



## Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

### Brief Measure Information

**NQF #:** 0091

**Corresponding Measures:**

**Measure Title:** COPD: Spirometry Evaluation

**Measure Steward:** American Thoracic Society

**sp.02. Brief Description of Measure:** Percentage of patients aged 18 years and older with a diagnosis of COPD who had spirometry results documented.

**1b.01. Developer Rationale:** Despite major efforts to broadly disseminate the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines and use of COPD performance measures across different specialty societies, COPD remains underdiagnosed and misdiagnosed (Collins et al., 2015; Perez et al., 2011). Although spirometry use has increased, it remains underutilized to confirm airflow obstruction and accurately diagnose COPD (CDC, 2012; Nishi et al., 2013). Studies show proper COPD diagnosis with spirometry is done on just over half of patients in the US and Canada (Boulet et al., 2013; Bourbeau et al., 2008; Collins et al., 2015; Nishi et al., 2013; Perez et al., 2011; Yu et al., 2013) and ranges from 10-48% in the Asia-Pacific region, Africa, eastern Europe, and Latin America (Aisanov et al., 2012). A study of physician-diagnosed COPD patients hospitalized for exacerbations found that 22% of patients did not have COPD upon spirometry testing (Prieto Centurion, et al., 2012).

Treatment of COPD without accurate diagnosis and understanding of true etiology of symptoms results in patients not receiving medication that would improve symptoms and quality of life, prevent exacerbations and reduce costly use of emergency and hospital services while other patients may be exposed to adverse effects of unneeded medication and or delays in true diagnosis and management of another condition increasing overall cost of care (Boulet et al., 2013; Bourbeau et al., 2008; CDC, 2012; Collins et al., 2015; Joo et al., 2011). We believe this measure will continue to increase appropriate spirometry use to assist physicians in the accurate diagnosis and treatment of patients with COPD, improving patient management and reducing total costs of COPD.

**Citations:**

Aisanov Z, Bai C, Bauerle O, Colodenco FD, Feldman C, Hashimoto S, Jardim J, Lai CK, Laniado-Laborin R, Nadeau G, Sayiner A, Shim JJ, Tsai YH, Walters RD, Waterer G. Primary care physician perceptions on the diagnosis and management of chronic obstructive pulmonary disease in diverse regions of the world. *Int J Chron Obstruct Pulmon Dis.* 2012;7:271-82.

Boulet LP, Bourbeau J, Skomro R, Gupta S. Major care gaps in asthma, sleep and chronic obstructive pulmonary

disease: a road map for knowledge translation. Can Respir J. 2013 Jul-Aug;20(4):265-9.

Bourbeau J, Sebaldt RJ, Day A, Bouchard J, Kaplan A, Hernandez P, Rouleau M, et al. Practice patterns in the management of chronic obstructive pulmonary disease in primary practice: the CAGE study. Can Respir J. 2008 Jan-Feb;15(1):13-9.

Centers for Disease Control and Prevention (CDC). Chronic obstructive pulmonary disease and associated health-care resource use - North Carolina, 2007 and 2009. MMWR Morb Mortal Wkly Rep. 2012 Mar 2;61(8):143-6.

Collins BF, Feemster LC, Rinne ST, Au DH. Factors predictive of airflow obstruction among Veterans with presumed empirical diagnosis and treatment of COPD. Chest. 2015 Feb;147(2):369-76.

Joo MJ, Au DH, Fitzgibbon ML, McKell J, Lee TA. Determinants of spirometry use and accuracy of COPD diagnosis in primary care. J Gen Intern Med. 2011 Nov;26(11):1272-7.

Nishi SP, Wang Y, Kuo YF, Goodwin JS, Sharma G. Spirometry use among older adults with chronic obstructive pulmonary disease;1999-2008. Ann Am Thorac Soc. 2013 Dec;10(6):565-73.

Perez X, Wisnivesky JP, Lurslurchachai L, Kleinman LC, Kronish IM. Barriers to adherence to COPD guidelines among primary care providers. Respir Med. 2012 Mar;106(3):374-81.

Prieto Centurion V, Huang F, Naureckas ET, Camargo CA Jr, Charbeneau J, Joo MJ, Press VG, Krishnan JA. Confirmatory spirometry for adults hospitalized with a diagnosis of asthma or chronic obstructive pulmonary disease exacerbation. BMC Pulm Med. 2012 Dec 7;12:73.

Yu WC, Fu SN, Tai EL, Yeung YC, Kwong KC, Chang Y, Tam CM, Yiu YK. Spirometry is underused in the diagnosis and monitoring of patients with chronic obstructive pulmonary disease (COPD). Int J Chron Obst Pulmon Dis. 2013;8:389-95.

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**sp.12. Numerator Statement:** Patients with documented spirometry results in the medical record (FEV1 and FEV1/FVC)

**sp.14. Denominator Statement:** All patients aged 18 years and older with a diagnosis of COPD

**sp.16. Denominator Exclusions:** Documentation of medical reason(s) for not documenting and reviewing spirometry results

Documentation of patient reason(s) for not documenting and reviewing spirometry results

Documentation of system reason(s) for not documenting and reviewing spirometry results

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**Measure Type:** Process

**sp.28. Data Source:**

Registry Data

Claims

**sp.07. Level of Analysis:**

Clinician: Group/Practice

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**IF Endorsement Maintenance – Original Endorsement Date:** 2009-08-10 12:00 AM

**Most Recent Endorsement Date:** 8/3/2016 5:09:28 PM

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**IF this measure is included in a composite, NQF Composite#/title:**

**IF this measure is paired/grouped, NQF#/title:**

**sp.03. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?:**

## 1. Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria

**1ma.01. Indicate whether there is new evidence about the measure since the most recent maintenance evaluation. If yes, please briefly summarize the new evidence, and ensure you have updated entries in the Evidence section as needed.**

[Response Begins]

[Response Ends]

Please separate added or updated information from the most recent measure evaluation within each question response in the Importance to Measure and Report: Evidence section. For example:

**Current Submission:**

Updated evidence information here.

**Previous (Year) Submission:**

Evidence from the previous submission here.

**1a.01. Provide a logic model.**

*Briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.*

[Response Begins]

[Response Ends]

**1a.02. Select the type of source for the systematic review of the body of evidence that supports the performance measure.**

*A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data.*

[Response Begins]

[Response Ends]

If the evidence is not based on a systematic review, skip to the end of the section and do not complete the repeatable question group below. If you wish to include more than one systematic review, add additional tables by clicking "Add" after the final question in the group.

**Evidence - Systematic Reviews Table (Repeatable)**

Group 1 - Evidence - Systematic Reviews Table

**1a.03. Provide the title, author, date, citation (including page number) and URL for the systematic review.**

[Response Begins]

[Response Ends]

**1a.04. Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the systematic review.**

[Response Begins]

[Response Ends]

**1a.05. Provide the grade assigned to the evidence associated with the recommendation, and include the definition of the grade.**

[Response Begins]

[Response Ends]

**1a.06. Provide all other grades and definitions from the evidence grading system.**

[Response Begins]

[Response Ends]

**1a.07. Provide the grade assigned to the recommendation, with definition of the grade.**

[Response Begins]

[Response Ends]

**1a.08. Provide all other grades and definitions from the recommendation grading system.**

[Response Begins]

[Response Ends]

**1a.09. Detail the quantity (how many studies) and quality (the type of studies) of the evidence.**

[Response Begins]

[Response Ends]

**1a.10. Provide the estimates of benefit, and consistency across studies.**

[Response Begins]

[Response Ends]

**1a.11. Indicate what, if any, harms were identified in the study.**

[Response Begins]

[Response Ends]

**1a.12. Identify any new studies conducted since the systematic review, and indicate whether the new studies change the conclusions from the systematic review.**

[Response Begins]

[Response Ends]

**1a.13. If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, describe the evidence on which you are basing the performance measure.**

[Response Begins]

[Response Ends]

**1a.14. Briefly synthesize the evidence that supports the measure.**

[Response Begins]

[Response Ends]

**1a.15. Detail the process used to identify the evidence.**

[Response Begins]

[Response Ends]

**1a.16. Provide the citation(s) for the evidence.**

[Response Begins]

[Response Ends]

**1b.01. Briefly explain the rationale for this measure.**

*Explain how the measure will improve the quality of care, and list the benefits or improvements in quality envisioned by use of this measure.*

[Response Begins]

Despite major efforts to broadly disseminate the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines and use of COPD performance measures across different specialty societies, COPD remains underdiagnosed and misdiagnosed (Collins et al., 2015; Perez et al., 2011). Although spirometry use has increased, it remains underutilized to confirm airflow obstruction and accurately diagnose COPD (CDC, 2012; Nishi et al., 2013). Studies show proper COPD diagnosis with spirometry is done on just over half of patients in the US and Canada (Boulet et al., 2013; Bourbeau et al., 2008; Collins et al., 2015; Nishi et al., 2013; Perez et al., 2011; Yu et al., 2013) and ranges from 10-48% in the Asia-Pacific region, Africa, eastern Europe, and Latin America (Aisanov et al., 2012). A study of physician-diagnosed COPD patients hospitalized for exacerbations found that 22% of patients did not have COPD upon spirometry testing (Prieto Centurion, et al., 2012).

