NATIONAL QUALITY FORUM

TO: Pulmonary and Critical Care Steering Committee

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SU: Pulmonary and Critical Care Public and Member Comments

DA: June 15, 2012

The Pulmonary and Critical Care Steering Committee will meet via conference call on Thursday, June 21. The purpose of the meeting is to:

1. Discuss comments received during the public and member comment period.
2. Provide input on responses to comments.
3. Determine whether reconsideration of any measures is warranted.

Please let us know if you have any questions.

Steering Committee Action:

1. Review the individual comments received during the public and member comment period, measure developer responses to some comments and proposed responses. (Excel spreadsheet included in the meeting materials has been sorted by topic and measures. Filters have also been applied to the spreadsheet so that custom filters can be applied by theme, submitter, member council, etc.)
2. Review comment themes (within this memo) and proposed responses.
3. Be prepared to provide feedback and input on proposed comment responses.

Comments on Pulmonary and Critical Care measures

NQF received **139** comments on the draft report from the public and NQF members. The major themes of the comments and issues identified for Committee discussion are listed below. In response to these themes, NQF staff has proposed draft responses or potential action items for the Committee to consider. All comments and proposed responses are subject to discussion. These themes are not an attempt to limit the Committee discussion, but rather to aggregate them due to the volume and repetition of comments.

Major Themes/Issues of the Measures

In addition to many comments that support the recommendations of the Steering Committee, comments were received regarding:

1. Parsimony

2. Lack of Support for Recommended Measures
3. Requests for Reconsideration of Measures not Recommended
4. Related and Competing Measures
5. Outcome measures
6. Questions on specifications or coding
7. Reserve status
8. Various measure-specific comments that may warrant Committee consideration

Theme 1- Parsimony
Several NQF members noted that "consumers and purchasers strive for parsimony in measurement because an abundance of measures present an unnecessary burden to the health care system. The pulmonary measures currently undergoing the maintenance review and initial endorsement processes unnecessarily overlap in their measure focus and target population, and are overly reliant on process measures."

Proposed Committee Response: NQF's portfolio of measures for pulmonary and critical care includes eight additional measures that are not currently under maintenance review. Appendix D of the draft report lists all the measures in the portfolio. Of those eight measures, six are outcome measures including measures of ED visits for asthma patients, function status and quality of life for COPD patients in pulmonary rehabilitation programs, mortality and length of stay measures for the adult ICU and potentially preventable complications for pneumonia patients. Overall there are a significant number of outcome measures in the pulmonary and critical care portfolio,

Addressing whether the measures should continue to be endorsed with the goal of a more parsimonious set for these conditions was discussed by the Committee and the related and competing measures are discussed in Theme 4.

Theme 2- Lack of Support for Recommended Measures
Comments indicated lack of support for several recommended measures:

- ***0356: PN3a--Blood Cultures Performed Within 24 Hours Prior to or 24 Hours After Hospital Arrival for Patients Who Were Transferred or Admitted to the ICU Within 24 Hours of Hospital Arrival***
  Comments from APIC, SCCM and ACEP indicated lack of support for this measure, citing lack of any high level evidence that this process measure is directly linked to improved patient outcomes for pneumonia patients; the measure does not state that blood cultures should be obtained before the initiation of treatment; and the measure may create an unnecessary distraction from the delivery of more important care that needs to be delivered in the ED or ICU settings for not supporting this measure.

  ACTION ITEM: After review of the comments does the Committee wish to reconsider their recommendation of the measure? The measure evaluation summary is attached.

- Multiple comments were received on three pneumonia severity assessment measures:

1895: Assessment of Mental Status for Community-Acquired Bacterial Pneumonia
0232: Vital Signs for Community-Acquired Bacterial Pneumonia
0233: Assessment of Oxygen Saturation for Community-Acquired Bacterial Pneumonia for endorsement ***(not recommended)***

ACP questioned why mental status was selected as a specific element of pneumonia severity assessment as a measure, thereby suggesting this individual item is more important than a more comprehensive assessment utilizing a validated score. Other comments indicate that mental status and vital signs are very basic expectations of care and questions whether there is really a gap in these care processes. These factors should become part of composite measure that includes all elements of assessment by the physician and hospital. Another comment disagreed with not recommending measure 0233 because there is widespread evidence that the degree of O2 saturation influences morbidity and mortality and determination of whether a patient is hospitalized or admitted to the ICU.

ACTION ITEM: After reviewing the comments, does the Committee wish to maintain the current recommendations or perhaps consider recommending combining the measures into a composite or recommending use of severity scoring for future consideration by NQF instead of the three individual measures?

- ***0091 COPD: spirometry evaluation***
  A commenter does not support this measure because there has been no demonstrated improvement in outcomes for COPD.

