March 13, 2012

Dear Dr. Winkler,

The American College of Chest Physicians (ACCP) and the American Thoracic Society (ATS) are two medical specialty societies whose members include in excess of 32,000 clinicians and scientists.

The ACCP and ATS appreciate the opportunity to provide a response to the National Quality Forum’s request to identify areas in pulmonary medicine where measures do not exist, but if they did would improve the quality of care provided. As such, a task force comprised of ACCP and ATS representatives was convened to prepare a report for your consideration.

The members of the ACCP/ATS Pulmonary Measure Gap Task Force and the leadership of ACCP and ATS are privileged to partner with the NQF in this effort. Should you have any questions, please do not hesitate to contact us.

Sincerely,

Suhaill Raoof, MBBS, FCCP
President, American College of Chest Physicians

Nicholas S. Hill, MD
President, American Thoracic Society.
ACCP/ATS Pulmonary Measure Gap Task Force

Measure Gap Areas in Pulmonary Medicine

March 13, 2012
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Introduction

The assessment of the quality of care provided by medical practitioners is enhanced through the creation and implementation of performance measures. The National Quality Forum (NQF) has served as a major vehicle for the endorsement of these measures.

In response to the perceived measures gap in pulmonary medicine, in January 2012 the ACCP and ATS appointed a Pulmonary Measure Gap Task Force consisting of members from both societies (Appendix A). The ACCP/ATS Pulmonary Measure Gap Task Force subsequently met via teleconference in order to create a framework for the generation of several potential pulmonary performance measures to address the performance measures gap. The methodology and the results of this effort are provided below. Of note, this effort does not include critical care measure gaps, which are described in a separate report, or pediatric pulmonary gaps, which were outside this Task Force’s scope. The ACCP/ATS Task Force endorses the critical care measure gaps identified in the Critical Care Societies Collaborative Critical Care Measure Gap Report, which include:

- Management of sepsis
- Overuse of blood transfusions
- Ventilator-associated pneumonia
- Risk-adjusted intensive care unit (ICU) outcome
- Therapeutic hypothermia
- Daily chest radiographs in ICU patients
- Screening of acute lung injury/acute respiratory distress syndrome

The ACCP/ATS Pulmonary Measure Gap Task Force understands that the topics provided below only serve as a starting point for the generation of performance measures. The Task Force acknowledges the principles required by the NQF for performance measures: importance, scientific acceptability, usability, and feasibility, may not all be met by the proposed topics, must be fully realized in order to proceed with any recommendation for a performance measure in pulmonary medicine. The Task Force recognizes much additional work is required. Yet, we are confident meaningful, and widely accepted performance measures in the area of pulmonary medicine can be generated. The members of the ACCP/ATS Pulmonary Measure Gap Task Force are privileged to partner with the NQF in this effort.

Methodology

ACCP staff developed a spreadsheet of all existing pulmonary medicine performance measures using the National Quality Measures Clearinghouse (Appendix B). ACCP staff categorized all of the measures by disease state and provided the following information about each measure:

- Measure Name
- Measure Description
- NQF Endorsement Status
- Description of national programs where existing performance measures are implemented
- Mapped to the national priorities that were identified by the Institute of Medicine, National Priority Partners, and National Strategy for Quality Improvement in Health Care.
This information was distributed to the ACCP Quality Improvement Committee (QIC), ACCP Airways, Chest Infections, Interventional Chest/Diagnostic Procedures, Pulmonary Physiology, Function, and Rehabilitation, Occupational and Environmental Health, Thoracic Oncology, and Transplant NetWorks with a request to review the existing performance measures in their area of expertise and respond with any potential measure gaps.

The spreadsheet and potential measure gaps were then presented to the ACCP/ATS Pulmonary Measure Gap Task Force prior to their first conference call. On their first teleconference, the Task Force reviewed the grid of measures, potential measure gaps submitted by the ACCP QIC and ACCP NetWorks and discussed each disease state that would be encountered in the pulmonary setting. Critical Care measure gaps were addressed in Measure Gaps Areas in Critical Care Medicine submitted on February 9, 2012 by the Critical Care Societies Collaborative. Furthermore, this group did not identify measure gap area in pediatric pulmonary care.

For each disease state, the Task Force discussed whether or not the existing performance measures omitted key factors related to the quality of care, or if the addition of a performance measure to an existing measure gap would improve the quality assessment for that particular disease state. When the ACCP/ATS Pulmonary Measure Gap Task Force identified a performance measure gap in a particular category, a Task Force member was assigned to provide rationale for the need of a performance measure(s) in this area and provide evidence for this rationale. Evidence included clinical guidelines, peer-reviewed manuscripts in the medical literature, and/or data from quality improvement initiatives (e.g., registry). A standardized form (Appendix C) was created to facilitate this process.

Once the ACCP/ATS Pulmonary Measure Gap Task Force members submitted the completed rationale, and evidence base for each of the measure gap areas was completed and submitted, this report was drafted. Members of the ACCP/ATS Pulmonary Measure Gap Task Force were then asked to complete a survey (Appendix D) that requested Task Force members to prioritize the identified gap areas by importance, as defined by the NQF.²

The Task Force identified performance measure gaps in the following pulmonary medicine areas and prioritized them as follows:

1. COPD
2. Ventilator Association Pneumonia and Mechanical Ventilation
3. Palliative Care and Dyspnea
4. Asthma
5. Interstitial Lung Disease
6. Iatrogenic Pneumothorax with Thoracentesis

The Task Force also identified areas where performance measure gaps may exist, however, could not find an evidence base to support the existence of a gap. Those areas were:

- Non-Cystic Fibrosis Bronchiectasis
- Chronic Bronchitis
- Pleural Disease
Once this report was approved and finalized by the members of the ACCP/ATS Pulmonary Measure Gap Task Force, the ACCP and ATS leadership reviewed and endorsed this report.