Treatment of COPD without accurate diagnosis and understanding of true etiology of symptoms results in patients not receiving medication that would improve symptoms and quality of life, prevent exacerbations and reduce costly use of emergency and hospital services while other patients may be exposed to adverse effects of unneeded medication and or delays in true diagnosis and management of another condition increasing overall cost of care (Boulet et al., 2013; Bourbeau et al., 2008; CDC, 2012; Collins et al., 2015; Joo et al., 2011). We believe this measure will continue to increase appropriate spirometry use to assist physicians in the accurate diagnosis and treatment of patients with COPD, improving patient management and reducing total costs of COPD.

Citations:

Aisanov Z, Bai C, Bauerle O, Colodenco FD, Feldman C, Hashimoto S, Jardim J, Lai CK, Laniado-Laborin R, Nadeau G, Sayiner A, Shim JJ, Tsai YH, Walters RD, Waterer G. Primary care physician perceptions on the diagnosis and management of chronic obstructive pulmonary disease in diverse regions of the world. *Int J Chron Obstruct Pulmon Dis*. 2012;7:271-82.

Boulet LP, Bourbeau J, Skomro R, Gupta S. Major care gaps in asthma, sleep and chronic obstructive pulmonary disease: a road map for knowledge translation. *Can Respir J*. 2013 Jul-Aug;20(4):265-9.

Bourbeau J, Sebaldt RJ, Day A, Bouchard J, Kaplan A, Hernandez P, Rouleau M, et al. Practice patterns in the management of chronic obstructive pulmonary disease in primary practice: the CAGE study. *Can Respir J*. 2008 Jan-Feb;15(1):13-9.

Centers for Disease Control and Prevention (CDC). Chronic obstructive pulmonary disease and associated health-care resource use - North Carolina, 2007 and 2009. *MMWR Morb Mortal Wkly Rep*. 2012 Mar 2;61(8):143-6.

Collins BF, Feemster LC, Rinne ST, Au DH. Factors predictive of airflow obstruction among Veterans with presumed empirical diagnosis and treatment of COPD. *Chest*. 2015 Feb;147(2):369-76.

Joo MJ, Au DH, Fitzgibbon ML, McKell J, Lee TA. Determinants of spirometry use and accuracy of COPD diagnosis in primary care. *J Gen Intern Med*. 2011 Nov;26(11):1272-7.

Nishi SP, Wang Y, Kuo YF, Goodwin JS, Sharma G. Spirometry use among older adults with chronic obstructive pulmonary disease;1999-2008. *Ann Am Thorac Soc*. 2013 Dec;10(6):565-73.

Perez X, Wisnivesky JP, Lurslurchachai L, Kleinman LC, Kronish IM. Barriers to adherence to COPD guidelines among primary care providers. *Respir Med*. 2012 Mar;106(3):374-81.

Prieto Centurion V, Huang F, Naureckas ET, Camargo CA Jr, Charbeneau J, Joo MJ, Press VG, Krishnan JA. Confirmatory spirometry for adults hospitalized with a diagnosis of asthma or chronic obstructive pulmonary disease exacerbation. *BMC Pulm Med*. 2012 Dec 7;12:73.

Yu WC, Fu SN, Tai EL, Yeung YC, Kwong KC, Chang Y, Tam CM, Yiu YK. Spirometry is underused in the diagnosis and monitoring of patients with chronic obstructive pulmonary disease (COPD). *Int J Chron Obstruct Pulmon Dis*. 2013;8:389-95.

**[Response Ends]**

**1b.02. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.**

*Include mean, std dev, min, max, interquartile range, and scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.*

**[Response Begins]**

This measure has been in use by the CMS Physician Quality Reporting Initiative/System (PQRI/S) since 2007 with the following reporting options:

- 2007 – Claims option
- 2008-2010, 2012, 2013 – Claims and registry options

•2011 – Claims, registry and GPRO II options

Data from CMS(1) indicates a gap in care, trending favorably over time. Most recent data indicate a greater than 30% gap in care for 2014. This gap is aligned with research findings cited in 1b.3.

Average performance rate:

2010 - 56.0%

2011 - 68.3%

2012 - 69.4%

2013 - 53.4%

2014 - 67.1%

(1)Source: Timothy Jackson, CMS.

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Performance scores from 2012 comprehensive review submitted by PCPI to provide history.

CMS Physician Quality Reporting Initiative/System:

This measure was used in the CMS Physician Quality Reporting Initiative/System (PQRI/S) in the 2007 through 2011 claims option; 2009 through 2011 registry option; and the 2011 group practice reporting II option.

There is a gap in care as shown by this 2008 data; 45.7% of patients reported on did not meet the measure.(1)

10th percentile: 4.17%

25th percentile: 17.39%

50th percentile: 51.45%

75th percentile: 83.33%

90th percentile: 94.85%

Exception rate: 2.5%

(1) Confidential CMS PQRI Performance Information by Measure. Jan-Sept TAP file.

**[Response Ends]**

**1b.03. If no or limited performance data on the measure as specified is reported above, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement. Include citations.**

**[Response Begins]**

Studies show proper COPD diagnosis with spirometry is done on just over half of patients in the US and Canada (Boulet et al., 2013; Collins et al., 2015; Nishi et al., 2013; Perez et al., 2011; Yu et al., 2013,) and globally ranges from 6.5% in China to 59% in Sweeden with a mean of 26% in the Asia-Pacific region, Africa, eastern Europe, and Latin America (Aisanov et al., 2012; Yu et al., 2013).

Citations:

Aisanov Z, Bai C, Bauerle O, Colodenco FD, Feldman C, Hashimoto S, Jardim J, Lai CK, Laniado-Laborin R, Nadeau G, Sayiner A, Shim JJ, Tsai YH, Walters RD, Waterer G. Primary care physician perceptions on the diagnosis and management of chronic obstructive pulmonary disease in diverse regions of the world. Int J Chron Obstruct Pulmon Dis. 2012;7:271-82.



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Nishi SP, Wang Y, Kuo YF, Goodwin JS, Sharma G. Spirometry use among older adults with chronic obstructive pulmonary disease;1999-2008. *Ann Am Thorac Soc*. 2013 Dec;10(6):565-73.

Perez X, Wisnivesky JP, Lurslurchachai L, Kleinman LC, Kronish IM. Barriers to adherence to COPD guidelines among primary care providers. *Respir Med*. 2012 Mar;106(3):374-81.

Yu WC, Fu SN, Tai EL, Yeung YC, Kwong KC, Chang Y, Tam CM, Yiu YK. Spirometry is underused in the diagnosis and monitoring of patients with chronic obstructive pulmonary disease (COPD). *Int J Chron Obst Pulmon Dis*. 2013;8:389-95.

**[Response Ends]**

**1b.04. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability.**

*Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included. Include mean, std dev, min, max, interquartile range, and scores by decile. For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.*

**[Response Begins]**

We are not aware of any disparities data from this measure as specified. Please see 1b.5 for a summary of our findings in the literature regarding disparities.

**[Response Ends]**

**1b.05. If no or limited data on disparities from the measure as specified is reported above, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in above.**

**[Response Begins]**

Studies have been done to show associations between education level and income and outcomes related to COPD (Eisner et al., 2011; Holt et al., 2011). Studies also show association between gender and race on the incidence/severity of COPD (Bruse et al., 2011; Diaz et al., 2014; Foreman et al., 2011; Han et al., 2011). However, few research studies have been conducted to show disparities in use of spirometry.

One study showed misdiagnosis of COPD in an underserved, uninsured population. In a study of COPD patients from February 2011 to June 2012 at a federally qualified health center "eighty patients treated for a previous diagnosis of COPD (n = 72) or on anticholinergic inhalers (n = 8) with no COPD diagnosis were evaluated. The average age was 52.9 years; 71% were uninsured. Only 17.5% (14/80) of patients reported previous spirometry. Spirometry revealed that 42.5% had no obstruction, 22.5% had reversible obstruction, and 35% had nonreversible obstruction." Thus 42% of the patients were being over/mistreated (Ghattas et al., 2013).

Another study conducted in an outpatient primary clinic of a large urban hospital found no difference in use of spirometry between Caucasians and minorities, or between normal weight and obese patients (Joo et al., 2011).

A review of COPD in Hispanics noted that common reasons for misdiagnosis in Hispanics may include lack of access to health care (which may include spirometry) and a high proportion of uninsured individuals (Brehm and Celedón, 2008).

The ATS is aware of health disparities related to respiratory diseases and has recently created a Health Equality Subcommittee of the Health Policy Committee. This group has been tasked with providing recommendations for moving toward respiratory health equality to include improving environmental factors, healthy lifestyle promotion, high quality healthcare (prevention, screening, diagnosis and treatment) and further research (Celedón et al., 2014).

Citations:

Brehm JM, Celedón JC. Chronic obstructive pulmonary disease in Hispanics. *Am J Respir Crit Care Med*. 2008 Mar 1;177(5):473-8.

Bruse S, Sood A, Petersen H, Liu Y, Leng S, Celedón JC, Gilliland F, Celli B, Belinsky SA, Tesfaigzi Y. New Mexican Hispanic smokers have lower odds of chronic obstructive pulmonary disease and less decline in lung function than non-Hispanic whites. *Am J Respir Crit Care Med*. 2011 Dec 1;184(11):1254-60.