  ACTION ITEM: After reviewing the comment and the measure information regarding the evidence, does the Committee wish to change the recommendation of the measure?

Theme 3- Requests for Reconsideration of Measures Not Recommended
Comments requested reconsideration of three measures:

- ***0338 CAC-3 Home management plan of care (HMPC) document given to patient /caregiver***
  The comment suggests the measure should be reconsidered because it is important for care coordination efforts and there is a lack of quality measures addressing the high-priority area in the current NQF measures portfolio.

  Proposed Committee Response: This measure fails to meet the NQF criteria for evidence. The Committee noted the recent publication in JAMA by Morse in October 5, 2011 that found "Among children admitted to pediatric hospitals for asthma, there was high hospital-level compliance with CAC-1 and CAC-2 quality measures and moderate compliance with the CAC-3 measure but no association between CAC-3 compliance and

subsequent ED visits and asthma-related readmissions". http://jama.ama-assn.org/content/306/13/1454.abstract

- ***0549 Pharmacotherapy management of COPD exacerbation (PCE)***

  The developer is requesting reconsideration of this measure because they believe the Committee discussed issues outside of the scope of the measure evaluation sub-criteria. For example, during the discussion of Importance, the SC discussion focused exclusively on the sub-criteria of validity with no further discussion of this measure's high impact, performance gap, and evidence.

  Summary of Previous Committee Discussion: The Committee rated the sub-criteria for Importance high in all areas by large majorities and so the measure easily passed the Importance criterion despite questions of why there had been no improvement in performance over 3 years of data. The issues of concern to the Committee centered on the validity of the critical data elements of the numerator. The measure submission information did not include empiric validity testing of the numerator data elements. Both Importance and Scientific Acceptability are must pass criteria as such because the measure did not pass the Scientific Acceptability criterion it was not evaluated further.

  ACTION ITEM: After review of the information provided by the developer, the Committee are asked to re-evaluate the measure against the Scientific Acceptability, Usability and Feasibility criteria and reconsider their recommendation. The measure evaluation summary is attached.

- ***0341 PICU Pain Assessment on Admissions***
- ***0342 PICU Periodic Pain Assessment***

  The Children's Hospital Association requests reconsideration of these measures because there are very few endorsed measures available for pediatric inpatient care and these measures were included in the proposed rule for Stage 2 of Meaningful Use.

  Proposed Committee Response: The Committee first recommended that the measures be combined as periodic assessment can easily include the first assessment on admission. On further evaluation of the measures the Committee found there was no testing data or information for the measure and therefore does not meet NQF's criteria for Scientific Acceptability.

Theme 4- Related and Competing Measures

Several commenters noted the number of overlapping measures recommended for asthma medication management and recommend reducing the number to achieve parsimony:

0036 Use of appropriate medications for people with asthma
0047 Asthma: Pharmacologic Therapy for Persistent Asthma
0548 Suboptimal Asthma Control (SAC) and Absence of Controller Therapy (ACT)

1799 Medication Management for People with Asthma (MMA)
1800 Asthma Medication Ratio (AMR)

Comments noted that neither 0036 nor 0047 reflect improvement or decline in the patient's condition, nor do they track how well asthma is managed over time; a single prescription is a very basic standard of care and more robust measures are indicated to assess control that is related to improved outcomes; and preference for medication dispensation (0036) rather than prescription (0047) though other commenters prefer prescribed.. Measures 1799 and 1800 are potentially more meaningful to consumers because they include a care management component and therefore a stronger link to improved outcomes. Some commenters question the evidence for the 50% and 75% thresholds in measure 1799 which seem arbitrary. Additionally, comments noted that for measure 1800 a MPR of 0.50 seems arbitrary though another comment reports that a panel of experts from the ACAAI and AAAAI Joint Task Force, documented the correlation between a ratio > 0.5 and lower Emergency Department and Hospitalization rates for asthma The ratio measure was most discriminating if a denominator definition of one or more medical claims with a diagnosis of asthma plus 4 or more asthma medication dispensing events during the year prior to measurement was used. (Schatz M; et al Ann Allergy Asthma Immunol. 2009)

ACTION ITEM: The developers agreed to submit a plan and timeline for harmonization to be discussed on this call. After reviewing the comments and any responses by the developers and the plans for harmonization, does the Committee wish to reconsider any recommendations of the measures.

Comments supported harmonization of two measures for spirometry in COPD patients:

0091: COPD: spirometry evaluation
0577: Use of Spirometry Testing in the Assessment and Diagnosis of COPD

ACTION ITEM: The developers agreed to submit a plan and timeline for harmonization to be discussed on this call. After reviewing the harmonization plan and timeline does the Committee find it acceptable? If the plan is not acceptable, the Committee is asked to select the best measure to recommend.