### Measure Gap Areas

**Chronic Obstructive Pulmonary Disease (COPD)**

*Acute Exacerbations of COPD*

Chronic obstructive pulmonary disease (COPD) is now the nation’s 3rd leading cause of death and exacerbations result in more than 500,000 annual hospital admissions. Healthcare costs for COPD are over $40 billion per year and expected to climb as the burden from COPD increases; a major contributing factor for healthcare costs for COPD is related to the evaluation and management of COPD exacerbations. Evidence-based guidelines strongly recommend use of inhaled short-acting bronchodilators, systemic corticosteroids, referral to pulmonary rehabilitation, review of discharge medications, and assisting patients with scheduling outpatient follow-up appointments in all patients hospitalized for COPD exacerbations.\(^4,5,6,7,8\) Guidelines recommend some additional interventions in selected patients, including counseling and pharmacotherapy for smoking cessation (for current smokers), antibiotics (for those with changes in sputum production or dyspnea), and early use of non-invasive mechanical ventilation (bi-level ventilation for those with impending respiratory failure).

Prior research has identified deficiencies in the delivery of recommended care for acute exacerbations of COPD, highlighting opportunities to improve the quality of care in both ambulatory and inpatient settings. These studies demonstrate the underuse of guideline recommended treatments such as systemic corticosteroids, overuse of potentially ineffective therapies such as sputum testing in the absence of pneumonia, and the misuse of others, such as spirometry in acute presentations. The studies also show that the treatment and outcomes of patients hospitalized for exacerbations of COPD vary widely across hospitals. Yet despite enormous clinical and economic consequences of COPD, recognized gap in the quality of care, and variation in quality across hospitals, no rigorous efforts have been made to develop, implement or evaluate strategies to speed the translation of guideline-recommended treatments into the routine clinical care of patients hospitalized for COPD.\(^4,5,6,7,8\)

One example of potential quality measures (see following table) for the assessment of hospitalized acute exacerbations can be drawn from bundled care proposed by the COPD Outcomes-Based Network for Clinical Effectiveness and Research Translation (CONCERT), an inter-disciplinary and multi-institutional team of investigators dedicated to improving the outcomes for patients with COPD through the development of effective methods to translate biomedical knowledge into routine practice.\(^8\) This set has been vetted by its national group of stakeholder organizations and prioritized within a translational research agenda in acute and chronic COPD care. The COPD acute hospital exacerbation bundle has also been proposed to CMS as part of a measure gap analysis performed in late 2011.

#### Acute Care Practices to be Delivered at Admission

<table>
<thead>
<tr>
<th>Controlled oxygen</th>
<th>Evidence Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>To achieve oxygen saturation of &gt;90%; 88-92% among patients with</td>
<td>B</td>
</tr>
<tr>
<td><strong>history of hypercarbia (PCO2 &gt; 45)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Arterial blood gas measurement</strong></td>
<td>B</td>
</tr>
<tr>
<td>In all hypoxic pts who have a history of hypercarbia or in patients for whom it is unknown</td>
<td></td>
</tr>
<tr>
<td><strong>Inhaled short acting beta agonist</strong></td>
<td>A</td>
</tr>
<tr>
<td>All patients</td>
<td></td>
</tr>
<tr>
<td><strong>Inhaled short acting anticholinergic</strong></td>
<td>B</td>
</tr>
<tr>
<td>All patients</td>
<td></td>
</tr>
<tr>
<td><strong>Non-invasive mechanical ventilation</strong></td>
<td>A</td>
</tr>
<tr>
<td>For patients with acidosis (7.25 ≤ pH ≤ 7.35) / Hypercapnia (PaCO2 &gt; 45 mmHg); respiratory frequency &gt; 25 breaths/minute but &lt; 35 breaths/min. Moderate-to-severe dyspnea with use of accessory muscles and paradoxical abdominal motion; Contraindications: respiratory arrest, cardiovascular instability (hypotension, arrhythmias, myocardial infarction), somnolence / inability to follow commands, high aspiration risk</td>
<td></td>
</tr>
<tr>
<td><strong>Systemic corticosteroids</strong></td>
<td>A</td>
</tr>
<tr>
<td>For all patients. Oral or intravenous administration acceptable. Lower doses (ie 40mg once daily of prednisone) preferred</td>
<td></td>
</tr>
<tr>
<td><strong>Systemic antibiotics</strong></td>
<td>B/C</td>
</tr>
<tr>
<td>All patients requiring mechanical ventilation; Patients with increased sputum purulence and one other cardinal symptom</td>
<td></td>
</tr>
</tbody>
</table>

### Chronic Care Practices to be Delivered Prior to Discharge

| Smoking cessation counseling | A |
| For all patients who are active smokers. Recommend nicotine replacement therapy |  |
| **Influenza and pneumococcal vaccination** | A/B |
| Administer in season if not contraindicated; Administer to those without vaccination in past 5 years |  |
| **Assessment and training regarding Inhaler technique** | C |
| All patients |  |
| **Assess need for home oxygen** | B |
| All patients |  |
| **Prescribe preventive medication** | B |
| All patients; options include inhaled steroid, long-acting beta agonist, tiotropium |  |
| **Post-discharge coordination** | C |
| All patients. Components include medication reconciliation, scheduled follow-up visit within 4 weeks, referral to pulmonary rehabilitation (where available), structured communication with primary care physician regarding home oxygen and smoking cessation interventions initiated during the hospitalization |  |

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to acute exacerbations of COPD as following:
• Controlled oxygen to achieve oxygen saturation of >90% generally and 88-92% among patients with history of hypercarbia (PCO2 > 45) in acute COPD exacerbation
• Arterial blood gas measurement in all hypoxic pts who have a history of hypercarbia or in patients for whom it is unknown in acute hospitalized COPD exacerbation
• Inhaled short acting beta agonist in all patients in acute COPD exacerbation
• Inhaled short acting anticholinergics in all patients in acute COPD exacerbation
• Non-invasive mechanical ventilation for patients with acidosis (7.25 < pH<7.35) associated with hypercapnia (PaCO2>45 mmHg) in acute COPD exacerbation without contraindications (respiratory arrest, cardiovascular instability (hypotension, arrhythmias, myocardial infarction), somnolence / inability to follow commands, high aspiration risk)
• Systemic corticosteroids for all patients in acute COPD exacerbation; noting lower doses of oral corticosteroids preferred (ie 40mg once daily equivalence of prednisone)
• Systemic antibiotics for patients requiring mechanical ventilation or patients with increased sputum purulence and one other cardinal symptom (increased sputum volume or increased dyspnea).