Celedón JC, Roman J, Schraufnagel DE, Thomas A, Samet J. Respiratory health equality in the United States. The American thoracic society perspective. *Ann Am Thorac Soc*. 2014 May;11(4):473-9.

Diaz AA, Come CE, Mannino DM, Pinto-Plata V, Divo MJ, Bigelow C, Celli B, Washko GR. Obstructive lung disease in Mexican Americans and non-Hispanic whites: an analysis of diagnosis and survival in the National Health and Nutritional Examination Survey III Follow-up Study. *Chest*. 2014 Feb;145(2):282-9.

Eisner MD, Blanc PD, Omachi TA, Yelin EH, Sidney S, Katz PP, Ackerson LM, Sanchez G, Tolstykh I, Iribarren C. Socioeconomic status, race and COPD health outcomes. *J Epidemiol Community Health* 2011;65:26–34.

Foreman MG, Zhang L, Murphy J, Hansel NN, Make B, Hokanson JE, et al. Early-onset chronic obstructive pulmonary disease is associated with female sex, maternal factors, and African American race in the COPDGene Study. *Am J Respir Crit Care Med*. 2011 Aug 15;184(4):414-20.

Ghattas C, Dai A, Gemmel DJ, Awad MH. Over diagnosis of chronic obstructive pulmonary disease in an underserved patient population. *Int J Chron Obstruct Pulmon Dis*. 2013;8:545-9.

Han MK, Curran-Everett D, Dransfield MT, Criner GJ, Zhang L, Murphy JR, Hansel NN, DeMeo DL, Hanania NA, Regan EA, Make BJ, Martinez FJ, Westney GE, Foreman MG; COPDGene Investigators. Racial differences in quality of life in patients with COPD. *Chest*. 2011 Nov;140(5):1169-76.

Holt JB, Zhang X, Presley-Cantrell L, Croft JB. Geographic disparities in chronic obstructive pulmonary disease (COPD) hospitalization among Medicare beneficiaries in the United States. *Int J Chron Obstruct Pulmon Dis*. 2011; 6 321–328.

Joo MJ, Au DH, Fitzgibbon ML, McKell J, Lee TA. Determinants of spirometry use and accuracy of COPD diagnosis in primary care. *J Gen Intern Med*. 2011 Nov;26(11):1272-7.

**[Response Ends]**



## 2. 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. Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.

**spma.01. Indicate whether there are changes to the specifications since the last updates/submission. If yes, update the specifications in the Measure Specifications section of the Measure Submission Form, and explain your reasoning for the changes below.**

**[Response Begins]**

No

**[Response Ends]**

**spma.02. Briefly describe any important changes to the measure specifications since the last measure update and provide a rationale.**

For annual updates, please explain how the change in specifications affects the measure results. If a material change in specification is identified, data from re-testing of the measure with the new specifications is required for early maintenance review.

*For example, specifications may have been updated based on suggestions from a previous NQF CDP review.*

**[Response Begins]**

No changes

**[Response Ends]**

**sp.01. Provide the measure title.**

*Measure titles should be concise yet convey who and what is being measured (see [What Good Looks Like](#)).*

**[Response Begins]**

COPD: Spirometry Evaluation

**[Response Ends]**

**sp.02. Provide a brief description of the measure.**

*Including type of score, measure focus, target population, timeframe, (e.g., Percentage of adult patients aged 18-75 years receiving one or more HbA1c tests per year).*

**[Response Begins]**

Percentage of patients aged 18 years and older with a diagnosis of COPD who had spirometry results documented.

**[Response Ends]**

**sp.04. Check all the clinical condition/topic areas that apply to your measure, below.**

*Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.*

*Please do not select:*

- *Surgery: General*

**[Response Begins]**

Respiratory

Respiratory: Chronic Obstructive Pulmonary Disease (COPD)

**[Response Ends]**

**sp.05. Check all the non-condition specific measure domain areas that apply to your measure, below.**

**[Response Begins]**

Other (specify)

**[Other (specify) Please Explain]**

Diagnosis

**[Response Ends]**

**sp.06. Select one or more target population categories.**

*Select only those target populations which can be stratified in the reporting of the measure's result.*

*Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.*

*Please do not select:*

- *Populations at Risk: Populations at Risk*

**[Response Begins]**

Elderly (Age >= 65)

**[Response Ends]**

**sp.07. Select the levels of analysis that apply to your measure.**

*Check ONLY the levels of analysis for which the measure is SPECIFIED and TESTED.*

*Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.*

*Please do not select:*

- *Clinician: Clinician*
- *Population: Population*

**[Response Begins]**

Clinician: Group/Practice

**[Response Ends]**

**sp.08. Indicate the care settings that apply to your measure.**

*Check ONLY the settings for which the measure is SPECIFIED and TESTED.*

**[Response Begins]**

Outpatient Services

**[Response Ends]**

**sp.09. Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials.**

*Do not enter a URL linking to a home page or to general information. If no URL is available, indicate "none available".*

**[Response Begins]**

The specifications for this measure are included within this form.

**[Response Ends]**

**sp.12. Attach the data dictionary, code table, or value sets (and risk model codes and coefficients when applicable). Excel formats (.xlsx or .csv) are preferred.**

*Attach an excel or csv file; if this poses an issue, [contact staff](#). Provide descriptors for any codes. Use one file with multiple worksheets, if needed.*

**[Response Begins]**

No data dictionary/code table – all information provided in the submission form

**[Response Ends]**

**sp.13. State the numerator.**

*Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome).*

*DO NOT include the rationale for the measure.*

**[Response Begins]**

Patients with documented spirometry results in the medical record (FEV1 and FEV1/FVC)

**[Response Ends]**

**sp.14. Provide details needed to calculate the numerator.**

*All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets.*

*Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.*

**[Response Begins]**

Numerator Quality-Data Coding Options for Reporting Satisfactorily

Numerator Instructions: Look for most recent documentation of spirometry evaluation results in the medical record; do not limit the search to the reporting period.

To submit the numerator option for spirometry results documented and reviewed, report the following:

Performance Met: CPT II 3023F: Spirometry results documented and reviewed

OR

Spirometry Results not Documented for Medical, Patient, or System Reasons

Append a modifier (1P, 2P or 3P) to CPT Category II code 3023F to report documented circumstances that appropriately exclude patients from the denominator.

Medical Performance Exception: 3023F with 1P: Documentation of medical reason(s) for not documenting and reviewing spirometry results

OR

Patient Performance Exception: 3023F with 2P: Documentation of patient reason(s) for not documenting and reviewing spirometry results

OR

System Performance Exception: 3023F with 3P: Documentation of system reason(s) for not documenting and reviewing spirometry results

OR

Spirometry Results not Documented, Reason not Otherwise Specified

Append a reporting modifier (8P) to CPT Category II code 3023F to report circumstances when the action described in the numerator is not performed and the reason is not otherwise specified.

Performance Not Met: 3023F with 8P: Spirometry results not documented and reviewed, reason not otherwise specified

**[Response Ends]**

**sp.15. State the denominator.**

*Brief, narrative description of the target population being measured.*

**[Response Begins]**

All patients aged 18 years and older with a diagnosis of COPD

**[Response Ends]**

**sp.16. Provide details needed to calculate the denominator.**

*All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets.*

*Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.*

**[Response Begins]**

All Patients aged >= 18 years on date of encounter

AND

Diagnosis for COPD

ICD-9-CM [for use before 9/30/2014]:

491.0, 491.1, 491.20, 491.21, 491.22, 491.8, 491.9, 492.0, 492.8, 493.20, 493.21, 493.22, 496

ICD-10-CM [for use after 10/1/2014]:

J41.0, J41.1, J41.8, J42, J43.0, J43.1, J43.2, J43.8, J43.9, J44.0, J44.1, J44.9

(Please see listing below for ICD-9/ICD-10 code definitions)

AND

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

---

ICD-9/ICD-10 code definitions

ICD-9-CM [for use before 9/30/2014]:

491.0 – Simple chronic bronchitis  
491.1 – Mucopurulent chronic bronchitis  
491.20 – Obstructive chronic bronchitis without exacerbation  
491.21 – Obstructive chronic bronchitis with (acute) exacerbation  
491.22 – Obstructive chronic bronchitis with acute bronchitis  
491.8 – Other chronic bronchitis  
491.9 – Unspecified chronic bronchitis  
492.0 – Emphysematous bleb  
492.8 – Other emphysema  
493.20 – Chronic obstructive asthma, unspecified  
493.21 – Chronic obstructive asthma with status asthmaticus  
493.22 – Chronic obstructive asthma with (acute) exacerbation  
496 – Chronic airway obstruction, not elsewhere classified

ICD-10-CM [for use after 10/1/2014]:

J41.0 – Simple chronic bronchitis  
J41.1 – Mucopurulent chronic bronchitis  
J41.8 – Mixed simple and mucopurulent chronic bronchitis  
J42 – Unspecified chronic bronchitis  
J43.0 – Unilateral pulmonary emphysema [MacLeod's syndrome]  
J43.1 – Panlobular emphysema  
J43.2 – Centrilobular emphysema  
J43.8 – Other emphysema  
J43.9 – Emphysema, unspecified  
J44.0 – Chronic obstructive pulmonary disease with acute lower respiratory infection  
J44.1 – Chronic obstructive pulmonary disease with (acute) exacerbation  
J44.9 – Chronic obstructive pulmonary disease, unspecified

**[Response Ends]**

**sp.17. Describe the denominator exclusions.**



*Brief narrative description of exclusions from the target population.*

**[Response Begins]**

Documentation of medical reason(s) for not documenting and reviewing spirometry results

Documentation of patient reason(s) for not documenting and reviewing spirometry results

Documentation of system reason(s) for not documenting and reviewing spirometry results

**[Response Ends]**

**sp.18. Provide details needed to calculate the denominator exclusions.**

*All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.*

**[Response Begins]**

ATS continues to use the PCPI exception methodology that uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure: medical, patient and system reasons.