Theme 5 - Outcome measures

Multiple comments from the American Hospital Association addressed several issues pertaining to the four outcome measures from CMS/Yale:

0506 Thirty-day all-cause risk standardized readmission rate following pneumonia hospitalizations
0468 Thirty-day all-cause risk standardized mortality rate following pneumonia hospitalizations
1891 Thirty-day all-cause risk standardized readmission rate following COPD hospitalizations

1893 Thirty-day all-cause risk standardized mortality rate following COPD hospitalizations

The Committee is urged to ask the developer to respond to the following issues:

- Failure to adjust for factors beyond the hospital's control such as patient characteristics, extreme circumstances, patient compliance and quality of post-acute care.
- Reliability – A recent CMS study required by the Accountable Care Act "shows the claims-based measures are unreliable." Additional reliability analyses are provided by KNG showing similar results.
- Harmonization with the recently endorsed measure *1789: Hospital-wide all-cause readmission measure* to exclude planned readmissions; harmonization of exclusions in the COPD measures compared to the pneumonia measures that include exclusions for discharged alive on day 0 or 1
- Exclusions for all Medicare patients in Hospice rather than just FFS Medicare patients enrolled in hospice.

Another comment asks why not recommend a process measure that evaluates compliance with the guidelines if that is thought to be the benefit of the measure.

ACCP asks for information on the performance of the risk model for pneumonia readmission.

Additionally other comments raised concerns with the validity of the coding for pneumonia and COPD measures, specifically that:

- the claims-based definition of pneumonia (for measures *0231 Inpatient pneumonia mortality* and 0506 and 0468) lacks sufficient validity and requests that the definition be updated to reflect coding trends, noting that this measure does not include patients with a primary diagnosis of sepsis or respiratory failure and a secondary diagnosis of pneumonia. A recent published study shows that hospital admissions with a primary diagnosis of pneumonia are declining over time, while at the same time admissions with a primary diagnosis of sepsis or respiratory failure and a secondary diagnosis of pneumonia are on the rise possibly due to the performance measures: http://jama.jamanetwork.com/article.aspx?volume=307&issue=13&page=1405

- research demonstrates that different algorithms for identifying COPD admission yield widely differing cohorts and there are no practical solutions at this time. A validation study examining the sensitivity and specificity of this coding strategy compared with the reference standard of a clinical diagnosis of an acute COPD exacerbation is necessary to ensure that these codes reliably and validly identify the intended target population, helping to mitigate the possibility that observed variation in outcome is due to variation in coding practices. Similar validation studies were performed prior to NQF endorsement of related measures for acute myocardial infarction, congestive heart failure and pneumonia, and the commenters believe that the COPD measures should be held to the same high standard.

Additionally a comment asks whether mortality is consistently coded.

ACEP suggests that measure 1891 (COPD readmissions) only be reported as a paired measure along with 1893 (COPD mortality) in order to more accurately reflect both outcomes of interest, the overall quality of care provided, and to enhance usability.

ACTION ITEM: CMS/Yale and AHRQ have responded to the various issues raised. CMS/Yale has advised NQF that they are working on harmonization of exclusions for planned readmission for the pneumonia and COPD readmission measures. This information will be provided to NQF and this Steering Committee no later than July 11.

After reviewing the comments and the measure developer's responses, does the Committee wish to reconsider their recommendations of the measures?

Theme 6- Specifications or coding

The following comments addressing specifications or coding have been forwarded to the developers for response. The developers' responses are listed in the comment spreadsheet.

0231: Pneumonia Mortality Rate (IQI #20)

The denominator should not exclude patients with missing documentation for date for discharge, disposition, age, gender, quarter, year or principal diagnosis.

0096: Empiric Antibiotic for Community-Acquired Bacterial Pneumonia

There is less attention to accurate coding in ambulatory pneumonias. As a result there are frequently mixtures of bacterial, viral and other pneumonias within any code set. We are also concerned that the measure references the Consensus Guidelines from the Infections Disease Society of America and the American Thoracic Society. Those guidelines do change over time but are not imbedded in the measure. This then requires that the measurement time periods be bound by the changes in the Guidelines.

1825: COPD - Management of Poorly Controlled COPD

This measure defines poorly controlled COPD not based upon FEV1 but based upon a variety of clinical and utilization-based criteria that may be non-specific for poorly controlled COPD. The ATS suggests further specifying the denominator to include only patients with an FEV1 <60% predicted, thus bringing it in line with the most current guidelines.

There are other measures of poorly controlled COPD other than a short acting bronchodilator, such as hospitalization, ED visit, steroid inhaler, visit frequency that could qualify a patient for the denominator. The denominator should include patients on long and short acting bronchodilators; how they will calculate the percentage if numerator is not included in the denominator?