Additionally the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to chronic care practices after acute exacerbations of COPD as following:

• Smoking cessation counseling for all patients who are active smokers.
• Recommend nicotine replacement therapy for smokers
• Influenza vaccination in season if not contraindicated and pneumococcal vaccination in those without vaccination in past 5 years
• Assessment and training regarding inhaler technique for all patients
• Post-hospitalized COPD discharge coordination to include medication reconciliation, scheduled follow-up visit within 4 weeks, referral to pulmonary rehabilitation (where available), structured communication with primary care physician regarding home oxygen and smoking cessation interventions initiated during the hospitalization

Given these recommendations for the focus of future measures, consideration must be given to the future measures' specification.

Pulmonary Rehabilitation for COPD Patients
Pulmonary rehabilitation has been inconsistently prescribed for patients with significant COPD because of many factors including lack of accessible programs, lack of insurance coverage and, until recently, lack of good quality studies demonstrating its benefit. Following the publication of the National Emphysema Treatment Trial results, CMS was approached by multiple medical societies advocating for coverage of pulmonary rehabilitation in COPD patients. Ultimately, Medicare coverage for pulmonary rehabilitation was implemented in 2010. A short summary of this road to reimbursement, which opened the door to many patients, can be found at the RT Magazine website.

Based on the results of multiple, well-designed clinical trials, existing COPD guidelines recommend Pulmonary Rehabilitation for patients with symptomatic COPD. The legislation supporting pulmonary rehabilitation outlines mandatory components for programs that include:

1. physician-prescribed exercise;
2. education or training;
3. psychosocial assessment;
4. outcome assessment.

However, no national ‘tracking system’ monitors individual programs so there is likely wide variation not only in components of systems but also in outcome measurements and in identification of appropriate patients. Thus a performance measure focused on pulmonary rehabilitation is likely to be of value both in assessing programs and improving consistency of care.

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to pulmonary rehabilitation for patients with significant COPD:

• For symptomatic patients, multidimensional pulmonary rehabilitation should be considered.

Given this recommendation for the focus of future measures, consideration must be given to the future measure’s specification.

**Risk and Comorbidities**
COPD guidelines currently highlight depression as a risk factor for increased utilization and symptom complexes in COPD as well as a psychosocial issue in care management that should be addressed by clinicians. The most recent version of the GOLD guidelines state, “symptoms of depression and/or anxiety merit specific enquiry in the clinical history because they are common in COPD and are associated with increased risk of exacerbations and poor health status.” Yet currently GOLD contains no other specific recommendations to screen for depression in COPD or which screening assessment to use. A recent meta-analysis of eight studies showed that almost 25% of COPD patients have depressive symptoms, a rate more than twice that of controls. Another review showed that depression is consistently identified as impairing the ability of patients to adhere to management strategies like pulmonary rehabilitation.

Based on these data the United States Preventive Services Task Force (USPSTF) provides the following recommendation:

The U.S. Preventive Services Task Force (USPSTF) recommends screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up.

**Rating:** B Recommendation.

**Rationale:** The USPSTF found good evidence that screening improves the accurate identification of depressed patients in primary care settings and that treatment of depressed adults identified in primary care settings decreases clinical morbidity. Trials that have directly evaluated the effect of screening on clinical outcomes have shown mixed results. Small benefits have been observed in studies that simply feed back screening results to clinicians. Larger benefits have been observed in studies in which the communication of screening results is coordinated with effective follow-up and treatment. The USPSTF concluded the benefits of screening are likely to outweigh any potential harms.
The USPSTF goes on to note that chronic disease is one of the risk factors for depression. Short, easy-to-administer, valid screening tests exist; however, many barriers still exist with regards to the detection and diagnosis of depression along with its management. There is recognition of the importance of this parameter in the updated COPD guidelines, but there is substantial variability in this aspect of disease, which can have a significant impact on patient outcomes.

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following area of focus for future performance measures related to screening for depression in patients that have COPD:

- Depression screening in patients with COPD.

Given this recommendation for the focus of future measures, consideration must be given to the future measure’s specification.

**Palliative Care and Dyspnea**

Assessment and treatment of dyspnea as specific clinical management strategies, as well as the larger approach of palliative care, are widely applicable to many pulmonary conditions and most especially to those chronic progressive disorders that commonly result in extended symptom complexes or death. Although some preliminary measures were identified, gaps exist generally in application of quality metrics for palliative care and dyspnea and in the scope of particular measures. Recent studies in palliative care suggest benefits for patients with COPD, lung cancer, and others.

A number of recent guidelines and task forces have identified assessment of dyspnea as underdeveloped in clinical practice and suggest performance measures should be part of the approach to improving care across cardiopulmonary disorders that manifest this symptom.

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to assessment of dyspnea and its related bother as following:

- Dyspnea assessment should be used in all patients and settings anticipated to manifest breathing difficulty and should employ a patient self-reported measure of intensity
- Assessment should include inquiry into the associated bother or distress experienced by the patient by the symptom
- Inclusion of palliative care services should be offered to patients with chronic progressive pulmonary conditions

Given these recommendations for the focus of future measures, consideration must be given to the future measures’ specification.

**Asthma**

*Treatment of Acute Asthma Exacerbations in the Emergency Department (ED)/Hospital Setting*

Asthma affects an estimated 25 million Americans. Exacerbations among asthmatics are a frequent occurrence, and mild exacerbations can often be managed at home with the aid of action
plans emphasizing early symptom recognition and appropriate escalation of inhaled medications.  Nevertheless, more severe asthma exacerbations remain common, with 2 million emergency department visits and 500,000 hospitalizations attributed to asthma each year.

In an effort to improve outcomes among patients requiring care in the acute setting, the NHLBI National Asthma and Education Program (NAEP) has established evidence-based guidelines for the treatment of acute asthma exacerbations. Based on multiple studies demonstrating benefit, these guidelines recommend the use of short-acting bronchodilators, systemic corticosteroids, and serial assessments of lung function for all patients presenting to the acute care setting with an asthma exacerbation (see Table below). Furthermore, the guidelines place an emphasis on appropriate patient education prior to discharge, to include review of prescription medications and inhaler techniques, as well as the development of a clear asthma action plan and scheduled follow-up with a healthcare provider within 4 weeks.