Exceptions are used to remove patients from the denominator of a performance measure when a patient does not receive a therapy or service AND that therapy or service would not be appropriate due to specific reasons; otherwise, the patient would meet the denominator criteria. Exceptions are not absolute, and the application of exceptions is based on clinical judgment, individual patient characteristics, or patient preferences. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions include medical reason(s), patient reason(s) or system reason(s) for not documenting spirometry results. Although this methodology does not require the external reporting of more detailed exception data, the ATS recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The ATS also conducts systematic review and analysis of exceptions data to identify practice patterns and opportunities for quality improvement.

For Claims:

Documentation of medical, patient, or system reason(s) for not documenting and reviewing spirometry results.

Append a modifier (1P, 2P or 3P) to CPT Category II code 3023F to report documented circumstances that appropriately exclude patients from the denominator.

3023F with 1P: Documentation of medical reason(s) for not documenting and reviewing spirometry results

3023F with 2P: Documentation of patient reason(s) for not documenting and reviewing spirometry results

3023F with 3P: Documentation of system reason(s) for not documenting and reviewing spirometry results

**[Response Ends]**

**sp.19. Provide all information required to stratify the measure results, if necessary.**

*Include the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate. Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format in the Data Dictionary field.*

**[Response Begins]**

We encourage the results of this measure to be stratified by race, ethnicity, primary language, and administrative sex.

**[Response Ends]**

**sp.20. Is this measure adjusted for socioeconomic status (SES)?**

**[Response Begins]**

No

**[Response Ends]**

**sp.21. Select the risk adjustment type.**

*Select type. Provide specifications for risk stratification and/or risk models in the Scientific Acceptability section.*

**[Response Begins]**

No risk adjustment or risk stratification

**[Response Ends]**

**sp.22. Select the most relevant type of score.**

*Attachment: If available, please provide a sample report.*

**[Response Begins]**

Rate/proportion

**[Response Ends]**

**sp.23. Select the appropriate interpretation of the measure score.**

*Classifies interpretation of score according to whether better quality or resource use is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*

**[Response Begins]**

Better quality = Higher score

**[Response Ends]**

**sp.24. Diagram or describe the calculation of the measure score as an ordered sequence of steps.**

*Identify the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period of data, aggregating data; risk adjustment; etc.*

**[Response Begins]**

1. Start with Denominator

2. Check Patient Age:

a. If the Age is greater than or equal to 18 years of age on Date of Service and equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.

b. If the Age is greater than or equal to 18 years of age on Date of Service and equals Yes during the measurement period, proceed to check Patient Diagnosis.

3. Check Patient Diagnosis:

- a. If Diagnosis of COPD as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
- b. If Diagnosis of COPD as Listed in the Denominator equals Yes, proceed to check Encounter Performed.
4. Check Encounter Performed:
  - a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Encounter as Listed in the Denominator equals Yes, include in the Eligible population.
5. Denominator Population:
  - a. Denominator population is all Eligible Patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 patients in the sample calculation.
6. Start Numerator
7. Check Spirometry Results Documented and Reviewed:
  - a. If Spirometry Results Documented and Reviewed equals Yes, include in Reporting Met and Performance Met.
  - b. Reporting Met and Performance Met letter is represented in the Reporting Rate and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 patients in Sample Calculation.
  - c. If Spirometry Results Documented and Reviewed equals No, proceed to Documentation of Medical Reason(s) for Not Documenting and Reviewing Spirometry Results.
8. Check Documentation of Medical Reason(s) for Not Documenting and Reviewing Spirometry Results:
  - a. If Documentation of Medical Reason(s) for Not Documenting and Reviewing Spirometry Results equals Yes, include in Reporting Met and Performance Exclusion.
  - b. Reporting Met and Performance Exclusion letter is represented in the Reporting Rate and Performance Rate in the Sample Calculation listed at the end of this document. Letter b1 equals 10 patients in the Sample Calculation.
  - c. If Documentation of Medical Reason(s) for Not Documenting and Reviewing Spirometry Results equals No, proceed to Documentation of Patient Reason(s) for Not Documenting and Reviewing Spirometry Results.
9. Check Documentation of Patient Reason(s) for Not Documenting and Reviewing Spirometry Results:
  - a. If Documentation of Patient Reason(s) for Not Documenting and Reviewing Spirometry Results equals Yes, include in Reporting Met and Performance Exclusion.
  - b. Reporting Met and Performance Exclusion letter is represented in the Reporting Rate and Performance Rate in the Sample Calculation listed at the end of this document. Letter b2 equals 0 patients in the Sample Calculation.
  - c. If Documentation of Patient Reason(s) for Not Documenting and Reviewing Spirometry Results equals No, proceed to Documentation of System Reason(s) for Not Documenting and Reviewing Spirometry Results.
10. Check Documentation of System Reason(s) for Not Documenting and Reviewing Spirometry Results:
  - a. If Documentation of System Reason(s) for Not Documenting and Reviewing Spirometry Results equals Yes, include in Reporting Met and Performance Exclusion.
  - b. Reporting Met and Performance Exclusion letter is represented in the Reporting Rate and Performance Rate in the Sample Calculation listed at the end of this document. Letter b3 equals 0 patients in the Sample Calculation.
  - c. If Documentation of System Reason(s) for Not Documenting and Reviewing Spirometry Results equals No, proceed to Spirometry Results Not Documented and Reviewed, Reason Not Specified.
11. Check Spirometry Results Not Documented and Reviewed, Reason Not Specified:
  - a. If Spirometry Results Not Documented and Reviewed, Reason Not Specified equals Yes, include in Reporting Met and Performance Not Met.
  - b. Reporting Met and Performance Not Met letter is represented in the Reporting Met in the Sample Calculation listed at the end of document. Letter c equals 20 patients in the Sample Calculation.

c. If Spirometry Results Not Documented and Reviewed, Reason Not Specified equals No, include in Reporting Not Met.

12. Check Reporting Not Met

a. If Reporting Not Met equals No, Quality Data Code or equivalent not reported. 10 patients have been subtracted from the reporting numerator in sample calculation.

‘Sample Calculation’ referenced above can be found in Appendix 1

**[Response Ends]**

**sp.27. If measure testing is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.**

*Examples of samples used for testing:*

- *Testing may be conducted on a sample of the accountable entities (e.g., hospital, physician). The analytic unit specified for the particular measure (e.g., physician, hospital, home health agency) determines the sampling strategy for scientific acceptability testing.*
- *The sample should represent the variety of entities whose performance will be measured. The [2010 Measure Testing Task Force](#) recognized that the samples used for reliability and validity testing often have limited generalizability because measured entities volunteer to participate. Ideally, however, all types of entities whose performance will be measured should be included in reliability and validity testing.*
- *The sample should include adequate numbers of units of measurement and adequate numbers of patients to answer the specific reliability or validity question with the chosen statistical method.*
- *When possible, units of measurement and patients within units should be randomly selected.*

**[Response Begins]**

Not applicable. The measure does not require sampling or a survey.

**[Response Ends]**

**sp.30. Select only the data sources for which the measure is specified.**

**[Response Begins]**

Claims

Registry Data

**[Response Ends]**

**sp.31. Identify the specific data source or data collection instrument.**

*For example, provide the name of the database, clinical registry, collection instrument, etc., and describe how data are collected.*

**[Response Begins]**

Not Applicable

**[Response Ends]**

**sp.32. Provide the data collection instrument.**

**[Response Begins]**

No data collection instrument provided

**[Response Ends]**

**2ma.01. Indicate whether additional empirical reliability testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Reliability - Testing. Include information on all testing conducted (prior testing as well as any new testing).**

*Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:*

**Current Submission:**

*Updated testing information here.*

**Previous Submission:**

*Testing from the previous submission here.*

**[Response Begins]**

No

**[Response Ends]**

**2ma.02. Indicate whether additional empirical validity testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Validity - Testing. Include information on all testing conducted (prior testing as well as any new testing).**

*Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:*

**Current Submission:**

*Updated testing information here.*

**Previous Submission:**

*Testing from the previous submission here.*

**[Response Begins]**

No

**[Response Ends]**

**2ma.03. For outcome, patient-reported outcome, resource use, cost, and some process measures, risk adjustment/stratification may be conducted. Did you perform a risk adjustment or stratification analysis?**

**[Response Begins]**

No

**[Response Ends]**

**2ma.04. For maintenance measures in which risk adjustment/stratification has been performed, indicate whether additional risk adjustment testing has been conducted since the most recent maintenance evaluation.**

**This may include updates to the risk adjustment analysis with additional clinical, demographic, and social risk factors.**

**Please update the Scientific Acceptability: Validity - Other Threats to Validity section.**

**Note: This section must be updated even if social risk factors are not included in the risk adjustment strategy.**

**[Response Begins]**

No additional risk adjustment analysis included

**[Response Ends]**

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 fields in the Scientific Acceptability sections of the Measure Submission Form.