0102: COPD: inhaled bronchodilator therapy

This measure defines poorly controlled COPD not based upon FEV1 but based upon a variety of clinical and utilization-based criteria that may be non-specific for poorly controlled COPD. The ATS suggests further specifying the denominator to include only patients with an FEV1 <60% predicted, thus bringing it in line with the most current guidelines/ ACP recommendation of <60% for FEV1/FVC ratio.

0577: Use of Spirometry Testing in the Assessment and Diagnosis of COPD
ACP and USPSTF both recommend AGAINST screening spirometry even in the presence of risk factors. The measure needs to clarify screening in symptomatic patients. The ACP Guideline referenced needs to be updated.
http://www.annals.org/content/155/3/179.full

Define the appropriate time frame in which to complete spirometry to confirm diagnosis.

0091: COPD: spirometry evaluation
There is no mention of respiratory symptoms in the measure. Also there is confusion about new diagnosis versus established diagnosis. COPD and respiratory symptoms would be better.

1800: Asthma Medication Ratio (AMR)
The denominator should be revised to be one or more medical claims with a diagnosis of asthma plus 4 or more asthma medication dispensing events during the year prior to measurement was used. This measure achieves the dual purpose of identifying patients who are not adequately persistent in their use of controller medication AND identifying patients who are high utilizers of rescue medications. Overuse of short-acting beta agonists (SABA) is associated with increased risk of hospitalization and is a marker for poor control and disease severity.

This measure should define asthma more specifically using the following four criteria 1) Symptoms (requiring use of an as-needed inhaler) more than twice a week 2) Nocturnal symptoms more than 2 nights per month 3) FEV1<80% predicted 4) Any limitation of activity because of asthma. The measure may be limited to bronchodilators but it is unclear if other meds are included.

Only ICS and LTRA should be counted among controllers, based on clinical efficacy and effectiveness data, availability, and use. The denominator should be described as "persistent asthma" unless there are data showing that the HEDIS denominator is specific for moderate-severe (as opposed to mild) persistent asthma.

1799: Medication Management for People with Asthma (MMA)
This measure should define asthma more specifically using the following four criteria 1) Symptoms (requiring use of an as-needed inhaler) more than twice a week 2) Nocturnal symptoms more than 2 nights per month 3) FEV1<80% predicted 4) Any limitation of activity because of asthma. The measure gives clinicians flexibility as to what to use as a controller med but seems better to specify an inhaled corticosteroid.

The denominator should be described as "persistent asthma" unless there are data showing that the HEDIS denominator is specific for moderate-severe (as opposed to mild) persistent asthma.

0548: Suboptimal Asthma Control (SAC) and Absence of Controller Therapy (ACT)
To more appropriately get at the issue of LTRA use for rhinitis instead of asthma, the measure should exclude patients whose ONLY controller is LTRA and who have received no short-acting beta agonists during the measurement year. The exclusion of patients who are treated with intranasal steroids (to increase specificity of the asthma population defined by LTRA dispensings alone) excludes many appropriate patients with both asthma and rhinitis.

ACTION ITEM: After reviewing the comments and the developers' responses, does the Committee wish to reconsider recommendations of any of these measures?

Theme 7 -Reserve status
Several comments suggest placing measures 0036 and 0047 in reserve status because of concerns about the measures.

Proposed Committee response: There may be some misunderstanding on what is needed in order to recommend measures for reserve status. Reserve status only applies to measures that meet all evaluation criteria except for sub-criteria 1b. Opportunity for Improvement. Measures for which there are concerns that the measure does not meet the evaluation criteria should not be placed on reserve status. The definitions and criteria for placing a measure in reserve status will be included in the draft report.

Theme 8 Various measure-specific comments that may warrant Committee consideration
Additional comments addressed a variety of issues that do not fit into the above themes:

CMS responded to comments/rationale documented in the "Draft Technical Report for Comment" from the Steering Committee's Evaluation of measure *0179 Improvement in Dyspnea* that was not recommended.

ACTION ITEM: After review of the comments, does the Committee wish to reconsider their recommendation?

ACCP recommends providing data generated by measures that are going through maintenance to allow for better determination of the effect of the current performance measures and the gaps necessitating their continued endorsement. Additionally, the risk-adjustment techniques would

be better assessed if model performance characteristics - such as calibration and discrimination - were provided to determine usability of the current measures.

Proposed Committee response: Data on current measure performance is requested at the time of measure submission. Data provided by the developers can be found in section 1b – Opportunity for improvement and 2b5 – Identification of meaningful differences in the measure forms that are post on the NQF website and may be accessed through the links on the measure title in the report. The characteristics of the risk models are also requested – the information provided by the developer can be found in section 2b4 Risk Adjustment Strategy.

Measure *0513: Thorax CT: Use of Contrast* Material would benefit from a more meaningful title and description.

Action taken: The recommendation has been forwarded to the measure developer.