Few studies evaluating adherence to guideline recommendations among patients with asthma exacerbations requiring acute care have been performed. However, the evidence that is available suggests that despite the NAEP guidelines, discrepancies still exist between recommended and delivered care. In a study of 4,000 patients presenting to the 63 emergency departments nationwide with an acute asthma exacerbation, substantial geographic variation existed in concordance with guideline measures. Another prospective study of 200 inner-city adults hospitalized with an acute asthma exacerbation demonstrated significant underuse of guideline-recommended care, including underuse of peak flow meters and written action plans. These discrepancies offer an opportunity to improve quality of care, in hopes of improving clinical outcomes and decreasing health care costs among this population of patients.

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to the treatment of adults presenting to the ED and/or hospitalized with an acute exacerbation of asthma:

<table>
<thead>
<tr>
<th>Treatment for Asthma Exacerbations in the Acute Care Setting</th>
<th>Evidence Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxygen Therapy</strong> (ED) and Hospital: To achieve oxygen saturation ≥90%</td>
<td>Not graded</td>
</tr>
<tr>
<td><strong>Inhaled Short-acting Beta-agonist (SABA)</strong> ED and Hospital: All Patients</td>
<td>A</td>
</tr>
<tr>
<td><strong>Inhaled Ipratropium Bromide</strong> ED: Add to SABA in patients with severe exacerbations (FEV1 or PEF &lt;40% predicted) Hospital: Not recommended</td>
<td>A</td>
</tr>
<tr>
<td><strong>Systemic Corticosteroids</strong> ED: All patients with moderate (FEV1 or PEF 40-69% predicted) to severe exacerbations (FEV1 or PEF &lt;40% predicted); patients with mild exacerbations (FEV1 or PEF ≥ 70%) not responding to initial SABA; and those recently on oral systemic corticosteroids Hospital: All patients</td>
<td>A</td>
</tr>
<tr>
<td><strong>Serial Measurement of Lung Function</strong> ED: All patients: upon presentation and after 3 doses of SABA (60-90 minutes after presentation)</td>
<td>B</td>
</tr>
</tbody>
</table>
Patients with severe exacerbations (FEV1 or PEF<40% predicted): repeat assessment after first dose of SABA

<table>
<thead>
<tr>
<th>Preventive Measures at Discharge from ED or Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prescription Medications</strong></td>
</tr>
<tr>
<td>ED: All patients given systemic steroids should receive course for 3-10 days, consider addition of inhaled corticosteroid</td>
</tr>
<tr>
<td>Hospital: SABA and oral steroids to complete course of therapy, consider addition of inhaled corticosteroid</td>
</tr>
<tr>
<td><strong>Assessment and training about inhaler techniques</strong></td>
</tr>
<tr>
<td>ED and Hospital: All patients</td>
</tr>
<tr>
<td><strong>Provide Asthma Discharge Plan</strong></td>
</tr>
<tr>
<td>ED and Hospital: All patients; components should include instructions for 1) use of prescribed medications and 2) escalating medications and when to seek medical attention if asthma symptoms worsen</td>
</tr>
<tr>
<td><strong>Referral to Follow-Up Asthma Care within 4 weeks</strong></td>
</tr>
<tr>
<td>ED and Hospital: All patients</td>
</tr>
<tr>
<td><strong>Influenza vaccination</strong></td>
</tr>
<tr>
<td>ED and Hospital: Administer in season if not contraindicated</td>
</tr>
<tr>
<td><strong>Smoking Cessation Counseling</strong></td>
</tr>
<tr>
<td>ED and Hospital: All patients who are active smokers. Recommend nicotine replacement therapy</td>
</tr>
</tbody>
</table>

Given these recommendations for the focus of future measures, consideration must be given to the future measures' specification.

**Idiopathic Pulmonary Fibrosis**

Idiopathic pulmonary fibrosis (IPF) is the most common form of restrictive lung disease in the United States. In a 2006 article, Raghu et al estimated the prevalence of this disease to range from 14 to 42.7 people per 100,000 and the incidence to range from 6.8 to 14 people per 100,000.\(^\text{27}\) It is a rapidly progressive disease with few treatment options. In 2000, the American Thoracic Society (ATS), European Respiratory Society (ERS) and the American College of Chest Physicians (ACCP) published a consensus document on the diagnosis and management of IPF.\(^\text{28}\) In the ensuing decade, a number of prospective studies were undertaken, and in 2011, an evidence-based updated guideline was issued jointly by the ATS, ERS, Japanese Respiratory Society, and the Latin American Thoracic Association.\(^\text{29}\)

There are currently no performance measures targeting the diagnosis or management of IPF. Despite the studies that have been done in the past decade, the level of evidence remains moderate, at best, in most areas and, particularly, in treatment approaches other than lung transplantation. However, early diagnosis is important both for early referral for transplant and, for those patients who are not transplant candidates, for prognostic information and counseling.

While a number of cases may undergo lung biopsy for diagnosis, the authors state that a high resolution computed tomography study (HRCT) is critical for diagnosis and may avoid biopsy: “HRCT is an essential component of the diagnostic pathway in IPF.” This is the case because a pattern termed usual interstitial pneumonia (UIP). They further state: “Several studies have
documented that the positive predictive value of a HRCT diagnosis of UIP is 90 to 100%.” Thus, it is important that a HRCT scan be an early part of evaluation of the patient suspected of having IPF. The most certain way to diagnose IPF is using the clinical-radiological-pathological (CRP) systematic approach. However, this requires surgical lung biopsy. Since the Guidelines do not require surgical lung biopsy for diagnosis, it does not seem appropriate to include the CRP approach in a performance measure.30

A gap analysis has shown difference between community and academic physicians in terms of agreement about an IPF diagnosis,30 but other studies of gaps in diagnosis or treatment have not been well documented. It is known that non-white patients and patients who are not treated in tertiary referral centers have poorer survival.31,32 However, the reasons for this are not well studied. A performance measure focusing on diagnosis may serve to inform these issues and better identify other gaps in care.

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to the patient suspected of having IPF is proposed:

In patients suspected clinically of having a diagnosis of IPF, a HRCT scan should be performed based on current Guidelines.30

Given this recommendation for the focus of future measures, consideration must be given to the future measure’s specification.