- Measures must be tested for all the data sources and levels of analyses that are specified. If there is more than one set of data specifications or more than one level of analysis, contact NQF staff about how to present all the testing information in one form.
- All required sections must be completed.
- For composites with outcome and resource use measures, Questions 2b.23-2b.37 (Risk Adjustment) also must be completed.
- If specified for multiple data sources/sets of specifications (e.g., claims and EHRs), Questions 2b.11-2b.13 also must be completed.
- An appendix for supplemental materials may be submitted (see Question 1 in the Additional section), but there is no guarantee it will be reviewed.
- Contact NQF staff with any questions. Check for resources at the [Submitting Standards webpage](#).
- For information on the most updated guidance on how to address social risk factors variables and testing in this form refer to the release notes for the [2021 Measure Evaluation Criteria and Guidance](#).

Note: The information provided in this form is intended to aid the Standing Committee and other stakeholders in understanding to what degree the testing results for this measure meet NQF's evaluation criteria for testing.

2a. Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise. For instrument-based measures (including PRO-PMs) and composite performance measures, reliability should be demonstrated for the computed performance score.

2b1. Validity testing demonstrates that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality. For instrument based measures (including PRO-PMs) and composite performance measures, validity should be demonstrated for the computed performance score.

2b2. Exclusions are supported by the clinical evidence and are of sufficient frequency to warrant inclusion in the specifications of the measure;

AND

If patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that the exclusion impacts performance on the measure; in such cases, the measure must be specified so that the

information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

2b3. For outcome measures and other measures when indicated (e.g., resource use):

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified; is based on patient factors (including clinical and social risk factors) that influence the measured outcome and are present at start of care; 14,15 and has demonstrated adequate discrimination and calibration

OR

- rationale/data support no risk adjustment/ stratification.

2b4. Data analysis of computed measure scores demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance;

OR

there is evidence of overall less-than-optimal performance.

2b5. If multiple data sources/methods are specified, there is demonstration they produce comparable results.

2b6. Analyses identify the extent and distribution of missing data (or nonresponse) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders) and how the specified handling of missing data minimizes bias.

2c. For composite performance measures, empirical analyses support the composite construction approach and demonstrate that:

2c1. the component measures fit the quality construct and add value to the overall composite while achieving the related objective of parsimony to the extent possible; and

2c2. the aggregation and weighting rules are consistent with the quality construct and rationale while achieving the related objective of simplicity to the extent possible.

(if not conducted or results not adequate, justification must be submitted and accepted)

## Definitions

Reliability testing applies to both the data elements and computed measure score. Examples of reliability testing for data elements include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing of the measure score addresses precision of measurement (e.g., signal-to-noise).

Validity testing applies to both the data elements and computed measure score. Validity testing of data elements typically analyzes agreement with another authoritative source of the same information. Examples of validity testing of the measure score include, but are not limited to: testing hypotheses that the measures scores indicate quality of care, e.g., measure scores are different for groups known to have differences in quality assessed by another valid quality measure or method; correlation of measure scores with another valid indicator of quality for the specific topic; or relationship to conceptually related measures (e.g., scores on process measures to scores on outcome measures). Face validity of the measure score as a quality indicator may be adequate if accomplished through a systematic and transparent process, by identified experts, and explicitly addresses whether performance scores resulting from the measure as specified can be used to distinguish good from poor quality. The degree of consensus and any areas of disagreement must be provided/discussed.

Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, variability of exclusions across providers, and sensitivity analyses with and without the exclusion.

Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

Risk factors that influence outcomes should not be specified as exclusions.

With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of

one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74 percent v. 75 percent) is clinically meaningful; or whether a statistically significant difference of \$25 in cost for an episode of care (e.g., \$5,000 v. \$5,025) is practically meaningful. Measures with overall less-than-optimal performance may not demonstrate much variability across providers.

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

**Current Submission:**

Updated testing information here.

**Previous (Year) Submission:**

Testing from the previous submission here.

**2a.01. Select only the data sources for which the measure is tested.**

**[Response Begins]**

Claims

**[Response Ends]**

**2a.02. If an existing dataset was used, identify the specific dataset.**

*The dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry).*

**[Response Begins]**

**From 2015 submission**

"The data source for reliability testing that was performed is the Centers for Medicare & Medicaid Services (CMS) Medicare administrative claims database.

The testing was conducted by Mathematica Policy Research as a component of the 2012 Quality and Resource Use Report (QRUR), part of the CMS Physician Feedback Reporting Program.

Citation:

Mathematica Policy Research. Experience Report for the Performance Year 2012 Quality and Resource Use Reports. January 8, 2014. Accessed December 7, 2015. Accessible at: [https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2012-QRUR\\_Experience\\_Report.pdf](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2012-QRUR_Experience_Report.pdf) "

***This measure was also tested in 2012 by the PCPI to support NQF re-endorsement for the 2012 comprehensive review which has been provided previously with the 2015 submission and is copied again here:***

"EHR Measure Validity

The measure was calculated using data collected using two different methods of collection:

- Automated EHR report
- Visual inspection of the medical record by professional data abstractors to capture the data elements to manually construct the performance

The data source was electronic health records in an ambulatory care setting.

The data sample came from 1 site representing an academic medical center located in an urban area.

The sample consisted of 123 patient encounters.



Data collected from patients seen between 01/01/2010-12/31/2011.

Visual inspection of the medical record was performed between 02/06/2012 and 02/10/2012."

**[Response Ends]**

**2a.03. Provide the dates of the data used in testing.**

*Use the following format: "MM-DD-YYYY - MM-DD-YYYY"*

**[Response Begins]**

01-2012 - 12-2012

**[Response Ends]**

**2a.04. Select the levels of analysis for which the measure is tested.**

*Testing must be provided for all the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan.*

*Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.*

*Please do not select:*

- Clinician: Clinician
- Population: Population

**[Response Begins]**

Clinician: Group/Practice

**[Response Ends]**

**2a.05. List the measured entities included in the testing and analysis (by level of analysis and data source).**

*Identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample.*

**[Response Begins]**

***From the 2015 submission:***

"Testing and analysis included 2,064 groups of physicians with at least 25 eligible professionals (EPs) (average of 120 EPs per group). Of these, there were 693 groups of physicians with at least 100 EPs (average of 322 EPs). This group represents 30% of medical group practices with 25 or more EPs nationwide. Groups were included if they reported at least 20 eligible cases for the measure. The groups were distributed across all states, the District of Columbia, Guam and Puerto Rico. "

**[Response Ends]**

**2a.06. Identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis), separated by level of analysis and data source; if a sample was used, describe how patients were selected for inclusion in the sample.**

*If there is a minimum case count used for testing, that minimum must be reflected in the specifications.*

**[Response Begins]**

***From the 2015 submission:***

"Testing and analysis included 11,593,241 Medicare beneficiaries identified on claims associated with the groups described in 1.5. Beneficiaries attributed to groups with more than 25 EPs averaged 2,974 (standard deviation = 5,105). Approximately half (52%) of the groups were attributed fewer than 1,000 beneficiaries. Beneficiaries attributed to groups with more than 100 EPs averaged 7,077 (standard deviation = 7,842)."

**[Response Ends]**

**2a.07. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing.**

**[Response Begins]**

***From the 2015 submission:***

The data were used for reliability testing only. Face validity testing was done with a survey. Other analyses were not done or not applicable.

**[Response Ends]**

**2a.08. List the social risk factors that were available and analyzed.**

*For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient (e.g. census tract), or patient community characteristics (e.g. percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.*

**[Response Begins]**

***From the 2015 submission:***

"Patients in the testing and analysis were Medicare beneficiaries. No other sociodemographic variables were available for analysis."

**[Response Ends]**

Note: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – in 2a.09 check patient or encounter-level data; in 2a.010 enter "see validity testing section of data elements"; and enter "N/A" for 2a.11 and 2a.12.

**2a.09. Select the level of reliability testing conducted.**

*Choose one or both levels.*

**[Response Begins]**

Accountable Entity Level (e.g., signal-to-noise analysis)

**[Response Ends]**

**2a.10. For each level of reliability testing checked above, describe the method of reliability testing and what it tests.**

*Describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used.*

**[Response Begins]**

***From the 2015 submission:***

The method of reliability testing as used by Mathematica Policy Research is described as:

“For each of these measures, reliability was estimated as a ratio of variation on performance between groups and the total variation (variation between groups and variation from measurement error):

“Reliability = Variation between groups/(Variation between groups + Variation within group)

“If a score is deemed highly reliable, we would expect that a group’s performance rates would be very similar if performance were calculated on the basis of a random sample of the practice’s beneficiaries.