Some performance data is several years old (2008). More current data would be appropriate for maintenance measures.

Action taken: The developer has provided 2010 performance data.

ATTACHMENTS

0356 PN3a--Blood cultures performed within 24 hours prior to or 24 hours after hospital arrival for patients who were transferred or admitted to the ICU within 24 hours of hospital arrival

Status: Maintenance, Original Endorsement: May 15, 2008
Description: Percent of pneumonia patients, age 18 years or older, transferred or admitted to the ICU within 24 hours of hospital arrival who had blood cultures performed within 24 hours prior to or 24 hours after arrival at the hospital.
Numerator Statement: Number of pneumonia patients transferred or admitted to the ICU within 24 hours of hospital arrival who had blood cultures performed within 24 hours prior to or 24 hours after arrival at the hospital
Denominator Statement: Patients, age 18 years or older, discharged with: ICD-9-CM principal diagnosis code of pneumonia OR ICD-9-CM principal diagnosis code of septicemia or respiratory failure (acute or chronic) AND an ICD-9-CM Other diagnosis code of pneumonia
Table 3.1 Pneumonia (PN)
ICD-9 Code Shortened Description
481 PNEUMOCOCCAL PNEUMONIA
482.0 K. PNEUMONIAE PNEUMONIA
482.1 PSEUDOMONAL PNEUMONIA
482.2 H.INFLUENZAE PNEUMONIA
482.30 STREPTOCOCCAL PNEUMN NOS
482.31 PNEUMONIA STRPTOCOCCUS A
482.32 PNEUMONIA STRPTOCOCCUS B
482.39 PNEUMONIA OTH STREP
482.40 STAPHYLOCOCCAL PNEU NOS
482.41 METH SUS PNEUM D/T STAPH
482.42 METH RES PNEU D/T STAPH
482.49 STAPH PNEUMONIA NEC
482.82 PNEUMONIA E COLI
482.83 PNEUMO OTH GRM-NEG BACT
482.84 LEGIONNAIRES´ DISEASE
482.89 PNEUMONIA OTH SPCF BACT
482.9 BACTERIAL PNEUMONIA NOS
483.0 PNEU MYCPLSM PNEUMONIAE
483.1 PNEUMONIA D/T CHLAMYDIA
483.8 PNEUMON OTH SPEC ORGNSM
485 BRONCHOPNEUMONIA ORG NOS
486 PNEUMONIA, ORGANISM NOS
Table 3.2 Septicemia
ICD-9 Code Shortened Description
038.0 STREPTOCOCCAL SEPTICEMIA
038.10 STAPHYLCOCC SEPTICEM NOS
038.11 METH SUSC STAPH AUR SEPT
038.12 MRSA SEPTICEMIA
038.19 STAPHYLCOCC SEPTICEM NEC
038.2 PNEUMOCOCCAL SEPTICEMIA
038.3 ANAEROBIC SEPTICEMIA
038.40 GRAM-NEG SEPTICEMIA NOS
038.41 H. INFLUENAE SEPTICEMIA
038.42 E COLI SEPTICEMIA
038.43 PSEUDOMONAS SEPTICEMIA
038.44 SERRATIA SEPTICEMIA
038.49 GRAM-NEG SEPTICEMIA NEC
038.8 SEPTICEMIA NEC
038.9 SEPTICEMIA NOS
995.91 SEPSIS
995.92 SEVERE SEPSIS