**Iatrogenic Pneumothorax with Thoracentesis**

Iatrogenic pneumothorax rates in hospitalized adults is captured in an existing quality measure (NQF #0346.) However, this measure excludes patients with a diagnosis of pleural effusion. Iatrogenic pneumothorax following thoracentesis for pleural effusion is a common occurrence (3-9%).33,34 One third of patients with a pneumothorax after a thoracentesis require chest tube insertion.35

The medical literature supports a reduced incidence of iatrogenic pneumothorax in procedures performed under ultrasound guidance and done by an experienced provider.36,37,38,39,40

Based on the supporting evidence and rational described above the ACCP/ATS Task Force recommends the following areas of focus for future performance measures related to iatrogenic pneumothorax in patients treated with thoracentesis for a pleural effusion. This potential measure would include best practices known to reduce the incidence of iatrogenic pneumothorax and overall complication rates for thoracentesis. These would include the following evidence-based practices:

- Use of ultrasound guidance
- Performance or immediate supervision by a clinician experienced in the procedure.

Given these recommendation for the focus of future measures, consideration must be given to the future measures' specification.
Appendix A

ACCP/ATS Pulmonary Measure Gap Task Force 2011-2012 Roster

ACCP Task Force Members
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### Appendix B

#### Measure details

<table>
<thead>
<tr>
<th>Measure Category</th>
<th>Measure Name</th>
<th>Measure Description</th>
<th>Endorsed Status</th>
<th>PQRS Measure</th>
<th>NCQS Measure</th>
<th>HEDIS Hospital</th>
<th>VBP Hospital</th>
<th>301 Hospital VSP</th>
<th>Care coordination</th>
<th>Patient Safety</th>
<th>Appropriateness of care</th>
<th>Affordability of care</th>
<th>Patient and family engagement</th>
<th>Population of interest</th>
<th>Measure setting</th>
<th>Measures developer</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asthma</strong></td>
<td>Asthma: percent of patients with documented self-management goals in the last 12 months</td>
<td>This measure is used to assess the percent of patients with documented self-management goals in the last 12 months.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with a severity assessment at last contact (visit or phone).</td>
<td>This measure is used to assess the percent of patients with a severity assessment at last contact (visit or phone).</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: average number of symptom-free days in the previous two weeks.</td>
<td>This measure is used to assess the average number of symptom-free days in the previous two weeks among patients with asthma who report symptom-free days.</td>
<td>1</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients evaluated for environmental triggers other than environmental tobacco smoke (dust mites, cats, dogs, molds/fungi, cockroaches) either by history of exposure and/or by allergy testing.</td>
<td>This measure is used to assess the percent of patients evaluated for environmental triggers other than environmental tobacco smoke (dust mites, cats, dogs, molds/fungi, cockroaches) either by history of exposure and/or allergy testing.</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
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<tr>
<td></td>
<td>Asthma: percent of patients with a reported exposure to environmental tobacco smoke at last visit.</td>
<td>This measure is used to assess the percent of patients with a reported exposure to environmental tobacco smoke at last visit.</td>
<td>1</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: average number of lost workdays and/or school days of last visit to the ED.</td>
<td>This measure is used to assess the average number of lost workdays and/or school days of last visit to the ED.</td>
<td>1</td>
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<td>1</td>
<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with persistent asthma at last contact who are on anti-inflammatory medication.</td>
<td>This measure is used to assess the percent of patients with persistent asthma at last contact who are on anti-inflammatory medication.</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with a documented screening for depression in the past 12 months.</td>
<td>This measure is used to assess the percent of patients with a documented screening for depression in the past 12 months.</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td><strong>Asthma and influenza vaccination</strong></td>
<td>Asthma: percentage of members 5 to 56 years of age during the measurement year who were identified as having persistent asthma and who were appropriately prescribed medication through multiple measurements during a period of relative disease stability.</td>
<td>This process measure evaluates whether members with persistent asthma are being prescribed medications that are acceptable as primary therapy for long-term asthma control. The list of acceptable medications is derived from the National Heart, Lung, and Blood Institute (NHLBI) National Asthma Education and Prevention Program (NAEPP) guidelines.</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with a documented influenza immunization in the past 12 months.</td>
<td>This measure is used to assess the percent of patients with a documented influenza immunization in the past 12 months.</td>
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<td>1</td>
<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with a reported exposure to environmental tobacco smoke at last visit.</td>
<td>This measure is used to assess the percent of patients with a reported exposure to environmental tobacco smoke at last visit.</td>
<td>1</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td></td>
<td>Asthma: percent of patients with persistent asthma at last contact who are on anti-inflammatory medication.</td>
<td>This measure is used to assess the percent of patients with persistent asthma at last contact who are on anti-inflammatory medication.</td>
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<td>National Committee for Quality Improvement, Institute for Clinical Systems Improvement</td>
<td>1-May-06</td>
</tr>
<tr>
<td>Measure</td>
<td>Description</td>
<td>Indicator</td>
<td>denominator</td>
<td>numerator</td>
<td>target</td>
<td>year</td>
<td>source</td>
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</tbody>
</table>
| Asthma | Diagnosis and management of asthma: percentage of controlled asthma patients who are seen by a healthcare provider every one to six months. | Percentage of patients aged 5 through 49 years who were diagnosed with asthma and were seen by at least one provider every one to six months. | 5 through 49 years | 70% (95%) | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Asthma | Asthma assessment | Percentage of patients who were identified as having persistent asthma during the measurement year and who were dispensed a prescription for either a inhaled corticosteroid or acceptable alternative medication during the measurement year | Persistent asthma | 1 | 1 | 15-May-08 | The Joint Commission Agency for Healthcare Research and Quality 15-Nov-07 |
| Asthma | Adult asthma: hospital admission rate | Percentage of adult patients who were diagnosed with asthma during the measurement year and who were admitted to the hospital during the measurement year | Adult asthma | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Asthma | Use of appropriate medications for people with asthma | Percentage of adult patients who were diagnosed with asthma and who received systemic corticosteroids during hospitalization. | Asthma patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Asthma | Asthma: pharmacological therapy | Percentage of patients with stable moderate persistent asthma who were prescribed a long-term control medication during the measurement year. | Asthma patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Asthma | Children’s asthma care: percent of pediatric asthma in patients who received systemic corticosteroids during hospitalization. | Percentage of pediatric patients who received systemic corticosteroids during hospitalization. | Pediatric asthma patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |

**Bronchitis–3 measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Indicator</th>
<th>denominator</th>
<th>numerator</th>
<th>target</th>
<th>year</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronchitis</td>
<td>Outpatient drug utilization: summary of outpatient utilization of drug prescriptions, stratified by age, during the measurement year.</td>
<td>Total number of prescriptions</td>
<td>Ambulatory care population</td>
<td>1</td>
<td>1</td>
<td>10-Aug-09</td>
<td>American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>Inappropriate antibiotic treatment for adults with acute bronchitis</td>
<td>Percentage of patients who were diagnosed with bronchitis who were dispensed an antibiotic during the three-month period.</td>
<td>Ambulatory care population</td>
<td>1</td>
<td>1</td>
<td>10-Aug-09</td>
<td>American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>Avoidance of antibiotic treatment in adults with acute bronchitis</td>
<td>Percentage of adults with acute bronchitis who were not dispensed an antibiotic</td>
<td>Adult ambulatory care population</td>
<td>1</td>
<td>1</td>
<td>10-Aug-09</td>
<td>American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09</td>
</tr>
</tbody>
</table>

**Upper Respiratory Infection–4 measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Indicator</th>
<th>denominator</th>
<th>numerator</th>
<th>target</th>
<th>year</th>
<th>source</th>
</tr>
</thead>
</table>
| URI | Appropriate treatment for children with upper respiratory infection (URI): percentage of children 3 months to 18 years of age with URI who received at least one dose of antibiotics and were not given an antibiotic prescription. | Percentage of children who were diagnosed with URI who were dispensed an antibiotic prescription on or three days after the Index Episode Start Date (IESD). | URI patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Respiratory Illness | Diagnosis and treatment of respiratory illness in children and adults: percentage of patients with an office visit for cold symptoms who had symptoms for less than seven days and who received an antibiotic. | Percentage of children and adults who were diagnosed with an upper respiratory tract infection and who received an antibiotic | Ambulatory care population and children admitted to hospital with a diagnosis of URI | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Respiratory Illness | Diagnosis and treatment of respiratory illness in children and adults: percentage of patients with a diagnosis of pharyngitis who had strep screen testing. | Percentage of patients with a diagnosis of pharyngitis who had strep screen testing. | Ambulatory care population and children admitted to hospital with a diagnosis of URI | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |

**Pneumonia–8 measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Indicator</th>
<th>denominator</th>
<th>numerator</th>
<th>target</th>
<th>year</th>
<th>source</th>
</tr>
</thead>
</table>
| Pneumonia | Appropriate treatment for children with pneumonia: percentage of children 3 months to 18 years of age who received at least one dose of antibiotics and were not given an antibiotic prescription. | Percentage of children who were diagnosed with pneumonia who were dispensed an antibiotic prescription on or three days after the Index Episode Start Date (IESD). | URI patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Pneumonia | Inappropriate antibiotic treatment for adults with pneumonia | Percentage of patients who were diagnosed with pneumonia who were dispensed an antibiotic during the three-month period. | Ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
| Pneumonia | Avoidance of antibiotic treatment in adults with pneumonia | Percentage of adults with pneumonia who were not dispensed an antibiotic | Adult ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
| Pneumonia | Appropriate antibiotic treatment for children with pneumonia: percentage of children 3 months to 18 years of age with pneumonia who received at least one dose of antibiotics and were not given an antibiotic prescription. | Percentage of children who were diagnosed with pneumonia who were dispensed an antibiotic prescription on or three days after the Index Episode Start Date (IESD). | URI patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Pneumonia | Inappropriate antibiotic treatment for adults with pneumonia | Percentage of patients who were diagnosed with pneumonia who were dispensed an antibiotic during the three-month period. | Ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
| Pneumonia | Avoidance of antibiotic treatment in adults with pneumonia | Percentage of adults with pneumonia who were not dispensed an antibiotic | Adult ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
| Pneumonia | Appropriate treatment for children with pneumonia: percentage of children 3 months to 18 years of age who received at least one dose of antibiotics and were not given an antibiotic prescription. | Percentage of children who were diagnosed with pneumonia who were dispensed an antibiotic prescription on or three days after the Index Episode Start Date (IESD). | URI patients | 1 | 1 | 10-Aug-09 | Institute of Clinical Systems Improvement (ICSI) 
Kaiser Permanente Northwest 
IPRO 8/10/2009 
National Committee for Quality Assurance (NCQA) 8/10/2009 |
| Pneumonia | Inappropriate antibiotic treatment for adults with pneumonia | Percentage of patients who were diagnosed with pneumonia who were dispensed an antibiotic during the three-month period. | Ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
| Pneumonia | Avoidance of antibiotic treatment in adults with pneumonia | Percentage of adults with pneumonia who were not dispensed an antibiotic | Adult ambulatory care population | 1 | 1 | 10-Aug-09 | American Medical Association – Physician Quality Improvement Program (AMAPQIP) 9-May-09 |
### Appendix B

<table>
<thead>
<tr>
<th>Measure</th>
<th>Agency for Healthcare Research and Quality</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pneumonia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia (PH): Hospital admission rate</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>5-May-08</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients transferred or admitted to the intensive care unit (ICU) within 24 hours of hospital arrival, who had blood cultures performed within 24 hours prior to or 24 hours after hospital arrival.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>3/7/2007</td>
</tr>
<tr>
<td>Pneumonia: Median time from arrival at the hospital to the administration of the first dose of antibiotic at the hospital.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>5-May-08</td>
</tr>
<tr>
<td>Pneumonia: Percent of patients who receive their first dose of antibiotics within 6 hours after arrival at the hospital.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>5-May-08</td>
</tr>
<tr>
<td>Pneumonia: Blood cultures performed in the emergency department prior to initial antibiotic received in hospital.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>5-May-08</td>
</tr>
<tr>
<td>Pneumonia: Smoking cessation: percent of patients with a history of smoking cigarettes who are given smoking cessation advice or counseling during hospital stay.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
<td>5-May-08</td>
</tr>
</tbody>
</table>