“Reliability scores are represented on a continuum from zero to one. Scores closer to zero indicate lower reliability and scores closer to one indicate higher reliability. Although there is no universally agreed-upon minimum reliability threshold, reliability scores in the 0.40–0.70 range are often considered moderate, and scores greater than 0.70 are considered high.”

[see 2a.02 for citation]

**[Response Ends]**

**2a.11. For each level of reliability testing checked above, what were the statistical results from reliability testing?**

*For example, provide the percent agreement and kappa for the critical data elements, or distribution of reliability statistics from a signal-to-noise analysis. For score-level reliability testing, when using a signal-to-noise analysis, more than just one overall statistic should be reported (i.e., to demonstrate variation in reliability across providers). If a particular method yields only one statistic, this should be explained. In addition, reporting of results stratified by sample size is preferred (pg. 18, [NQF Measure Evaluation Criteria](#)).*

**[Response Begins]**

***Copied from the 2015 submission:***

"As noted above, scores above 0.70 are considered high.

The reliability for this measure among groups with 25 or more EPs was 0.73.

The reliability for this measure among groups with 100 or more EPs was 0.83."

**[Response Ends]**

**2a.12. Interpret the results, in terms of how they demonstrate reliability.**

*(In other words, what do the results mean and what are the norms for the test conducted?)*

**[Response Begins]**

***Copied from the 2015 submission:***

"We believe this measure remains reliable based on high reliability test scores and relatively large test sample size. We also believe that the measure is reliable across relatively small groups and relatively large groups."

**[Response Ends]**

**2b.01. Select the level of validity testing that was conducted.**

**[Response Begins]**

Systematic assessment of face validity of performance measure score as an indicator of quality or resource use (i.e., is an accurate reflection of performance on quality or resource use and can distinguish good from poor performance)

**[Response Ends]**

**2b.02. For each level of testing checked above, describe the method of validity testing and what it tests.**

*Describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used.*

**[Response Begins]**

***Copied from the 2015 submission:***

"Face validity of the measure score as an indicator of quality was systematically assessed using the following approach:

After the measure was fully specified, the ATS Clinical Practice Committee was asked to rate their agreement with the following statement:

The scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good and poor quality.

The rating scale used was 1-5, where 1= Strongly Disagree; 3= Neither Agree nor Disagree; 5= Strongly Agree

The 12 members of the ATS COPD Clinical Practice Committee were selected to serve as an expert panel:

Kevin L. Kovitz, MD

Robert DeMarco, MD

Scott Manaker, MD

Michael Donahoe, MD

Omar Hussain, MD

Katina Nicolacakis, MD

Tom Gildea, MD

Steve G. Peters, MD

Kashif Hussain, MD

Stephen Hoffman, MD

Alan Plummer, MD

Mike Nelson, MD"

***Additional validity testing was performed by PCPI as part of 2012 comprehensive review- copied here and provided with the 2015 submission:***

***Copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:***

"EHR Measure Validity

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

Data analysis included:

- Percent agreement at the denominator and numerator(exception - for those measures with exception)
- Kappa statistic to ensure that agreement rates are not a phenomenon of chance

Face Validity

Face validity of the measure score as an indicator of quality was systematically assessed as follows.

After the measure was fully specified, the expert panel (workgroup membership) was asked to rate their agreement with the following statement:

The scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good and poor quality.

Scale 1-5, where 1= Strongly Disagree; 3=Neither Agree nor Disagree; 5= Strongly Agree"

**[Response Ends]**

**2b.03. Provide the statistical results from validity testing.**

*Examples may include correlations or t-test results.*

**[Response Begins]**

***Copied from the 2015 submission:***

The results of the expert panel rating of the validity statement include:

- N = 12
- Mean rating = 4.6
- Panelists that agree or strongly agree that this measure can accurately distinguish good and poor quality = 91.7%

Frequency distribution of ratings

1 – Strongly disagree	0
2	0
3 – Neither Agree nor Disagree	1
4	3
5 – Strongly Agree	8

***Additional validity testing was performed by PCPI as part of 2012 comprehensive review- copied here and provided with the 2015 submission:***

***Copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:***

EHR Measure Validity

This measure demonstrates substantial agreement when comparing the automated EHR report to visual inspection.

Reliability: N, % Agreement, Kappa

Numerator: 123, 86.89%, 0.7281 (0.6086-0.8476 CI)

Denominator: 123, 100%, kappa non-calculable (non-calculable CI)\*

\*Kappa statistic could not be calculated because of complete agreement. Confidence intervals cannot be calculated because to do so would involve dividing by zero which cannot be done.

Face Validity

The results of the expert panel rating of the validity statement were as follows: N = 7; Mean rating = 4.86 and 100% of respondents either agree or strongly agree that this measure can accurately distinguish good and poor quality.

Frequency Distribution of Ratings

1 - 0 (Strongly Disagree)

2 - 0

3 - 0 (Neither Agree nor Disagree)

4 - 1

5 - 6 (Strongly Agree)

**[Response Ends]**

**2b.04. Provide your interpretation of the results in terms of demonstrating validity. (i.e., what do the results mean and what are the norms for the test conducted?)**

**[Response Begins]**

***Copied from the 2015 submission as remains unchanged:***

"We believe this measure remains valid based on the degree of agreement by a panel of testers."

**[Response Ends]**

**2b.05. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified.**

*Describe the steps—do not just name a method; what statistical analysis was used? Do not just repeat the information provided in Importance to Measure and Report: Gap in Care/Disparities.*

**[Response Begins]**

***Copied from the 2015 submission as remains unchanged:***

"Analysis of the differences in performance rates was conducted through benchmarks. According to Mathematica Policy Research, 'Prior-year benchmarks were also computed for the claims-based quality indicators, and none of the measures differed significantly at the 5 percent level from the prior year benchmark. A weighted average (based on eligible cases) of performance for groups with 25 or more EPs serves as the benchmark for all groups of this size, whereas a comparable weighted average among groups with at least 100 EPs forms the benchmark for larger groups (100 or more EPs).'"

[see 2a.02 for citation]

***Additional data from the 2012 comprehensive review testing form submitted by the AMA-PCPI: Copied here from the 2015 submission.***

"CMS Physician Quality Reporting Initiative/System:

98,074 cases were reported on for the 2008 program, the most recent year for which data is available.

The following information is for the 2009 program, the only year for which such data is available.

Clinical Condition and Measure: #51 Spirometry Evaluation

# Eligible Professionals: 212,885

# Professionals Reporting: 1,841

% Professionals Reporting: 0.86%

# Professionals Reporting  $\geq 80\%$  of eligible instances: 737

% Professionals Reporting  $\geq 80\%$  of eligible instances: 40.03%

CMS Physician Quality Reporting Initiative/System:

The inter-quartile range (IQR) was calculated to determine the variability of performance on the measure."

**[Response Ends]**

**2b.06. Describe the statistical results from testing the ability to identify statistically significant and/or clinically/practically meaningful differences in performance measure scores across measured entities.**

*Examples may include number and percentage of entities with scores that were statistically significantly different from mean or some benchmark, different from expected; how was meaningful difference defined.*

**[Response Begins]**

***Copied from the 2015 submission:***

"The percent of groups different than the benchmark ( $p < 0.05$ ) for this measure among groups with 25 or more EPs was 45.6%.

The percent of groups different than the benchmark ( $p < 0.05$ ) for this measure among groups with 100 or more EPs was 47.1%."

***Additional data from the 2012 comprehensive review testing form submitted by the AMA-PCPI: Copied here from the 2015 submission.***

"CMS Physician Quality Reporting Initiative/System:

Scores on this measure: N = 98,074; Mean = 54.30%,

10th percentile: 4.17%

25th percentile: 17.39%

50th percentile: 51.45%

75th percentile: 83.33%

90th percentile: 94.85%

The inter-quartile range (IQR) provides a measure of the dispersion of performance. The IQR is 65.94 and indicates that 50% of physicians have performance on this measure ranging from 17.39% and 83.33% and 10% of physicians have performance rates less than or equal to 4.17%.(1)"

(1)Confidential CMS PQRI 2008 Performance Information by Measure. Jan-Sept TAP file.

[Response Ends]

**2b.07. Provide your interpretation of the results in terms of demonstrating the ability to identify statistically significant and/or clinically/practically meaningful differences in performance across measured entities.**

*In other words, what do the results mean in terms of statistical and meaningful differences?*

[Response Begins]

***Copied from the 2015 submission:***

The proportion of groups statistically different than the benchmark suggests that there is variation across group performance.

[Response Ends]

**2b.08. Describe the method of testing conducted to identify the extent and distribution of missing data (or non-response) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders). Include how the specified handling of missing data minimizes bias.**

*Describe the steps—do not just name a method; what statistical analysis was used.*

[Response Begins]

***Copied from the 2015 submission:***

Missing data analysis was not conducted on this measure in this study.