0356 PN3a--Blood cultures performed within 24 hours prior to or 24 hours after hospital arrival for patients who were transferred or admitted to the ICU within 24 hours of hospital arrival
Table 3.3 Respiratory Failure
ICD-9 Code Shortened Description
518.81 ACUTE RESPIRATRY FAILURE
518.84 ACUTE & CHRONC RESP FAIL
Table 3.1 Pneumonia (PN)
ICD-10 Code Shortened Description
J 13 Pneumonia due to Streptococcus pneumoniae
J 18.1 Lobar pneumonia, unspecified organism
J 15.0 Pneumonia due to Klebsiella pneumoniae
J 15.1 Pneumonia due to Pseudomonas
J 14 Pneumonia due to Hemophilus influenzae
J 15.4 Pneumonia due to other streptococci
J 15.3 Pneumonia due to streptococcus, group B
J 15.20 Pneumonia due to staphylococcus, unspecified
J 15.21 Pneumonia due to staphylococcus aureus
Z 16 Infection and drug resistant microorganisms
J 15.29 Pneumonia due to other staphylococcus
J 15.5 Pneumonia due to Escherichia coli
J 15.6 Pneumonia due to other aerobic Gram-negative bacteria
A 48.1 Legionnaires' disease
J 15.8 Pneumonia due to other specified bacteria
J 15.9 Unspecified bacterial pneumonia
J 15.7 Pneumonia due to Mycoplasma pneumoniae
J 16.0 Chlamydial pneumonia
J 16.8 Pneumonia due to other specified infectious organisms
J 18.0 Bronchopneumonia, unspecified organism
J 18.8 Other pneumonia, unspecified organism
J 18.9 Pneumonia, unspecified organism
J 17 Pneumonia in diseases classified elsewhere
J 18.2 Hypostatic pneumonia, unspecified organism
J 85.1 Abscess of lung with pneumonia
Table 3.2 Septicemia
ICD-10 Code Shortened Description
A 40.0 Sepsis due to streptococcus, group A
A 40.1 Sepsis due to streptococcus, group B
A 40.3 Sepsis due to Streptococcus pneumoniae
A 40.8 Other streptococcal sepsis
A 40.9 Streptococcal sepsis, unspecified
A 41.9 Sepsis unspecified
A 41.2 Sepsis due to other unspecified specified staphylococcus
A 41.0 Sepsis due to Staphylococcus aureus
A 41.0 AND U80.1 Sepsis due to Staphylococcus aureus AND Methicillin-resistant staph aureus infection
A 41.1 Sepsis due to other specified staphylococcus
A 41.89 Other specified sepsis
A 41.4 Sepsis due to anaerobes
A 41.50 Gram-negative sepsis, unspecified
A 41.3 Sepsis due to Hemophilus influenzae
A 41.51 Sepsis due to Escherichia coli (E coli)
A 41.52 Sepsis due to pseudomonas
A 41.53 Sepsis due to Serratia
A 41.59 Other Gram-negative sepsis
A 41.81 Sepsis due to Enterococcus
A 42.7 Actinomycotic sepsis

0356 PN3a--Blood cultures performed within 24 hours prior to or 24 hours after hospital arrival for patients who were transferred or admitted to the ICU within 24 hours of hospital arrival

A 41.9 Sepsis, unspecified
R65.20 Severe sepsis without septic shock
R65.21 Severe sepsis with septic shock
Table 3.3 Respiratory Failure
ICD-10 Code Shortened Description
J 96.0 Acute respiratory failure
J 96.9 Respiratory failure, unspecified
J 96.2 Acute and chronic respiratory failure
J 96.1 Chronic respiratory failure
J 80 Acute respiratory syndrome
J 22 Unspecified acute lower respiratory infection
J 98.8 Other specified respiratory disorders
Exclusions: Patients less than 18 years of age,
Patients with a length of stay greater than 120 days,
Patients with Cystic Fibrosis,
Patients who had not chest x-ray or CT scan that indicated abnormal findings within 24 hours prior to hospital arrival or anytime during this hospitalization,
Patients with Comfort Measures Only,
Patients enrolled in clinical trial,
Patients received as a transfer from emergency/observation department of another hospital,
Patients received as a transfer from an inpatient or outpatient department of another hospital,
Patients received as a transfer from an ambulatory surgery center,
Patients who had no diagnosis of pneumonia either as an ED final diagnosis/impression or direct admission diagnosis/impression and
Patients who have a duration of stay less than or equal to one day
Adjustment/Stratification: No risk adjustment or risk stratification N/A This measure is not stratified.
Level of Analysis: Facility, Population : National, Population : Regional, Population : State
Type of Measure: Process
Data Source: Administrative claims, Paper Records
Measure Steward: Centers for Medicare & Medicaid Services Other organizations: The Joint Commission, Centers for Disease Control and Prevention, Infectious Diseases Society of America, American Thoracic Society, Johns Hopkins University, Northeastern Ohio Univ. College of Medicine, Pneumonia Patient Outcomes Team, New Jersey Medical

IMPLEMENTATION COMMENTS

- APIC does not approve measure 0356. As outlined with our comment on measure 0148, we recommend NQF engage IDSA/ATS and other societies that represent intensivists on the value of use of this measure to assess and compare provider performance in relationship to timing. We agree that samples of blood and sputum for culture and urinary antigen testing are clear-cut for those with severe CAP who need critical care. We're not as sure of use of the timing of such testing for performance measurement.
    - Developer response: The performance measure simply asks whether a blood culture was obtained within 24 hours of hospital arrival for those patients who are admitted to the ICU within 24 hours of hospital arrival. This is consistent with recommendations from the IDSA/ATS 2007 guidelines for management of community-acquired pneumonia (see Table 5) that recommend routine blood cultures in ICU-admitted pneumonia patients. There are representatives of both the IDSA and ATS that participate on the technical expert panel that developed this performance measure.
- None of the ACCP QIC members use this measure at their institution and have never seen any data related to this measure. The QIC questions whether or not this measure sees widespread use.
    - Developer response: First Quarter of 2011, 3,152 hospitals reported this measure. The quarterly national rates and benchmarks for PN-3a are publicly available as a downloadable Excel of PDF files at the bottom of this CMS webpage:

      http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228768205297

Steering Committee Evaluations

0356 PN3a--Blood cultures performed within 24 hours prior to or 24 hours after hospital arrival for patients who were transferred or admitted to the ICU within 24 hours of hospital arrival