**Pneumonia / Immunization: 9 Measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Pneumonia Vaccination (%)</td>
<td>1 Medical Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients who ever received pneumococcal vaccination</td>
<td>1 Medical Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients age 65 and older who were screened for pneumococcal vaccine status and were administered the vaccine prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients age 50 years and older, hospitalized during October, November, December, January, February, or March who were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients aged 1 month or older who were prescribed Pneumocystis jiroveci pneumonia (PCP) prophylaxis.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients aged 65 and older who were screened for pneumococcal vaccine status and were administered the vaccine prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients age 65 years and older who ever received a pneumococcal vaccination.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients who received pneumococcal vaccine status and were vaccinated prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Pneumonia: Percentage of patients aged 1 month or older who were prescribed Pneumocystis jiroveci pneumonia (PCP) prophylaxis.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
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</table>

**Community Acquired Bacterial Pneumonia (CAP)**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Acquired Bacterial Pneumonia: Hospital admission rate</td>
<td>1 Medical Services/The Joint Commission</td>
</tr>
<tr>
<td>Community Acquired Bacterial Pneumonia: Percentage of patients with a history of smoking cigarettes who are given smoking cessation advice or counseling during hospital stay.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Community Acquired Bacterial Pneumonia: Percentage of patients who were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
<tr>
<td>Community Acquired Bacterial Pneumonia: Percentage of patients age 65 and older who were screened for pneumococcal vaccine status and were administered the vaccine prior to discharge, if indicated.</td>
<td>Centers for Medicare &amp; Medicaid Services/The Joint Commission</td>
</tr>
</tbody>
</table>

**Pneumonia - Smoking cessation**

This measure is used to assess mortality in discharges with principal diagnosis code of pneumonia. Pneumonia care occurs in an outpatient setting, and selection bias may be a problem for this indicator. In addition, 30-day mortality may be somewhat different from hospital mortality, leading to information bias. Risk adjustment for clinical factors is recommended.

**Pneumonia: Smoking cessation**

This measure is used to assess the number of admissions for bacterial pneumonia per 100,000 population.

**Pneumonia: Smoking cessation**

Pneumonia care occurs in an outpatient setting, and selection bias may be a problem for this indicator. In addition, 30-day mortality may be somewhat different from hospital mortality, leading to information bias. Risk adjustment for clinical factors is recommended.

**Pneumonia: Smoking cessation**

This measure is used to assess the percent of pneumonia patients who were transferred or admitted to the intensive care unit (ICU) within 24 hours of hospital arrival, who had blood cultures performed within 24 hours prior to or 24 hours after hospital arrival. This measure is used to assess the median time from arrival at the hospital to the administration of the first dose of antibiotic at the hospital for patients with a principal diagnosis of pneumonia. This measure is used to assess the percent of pneumonia patients transferred or admitted to the intensive care unit (ICU) within 24 hours of hospital arrival, who had blood cultures performed within 24 hours prior to or 24 hours after hospital arrival. This measure is used to assess the median time from arrival at the hospital to the administration of the first dose of antibiotic at the hospital for patients with a principal diagnosis of pneumonia. This measure is used to assess the percent of pneumonia patients who receive their first dose of antibiotics within 6 hours after arrival at the hospital. Percentage of pneumonia patients age 50 years and older, who have had blood cultures performed in the emergency department prior to initial antibiotic received in hospital. Percentage of pneumonia patients who were transferred or discharged prior to discharge, if indicated. This measure is used to assess the percent of pneumonia patients who have a history of smoking cigarettes who are given smoking cessation advice or counseling during the hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

**Pneumonia: Smoking cessation**

This measure is used to assess mortality in discharges with principal diagnosis code of pneumonia. Pneumonia care occurs in an outpatient setting, and selection bias may be a problem for this indicator. In addition, 30-day mortality may be somewhat different from hospital mortality, leading to information bias. Risk adjustment for clinical factors is recommended.

**Pneumonia: Smoking cessation**

This measure is used to assess the number of admissions for bacterial pneumonia per 100,000 population.

**Pneumonia: Smoking cessation**

Pneumonia care occurs in an outpatient setting, and selection bias may be a problem for this indicator. In addition, 30-day mortality may be somewhat different from hospital mortality, leading to information bias. Risk adjustment for clinical factors is recommended.
### Community Acquired Bacterial Pneumonia (CAP)
- **Target:** Community-acquired bacterial pneumonia: percentage of patients who had a documented rationale for level of care based on severity and safety of home care.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who had a documented rationale for level of care based on severity and safety of home care.
- **Value:** 1
- **Physician Group:** Consortium for Performance Improvement
- **Effective Date:** 1-May-07

### Community Acquired Bacterial Pneumonia (CAP) and smoking cessation
- **Target:** Community-acquired bacterial pneumonia: percentage of patients who were quitting smoking.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who were quitting smoking.
- **Value:** 1
- **Physician Group:** Joint Commission for Performance Improvement
- **Effective Date:** 0-Mar-07

### Ventilator Bundle
- **Target:** Initial antibiotic selection for community-acquired pneumonia (CAP) in immunocompromised patients
- **Measure:** Percentage of pneumonia patients 18 years of age or older selected for initial receipts of antibiotics for community-acquired pneumonia (CAP)
- **Value:** 1
- **Physician Group:** Centers for Medicare & Medicaid Services, Joint Commission for Performance Improvement
- **Effective Date:** 1-May-07

### Critical Signs for Community-Acquired Bacterial Pneumonia
- **Target:** Vital Signs for Community-Acquired Bacterial Pneumonia
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia for whom vital signs (respiratory rate, pulse, blood pressure) documented and reviewed.
- **Value:** 1
- **Physician Group:** American College of Emergency Physicians/ National Committee for Quality Improvement
- **Effective Date:** 1-May-07

### Ventilator Associated Pneumonia (VAP): 3 measures
- **Target:** Ventilator Associated Pneumonia for ICU and high-risk nursery (HRN) patients
- **Measure:** Percentage of patients aged 18 years and older with the diagnosis of ventilator-associated pneumonia for ICU and high-risk nursery patients with community-acquired pneumonia with mental status assessed.
- **Value:** 1
- **Physician Group:** American College of Emergency Physicians/ National Committee for Quality Improvement
- **Effective Date:** 1-May-07