[Response Ends]

**2b.09. Provide the overall frequency of missing data, the distribution of missing data across providers, and the results from testing related to missing data.**

*For example, provide results of sensitivity analysis of the effect of various rules for missing data/non-response. If no empirical sensitivity analysis was conducted, identify the approaches for handling missing data that were considered and benefits and drawbacks of each).*

[Response Begins]

***Copied from the 2015 submission:***

Not available

[Response Ends]

**2b.10. Provide your interpretation of the results, in terms of demonstrating that performance results are not biased due to systematic missing data (or differences between responders and non-responders), and how the specified handling of missing data minimizes bias.**



*In other words, what do the results mean in terms of supporting the selected approach for missing data and what are the norms for the test conducted; if no empirical analysis was conducted, justify the selected approach for missing data.*

**[Response Begins]**

***Copied from the 2015 submission:***

Not available

**[Response Ends]**

Note: This item is directed to measures that are risk-adjusted (with or without social risk factors) OR to measures with more than one set of specifications/instructions (e.g., one set of specifications for how to identify and compute the measure from medical record abstraction and a different set of specifications for claims or eCQMs). It does not apply to measures that use more than one source of data in one set of specifications/instructions (e.g., claims data to identify the denominator and medical record abstraction for the numerator). Comparability is not required when comparing performance scores with and without social risk factors in the risk adjustment model. However, if comparability is not demonstrated for measures with more than one set of specifications/instructions, the different specifications (e.g., for medical records vs. claims) should be submitted as separate measures.

**2b.11. Indicate whether there is more than one set of specifications for this measure.**

**[Response Begins]**

Yes, there is more than one set of specifications for this measure

**[Response Ends]**

**2b.12. Describe the method of testing conducted to compare performance scores for the same entities across the different data sources/specifications.**

*Describe the steps—do not just name a method. Indicate what statistical analysis was used.*

**[Response Begins]**

***From 2015 submission:*** Not applicable

***Also provided in the 2015 Submission and copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:***

The measure was calculated using data collected using two different methods of collection:

- Automated EHR report
- Visual inspection of the medical record by professional data abstractors to capture the data elements to manually construct the performance

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

Data analysis included:

- Percent agreement at the denominator and numerator(exception - for those measures with exception)
- Kappa statistic to ensure that agreement rates are not a phenomenon of chance

**[Response Ends]**

**2b.13. Provide the statistical results from testing comparability of performance scores for the same entities when using different data sources/specifications.**

*Examples may include correlation, and/or rank order.*

**[Response Begins]**

**From 2015 submission:** Not applicable

**Also provided in the 2015 Submission and copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:**

"EHR Measure Validity

This measure demonstrates substantial agreement when comparing the automated EHR report to visual inspection.

Reliability: N, % Agreement, Kappa

Numerator: 123, 86.89%, 0.7281 (0.6086-0.8476 CI)

Denominator: 123, 100%, kappa non-calculable (non-calculable CI)\*

\*Kappa statistic could not be calculated because of complete agreement. Confidence intervals cannot be calculated because to do so would involve dividing by zero which cannot be done."

**[Response Ends]**

**2b.14. Provide your interpretation of the results in terms of the differences in performance measure scores for the same entities across the different data sources/specifications.**

*In other words, what do the results mean and what are the norms for the test conducted.*

**[Response Begins]**

This measure demonstrates substantial agreement when comparing the automated EHR report to visual inspection.

**[Response Ends]**

**2b.15. Indicate whether the measure uses exclusions.**

**[Response Begins]**

Yes, the measure uses exclusions.

**[Response Ends]**

**2b.16. Describe the method of testing exclusions and what was tested.**

*Describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used?*

**[Response Begins]**

**From 2015 submission:**

"Exclusion analysis was not conducted on this measure in this study".

**Also provided in the 2015 Submission and copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:**

**Copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:**

"EHR Measure Validity

The data sample came from 1 site representing an academic medical center located in an urban area.

The sample consisted of 123 patient encounters.

Data collected from patients seen between 01/01/2010-12/31/2011.

Visual inspection of the medical record was performed between 02/06/2012 and 02/10/2012.

Exceptions included medical, patient and system reasons. Exceptions were analyzed for frequency and variability across providers".

**[Response Ends]**

**2b.17. Provide the statistical results from testing exclusions.**

*Include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores.*

**[Response Begins]**

**From 2015 submission:** Not available

**Also provided in the 2015 Submission and copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:**

Copied from 2012 comprehensive review testing form submitted by the AMA-PCPI:

EHR Measure Validity

Exception rate: 0.81%

Validity of exceptions was 0% agreement with a kappa of 0.0000\*

\*Due to the small sample size and the single exception found during manual abstraction, the resulting agreement rate and kappa statistic are low.

**[Response Ends]**

**2b.18. Provide your interpretation of the results, in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results.**

*In other words, the value outweighs the burden of increased data collection and analysis. Note: If patient preference is an exclusion, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion.*

**[Response Begins]**

Although the number of exceptions was low in the abstracted records, they remain necessary as there may be medical reasons that spirometry cannot be performed, patients may choose to not undergo the procedure, or the testing may not be available in a healthcare system (e.g. spirometry was suspended in many health systems due to the COVID pandemic).

[Response Ends]

**2b.19. Check all methods used to address risk factors.**

[Response Begins]

No risk adjustment or stratification

[Response Ends]

**2b.20. If using statistical risk models, provide detailed risk model specifications, including the risk model method, risk factors, risk factor data sources, coefficients, equations, codes with descriptors, and definitions.**

[Response Begins]

[Response Ends]

**2b.21. If an outcome or resource use measure is not risk-adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (i.e., case mix) is not needed to achieve fair comparisons across measured entities.**

[Response Begins]

Not applicable.

[Response Ends]

**2b.22. Select all applicable resources and methods used to develop the conceptual model of how social risk impacts this outcome.**

[Response Begins]

[Response Ends]

**2b.23. Describe the conceptual and statistical methods and criteria used to test and select patient-level risk factors (e.g., clinical factors, social risk factors) used in the statistical risk model or for stratification by risk.**

*Please be sure to address the following: potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of  $p < 0.10$  or other statistical tests; correlation of  $x$  or higher. Patient factors should be present at the start of care, if applicable. Also discuss any "ordering" of risk factor inclusion; note whether social risk factors are added after all clinical factors. Discuss any considerations regarding data sources (e.g., availability, specificity).*

[Response Begins]

[Response Ends]

**2b.24. Detail the statistical results of the analyses used to test and select risk factors for inclusion in or exclusion from the risk model/stratification.**

[Response Begins]

[Response Ends]

**2b.25. Describe the analyses and interpretation resulting in the decision to select or not select social risk factors.**

*Examples may include prevalence of the factor across measured entities, availability of the data source, empirical association with the outcome, contribution of unique variation in the outcome, or assessment of between-unit effects and within-unit effects. Also describe the impact of adjusting for risk (or making no adjustment) on providers at high or low extremes of risk.*

[Response Begins]

[Response Ends]

**2b.26. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (describe the steps—do not just name a method; what statistical analysis was used). Provide the statistical results from testing the approach to control for differences in patient characteristics (i.e., case mix) below. If stratified ONLY, enter “N/A” for questions about the statistical risk model discrimination and calibration statistics.**

*Validation testing should be conducted in a data set that is separate from the one used to develop the model.*

[Response Begins]

[Response Ends]

**2b.27. Provide risk model discrimination statistics.**

*For example, provide c-statistics or R-squared values.*

[Response Begins]

[Response Ends]

**2b.28. Provide the statistical risk model calibration statistics (e.g., Hosmer-Lemeshow statistic).**

[Response Begins]

Not applicable

[Response Ends]

**2b.29. Provide the risk decile plots or calibration curves used in calibrating the statistical risk model.**

*The preferred file format is .png, but most image formats are acceptable.*

[Response Begins]

[Response Ends]

**2b.30. Provide the results of the risk stratification analysis.**

[Response Begins]

[Response Ends]

**2b.31. Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix).**

*In other words, what do the results mean and what are the norms for the test conducted?*

**[Response Begins]**

**[Response Ends]**

**2b.32. Describe any additional testing conducted to justify the risk adjustment approach used in specifying the measure.**

*Not required but would provide additional support of adequacy of the risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods that were assessed.*

**[Response Begins]**

**[Response Ends]**

### 3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

---

**3.01. Check all methods below that are used to generate the data elements needed to compute the measure score.**

[Response Begins]

[Response Ends]

**3.02. Detail to what extent the specified data elements are available electronically in defined fields.**

*In other words, indicate whether data elements that are needed to compute the performance measure score are in defined, computer-readable fields.*

[Response Begins]

ALL data elements are in defined fields in electronic claims

[Response Ends]

**3.03. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using data elements not from electronic sources.**

[Response Begins]

[Response Ends]

**3.04. Describe any efforts to develop an eCQM.**

[Response Begins]

[Response Ends]

**3.06. Describe difficulties (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.**

[Response Begins]

[Response Ends]

Consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

**3.07. Detail any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm),**

**Attach the fee schedule here, if applicable.**

[Response Begins]

N/A

RESPONSE TO ITEM 3b.2

ATS is considering eMeasures in the future. At this time we have not determined whether this measure will be converted.

**[Response Ends]**



## 4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

---

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.

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement, in addition to demonstrating performance improvement.