Importance to Measure and Report (*based on decision logic*): Passed all three subcriteria
1a. Impact: H-16; M-3; L-0; I-0; 1b. Performance Gap: H-8; M-10; L-1; I-0
Rationale:

- The impact and need for improvement in compliance is well documented in the Hospital Inpatient Quality Reporting Program.
- The performance indicates that a blood culture is performed 96.9% of the time on ICU patients.
- Data on disparities indicate variation across all demographic groups that could be reduced. The Steering Committee discussed the potential of the measure being topped out, but noted that if CMS determines a measure is topped out they do not include it in the Value Based Purchsing Program.

1c. Evidence (*based on decision logic*): Y-18; N-1; I-0
Rationale:

- The joint guidelines by the Infectious Disease Society of America (IDSA) and American Thoracic Society (ATS) state "Pretreatment blood samples for culture and an expectorated sputum sample for stain and culture should be obtained from hospitalized patients with clinical indications listed on Table 5 (ICU is listed) but are optimal for patients without these conditions." Additionally, the quantity and quality of evidence is recent and reported in large datasets, consistent across reported outcomes. Taken together, the metric reflects scientific evidence and the opinion within the field.

2. Scientific Acceptability of Measure Properties (*based on decision logic*): Passed both subcriteria
2a. Reliability: H-15; M-4; L-0; I-0; 2b. Validity: H-17; M-1; L-0; I-1
Rationale:

- The measure is precisely specified and targeted to a high risk population of patients transfered into the ICU for pneumonia.
- Challenges will always exist with administrative data but routine use for many years has likely decreased the variation in collection of the data.

3. Usability: H-16; M-3; L-0; I-0
(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting and 3b. Quality Improvement)*
Rationale:

- The measure has been nationally reported as part of the CMS performance measure set for the Hospital Inpatient Quality Reporting Program since 2002; however, it is not publicly reported.
- The national rate of this measure has been reported on a quarterly basis.
- It is also used by The Joint Commission for acceditation.

4. Feasibility: H-16; M-3; L-0; I-0
(4a. Clinical data generated during care process; 4b. Electronic data; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)
Rationale:

- The specificatins are modified every 6 months according to feedback from hosptial staff and clinicians.

Steering Committee Assessment of Criteria Met/Suitable for Endorsement: Y-19; N-0
Rationale:

- This measure has been widely reported and is in use by several sources.
- It has been proven to have a direct impact on patient care and is consistent with IDSA/ATS guidelines

Additional Comments/Questions:

- The Steering Committee requested that the title be further specified to state that it focuses on "pneumonia patients".

RECOMMENDED FOR ENDORSEMENT

0549 Pharmacotherapy management of COPD exacerbation (PCE)

Status: Maintenance, Original Endorsement: Aug 05, 2009

Description: This measure assesses the percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or ED encounter on or between January 1–November 30 of the measurement year and who were dispensed appropriate medications.

Two rates are reported.

1. Dispensed a systemic corticosteroid within 14 days of the event
2. Dispensed a bronchodilator within 30 days of the event

Note: The eligible population for this measure is based on acute inpatient discharges and ED visits, not on members. It is possible for the denominator to include multiple events for the same individual.

Numerator Statement: This measure looks at the number of patients with an acute exacerbation related to COPD who were discharged and were dispensed medications following the discharge with appropriate medications. Two rates are reported for the numerator.

Rate 1: Dispensed prescription for systemic corticosteroid (Table PCE-C) on or 14 days after the Episode Date.

Rate 2: Dispensed prescription for a bronchodilator (Table PCE-D) on or 30 days after the Episode Date.

Denominator Statement: The eligible population for the measure includes all health plan members 40 years or older as of January 1 of the measurement year discharged from an inpatient setting (acute inpatient or ED) with a principal diagnosis of COPD

Exclusions: 1) Exclude any episodes on which the patient was transferred directly to an acute or nonacute care facility for any diagnosis.
2) Exclude inpatient ED Episodes on which the patient was readmitted to an acute or nonacute care facility for any diagnosis on or seven days after discharge.

Adjustment/Stratification: No risk adjustment or risk stratification N/A N/A

Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Clinician : Team, Facility, Health Plan, Integrated Delivery System, Population : National, Population : Regional

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Pharmacy

Measure Steward: National Committee for Quality Assurance

IMPLEMENTATION COMMENTS

America's Health Insurance Plans: Measures #0549 and 0577 are not very useful as they are subject to small numbers issues. Additionally, there are issues with data availability. For example, if a spirometry test is performed in the hospital these data may not be captured and the patient could be classified as non-compliant. The measure is also designed to identify new diagnosis of COPD and the timeline is insufficient to have data on new enrollees.

None of the ACCP QIC members use this measure at their institution and have never seen any data related to this measure. The QIC questions whether or not this measure sees widespread use

Steering Committee Evaluations

Importance to Measure and Report (*based on decision logic*): PASSED all three sub-criteria

1a. Impact: H-15; M-3; L-0; I-0; 1b. Performance Gap: H-2; M-13; L-2; I-1

Rationale:

- 1a: Measure focuses on high impact condition affecting 12M Americans and contributing to significant mortality.
- 1b: Limited evidence presented regarding under utilization of pharmacotherapy management
- Developer submitted the following current performance:

  Rate 1 (steroids): commercial health plan means: 69.8 (2010); 66.1 (2009); 67 (2008)

  Rate 2 (bronchodilator): commercial health plan means: 77.8 (2010); 78.7 (2009)
- There is lack of evidence that measure is currently informing quality improvement.

1c. Evidence (*based on decision logic*): Y-15; N-1; I-2

Rationale:

- Developer's assessment of evidence is inconsistent with materials presented.
- Does not cite original literature, uses concensus statements only.

0549 Pharmacotherapy management of COPD exacerbation (PCE)

2. Scientific Acceptability of Measure Properties (*based on decision logic*): Did not pass validity
2a. Reliability: H-1; M-11; L-5; I-1; 2b. Validity: H-1; M-7; L-8; I-2
Rationale:

- Testing results provided at the health plan level only.
- Reliability and validity testing are difficult to interpret.
- RELIABILITY: specifications – claims-based measure
  - Numerator for rate 1 includes both inhaled and oral steroids
  - Age 40 and over – concerns with lack of harmonization with other COPD measures
  - Uses only a primary discharge diagnosis of COPD. The Committee asked about inclusion ofrespiratory failure with a secondary diagnosis of COPD.
- VALIDITY: The Committee raised a series of questions.
  - Does the measure capture inhalers that were given to patients in the ED – something that is happending with growing frequency to encourage compliance. Are the medications only captured if the patient is charged for it?
  - What if the patient has existing medications and does not need a new prescription? Is there a pharmacy look back period?
  - How does the measure handle medications that are "stockpiled" for use in the event of an exacerbation?
    - The developer replied that there is not an active look back period but considers whether there is an active prescription and noted that the measures is "dispensed" based and not prescription based.
  - The measure lacks assessment of need for stratification for disparities.
  - A validation test was conducted in 2006 to determine the ability to capture COPD exacerbations (the denominator data element) in administrative claims data compared to chart review; testing on the numerator data elements was not provided.

Additional developer response to discussion of reliability and validity:

- *1) Does our measure capture samples providing in the ED or hospital?* There currently is no mechanism for capturing this practice in any setting or level of accountability, whether that is a health plan, a hospital, ED or physician office. Additionally, since this is a health plan specified measure (for patients with insurance coverage) we have found that there are positive incentives for providers of all types to submit claims to insurers for payment, including medications. We would also like to add that all NCQA medication related measures rely on dispensed drugs (not prescribed) which we believe best captures patient adherence. Health plans are clearly accountable for performance and in a position to drive improved performance.

- *2) Does our measure capture prescriptions provided at the ED?* Yes ED visits and related prescription medication claims are captured by the health plans, the same way as any outpatient visit and related dispensed medications.

- *3) How do you capture listed medications that are in current use (active prescription) at the time of the event (i.e., is there a look back period)?* If the member is on a prescription prior to the date of the exacerbation, any days supply left from that script can be used to count the person as a numerator hit. For example, if the member filled a script on December 1, of the measurement year with a 60 day supply, then had a COPD exacerbation on January 2, of the measurement year, that person would have some days supply. That active script would be counted as a numerator hit for this member's event. We are not prescriptive about how long to look back, so regardless of what method the health plan is using, if the method meets the intent, it is acceptable. I can tell you that most industry vendors look back 90 or 120 days. Very rarely is a prescription issued for more than 90 days at a time. There are some inhalers on the list, so it is harder to predict exactly how long those will last. We do know that some vendors prefer to use 120 days for this reason. They want to make sure they are catching anything that might be relevant. As a reminder, all of HEDIS health plan measures are audited by certified vendors.

The Committee considered the responses from the developer in the weeks after the meeting.

- The majority of the Committee agreed that the additional information did not resolve their questions. The key issue is whether or not administrative claims-based data can reliably and accurately capture whether a patient hospitalized or in the ED for a COPD exacerbation receives systemic steroids within 14 days post discharge (e.g., including those that may already have supplies or those who received samples from the hospital or ED).

DO NOT RECOMMEND ENDORSEMENT