### 4a.01. Check all current uses. For each current use checked, please provide:

Name of program and sponsor

URL

Purpose

Geographic area and number and percentage of accountable entities and patients included

Level of measurement and setting

[Response Begins]

Public Reporting

Payment Program

[Response Ends]

### 4a.02. Check all planned uses.

[Response Begins]

Quality Improvement (internal to the specific organization)

[Response Ends]

### 4a.03. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing), explain why the measure is not in use.

*For example, do policies or actions of the developer/steward or accountable entities restrict access to performance results or block implementation?*

[Response Begins]

N/A

[Response Ends]

### 4a.04. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes: used in any accountability application within 3 years, and publicly reported within 6 years of initial endorsement.

*A credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.*

**[Response Begins]**

N/A

**[Response Ends]**

**4a.05. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.**

*Detail how many and which types of measured entities and/or others were included. If only a sample of measured entities were included, describe the full population and how the sample was selected.*

**[Response Begins]**

**[Response Ends]**

**4a.06. Describe the process for providing measure results, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.**

**[Response Begins]**

**[Response Ends]**

**4a.07. Summarize the feedback on measure performance and implementation from the measured entities and others. Describe how feedback was obtained.**

**[Response Begins]**

**[Response Ends]**

**4a.08. Summarize the feedback obtained from those being measured.**

**[Response Begins]**

**[Response Ends]**

**4a.09. Summarize the feedback obtained from other users.**

**[Response Begins]**

**[Response Ends]**

**4a.10. Describe how the feedback described has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.**

**[Response Begins]**

**[Response Ends]**

**4b.01. You may refer to data provided in Importance to Measure and Report: Gap in Care/Disparities, but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included). If no improvement was demonstrated, provide an explanation. If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how**

**the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.**

**[Response Begins]**

This measure was initially developed for use in the PQRI/S program. Although not publically reported until the recent release of the new Physician Compare site, the performance trends indicate progress on increasing use of spirometry to accurately diagnose COPD from 2011-2014.

The ATS supports the goal of high-quality, efficient healthcare. Toward that goal, the ATS Quality Improvement Committee reviews performance annually as a component of measure maintenance and plans further analyses in the future. ATS participates in international COPD guideline development, publishes technical standards for spirometry and periodically develops tools and educational material to support members in quality improvement. ATS also conducts educational sessions and an annual meeting featuring use of guidelines, including appropriate spirometry use.

**[Response Ends]**

**4b.02. Explain any unexpected findings (positive or negative) during implementation of this measure, including unintended impacts on patients.**

**[Response Begins]**

We are not aware of any unintended consequences related to this measure.

**[Response Ends]**

**4b.03. Explain any unexpected benefits realized from implementation of this measure.**

**[Response Begins]**

**[Response Ends]**

## 5. Comparison to Related or 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.

---

If you are updating a maintenance measure submission for the first time in MIMS, please note that the previous related and competing data appearing in question 5.03 may need to be entered in to 5.01 and 5.02, if the measures are NQF endorsed. Please review and update questions 5.01, 5.02, and 5.03 accordingly.

### 5.01. Search and select all NQF-endorsed related measures (conceptually, either same measure focus or target population).

*(Can search and select measures.)*

[Response Begins]

[Response Ends]

### 5.02. Search and select all NQF-endorsed competing measures (conceptually, the measures have both the same measure focus or target population).

*(Can search and select measures.)*

[Response Begins]

[Response Ends]

### 5.03. If there are related or competing measures to this measure, but they are not NQF-endorsed, please indicate the measure title and steward.

[Response Begins]

[Response Ends]

### 5.04. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s), indicate whether the measure specifications are harmonized to the extent possible.

[Response Begins]

No

[Response Ends]

### 5.05. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

[Response Begins]

These measures have distinct differences in their denominators and numerators. First, our measure is broader in denominator population, being for all patients age 18 years and older with a diagnosis of COPD, while 0577 is for patients age 40 years and older with a new diagnosis of COPD. Our measure is more consistent with COPD guidelines, which do not state an age to start using a spirometry evaluation; rather, spirometry should be used to assess all adults with COPD, not just adults with a new diagnosis of COPD. Second, our measure's numerator is more flexible than 0577, allowing a spirometry evaluation anytime during the measurement period, rather than 0577's requirement that spirometry be performed within 6 months of a new diagnosis of COPD. Our measure numerator is also specific to spirometry results, requiring both the FEV1/FVC values.

[Response Ends]

**5.06. Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality). Alternatively, justify endorsing an additional measure.**

*Provide analyses when possible.*

**[Response Begins]**

N/A

**[Response Ends]**

## Appendix

**Supplemental materials may be provided in an appendix.:**

Available in attached file

Attachment: 0091\_Appendix 1\_Sample Calculation.docx

## Contact Information

**Measure Steward (Intellectual Property Owner):** American Thoracic Society

**Measure Steward Point of Contact:** Ruminjo, Joseph, jruminjo@thoracic.org

Ewart, Gary, gewart@thoracic.org

**Measure Developer if different from Measure Steward:** Northfield Associates LLC

**Measure Developer Point(s) of Contact:** Ruminjo, Joseph, jruminjo@thoracic.org

Frechette, Sue, sue.frechette@northfieldassoc.com

## Additional Information

**1. Provide any supplemental materials, if needed, as an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be collated one file with a table of contents or bookmarks. If material pertains to a specific criterion, that should be indicated.**

**[Response Begins]**

Available in attached file

**[Response Ends]**

Attachment: 0091\_Appendix 1\_Sample Calculation.docx

**2. List the workgroup/panel members' names and organizations.**

*Describe the members' role in measure development.*

**[Response Begins]**

This measure was initially developed in 2007 by the AMA-PCPI, working with the ATS.

PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study are invited to participate as equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.

The initial Work Group Panel consisted of:

William E. Golden, MD, FACP, co-chair

Linus Santo Tomas, MD, MS, co-chair

Bruce Bagley, MD (AAFP)

Troy T. Fiesinger, MD (AAFP)

David G. Jaimovich, MD (SCCM)

Bruce Krieger, MD (ATS)

Thomas W. Lukens, MD, PhD, FACEP (ACEP)

Susan Nedza, MD, MBA, FACEP (CMS)

Deborah Patterson, MS, RN (BCBSA)

Sam J. W. Romeo, MD, MBA

Ralph M Schapira, MD (VA)

Sean D. Sullivan, RPh, PhD

Dennis E. Richling, MD

Nancy Lawler, RN (Joint Commission)

Stewardship of this measure was transferred to the ATS in November 2014.

To prepare for the 2015 NQF comprehensive review, ATS formed the Quality Improvement Committee Sub-committee on COPD Measures to review and update this measure. The Sub-committee members include:  
Laura Feemster, MD, MS, VA Puget Sound Health Care System, University of Washington Medical Center, Chair  
Bela Patel, MD, The University of Texas Health Science Center at Houston  
Carolyn Fruci, MD, PhD, Prima-CARE, PC  
David Au, MD, MS, VA Puget Sound Health Care System, University of Washington Medical Center

Jerry A. Krishnan, MD, PhD, University of Illinois at Chicago  
Gary Ewart, Chief, Advocacy & Government Relations, ATS  
Sue Frechette, RN, MBA, Consultant, Northfield Associates LLC

**[Response Ends]**

**3. Indicate the year the measure was first released.**

**[Response Begins]**

**[Response Ends]**

**4. Indicate the month and year of the most recent revision.**

**[Response Begins]**

**[Response Ends]**

**5. Indicate the frequency of review, or an update schedule, for this measure.**

**[Response Begins]**

Annually

**[Response Ends]**

**6. Indicate the next scheduled update or review of this measure.**

**[Response Begins]**

**[Response Ends]**

**7. Provide a copyright statement, if applicable. Otherwise, indicate "N/A".**

**[Response Begins]**

The Measures are not clinical guidelines, do not establish a standard of medical care, and have not been tested for all potential applications.

The Measures, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes, e.g., use by health care providers in connection with their practices. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain.

Commercial uses of the Measures require a license agreement between the user and the PCPI® Foundation (PCPI®) or the American Thoracic Society (ATS). Neither ATS, nor the American Medical Association (AMA), nor the AMA-convened Physician Consortium for Performance Improvement® (AMA-PCPI), now known as PCPI, nor their members shall be responsible for any use of the Measures.

The AMA's and AMA-PCPI's significant past efforts and contributions to the development and updating of the Measures is acknowledged. ATS is solely responsible for the review and enhancement ("Maintenance") of the Measures as of September 8, 2014.

ATS encourages use of the Measures by other health care professionals, where appropriate.

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

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Limited proprietary coding is contained in the Measure specifications for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. ATS, the AMA, the PCPI and its members and former members of the AMA-PCPI disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT®) or other coding contained in the specifications.

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**[Response Ends]**

**8. State any disclaimers, if applicable. Otherwise, indicate “N/A”.**

**[Response Begins]**

**[Response Ends]**

**9. Provide any additional information or comments, if applicable. Otherwise, indicate “N/A”.**

**[Response Begins]**

Coding/Specifications updates occur annually. ATS plans to continue measurement review process that stipulates regular (usually on a three-year cycle, when feasible) review of the measures. ATS will also review the measures if there is a major change in scientific evidence, results from testing or other issues are noted that materially affect the integrity of the measure.

**[Response Ends]**