### Ventilator Associated Pneumonia (VAP)
- **Target:** Ventilator Associated Pneumonia: percent of immunocompetent intensive care unit (ICU) patients with community-acquired pneumonia (CAP) who receive an initial antibiotic regimen during the first 24 hours that is consistent with current guidelines.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who received an initial antibiotic regimen during the first 24 hours that is consistent with current guidelines.
- **Value:** 1
- **Physician Group:** NQMC: http://www.qualityforum.org/MeasuresListBox.aspx?keyword=vap
- **Effective Date:** 11/15/2007

### Ventilator Associated Pneumonia (VAP)
- **Target:** Ventilator Associated Pneumonia: percent of immunocompetent intensity care unit (ICU) patients with community-acquired pneumonia (CAP) who receive an initial antibiotic regimen during the first 24 hours.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who received an initial antibiotic regimen during the first 24 hours.
- **Value:** 1
- **Physician Group:** NQMC: http://www.qualityforum.org/MeasuresListBox.aspx?keyword=vap
- **Effective Date:** 11/15/2007

### Ventilator Associated Pneumonia (VAP)
- **Target:** Ventilator Associated Pneumonia: percent of immunocompetent intensive care unit (ICU) patients with community-acquired pneumonia (CAP) who receive an initial antibiotic regimen during the first 24 hours.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who received an initial antibiotic regimen during the first 24 hours.
- **Value:** 1
- **Physician Group:** NQMC: http://www.qualityforum.org/MeasuresListBox.aspx?keyword=vap
- **Effective Date:** 11/15/2007

### Ventilator Associated Pneumonia (VAP)
- **Target:** Ventilator Associated Pneumonia: percent of immunocompetent intensive care unit (ICU) patients with community-acquired pneumonia (CAP) who receive an initial antibiotic regimen during the first 24 hours.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who received an initial antibiotic regimen during the first 24 hours.
- **Value:** 1
- **Physician Group:** NQMC: http://www.qualityforum.org/MeasuresListBox.aspx?keyword=vap
- **Effective Date:** 11/15/2007

### Ventilator Associated Pneumonia (VAP)
- **Target:** Ventilator Associated Pneumonia: percent of immunocompetent intensive care unit (ICU) patients with community-acquired pneumonia (CAP) who receive an initial antibiotic regimen during the first 24 hours.
- **Measure:** This measure is used to assess the percentage of patients aged greater than or equal to 18 years diagnosed with community-acquired bacterial pneumonia who received an initial antibiotic regimen during the first 24 hours.
- **Value:** 1
- **Physician Group:** NQMC: http://www.qualityforum.org/MeasuresListBox.aspx?keyword=vap
- **Effective Date:** 11/15/2007

### CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): 17 measures
- **Target:** Chronic obstructive pulmonary disease (COPD): percentage of community-acquired pneumonia in immunocompromised patients
- **Measure:** This measure is used to assess the percentage of patients diagnosed with community-acquired pneumonia in immunocompromised patients.
- **Value:** 1
- **Physician Group:** National Committee for Quality Assurance
- **Effective Date:** 1/1/2004

### CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): 5 measures
- **Target:** Community-acquired pneumonia: percentage of patients aged 40 years of age and older with a new diagnosis of newly active chronic obstructive pulmonary disease (COPD) who received appropriate spirometry testing to confirm the diagnosis.
- **Measure:** This measure is used to assess the percentage of patients who received a smoking cessation intervention.
- **Value:** 1
- **Physician Group:** Centers for Medicare & Medicaid Services, Joint Commission for Performance Improvement
- **Effective Date:** 0-Mar-07
### Appendix B

<table>
<thead>
<tr>
<th>Measure</th>
<th>Percentage</th>
<th>Reference Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD and FEV1 less than 40% of predicted value who have oxygen saturation assessed at least annually</td>
<td>1</td>
<td>1-May-06</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who were assessed for COPD symptoms at least annually</td>
<td>1</td>
<td>1-May-06</td>
</tr>
<tr>
<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
<td>1</td>
<td>1-May-06</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who identified as smokers who received a smoking cessation intervention at least annually</td>
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<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who were queried about smoking at least annually</td>
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<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
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<tr>
<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
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<td>1-May-06</td>
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<tr>
<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who were assessed for pneumococcus immunization status</td>
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<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
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<tr>
<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
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<td>1-May-06</td>
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<tr>
<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who received influenza immunization during current flu season</td>
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<td>Chronic obstructive pulmonary disease (COPD) percentage of patients aged 18 years and older with a diagnosis of COPD who were recommended to receive an influenza immunization annually</td>
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<tr>
<td>COPD - Spirometry evaluation</td>
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<td>COPD - Inhaled bronchodilator therapy</td>
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<td>COPD - Smoking cessation</td>
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<td>1-May-06</td>
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<td>COPD - Pulmonary rehabilitation: exercise training recommended</td>
<td>1</td>
<td>1-May-06</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (COPD): percentage of patients aged 18 years and older with a diagnosis of COPD and an oxygen saturation less than or equal to 89% or a PaO2 less than or equal to 55 mm Hg who prescribed long term oxygen therapy</td>
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</tr>
</tbody>
</table>

### Measures

- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD and FEV1 less than 40% of predicted value who have oxygen saturation assessed at least annually.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who were assessed for COPD symptoms at least annually.
- **COPD - Pulmonary rehabilitation: exercise training recommended.**
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who identified as smokers who received a smoking cessation intervention at least annually.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who were queried about smoking at least annually.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who received a pneumococcus immunization.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who were assessed for pneumococcus immunization status.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who received influenza immunization during current flu season.
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD who were recommended to receive an influenza immunization annually.
- **Chronic obstructive pulmonary disease (COPD):** Hospital admission rate.
- **COPD - Spirometry evaluation.**
- **COPD - Inhaled bronchodilator therapy.**
- **COPD - Smoking cessation.**
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients with chronic obstructive pulmonary disease (COPD) whose physician inquired about smoking cessation (if patient a smoker) at every visit.
- **Pharmacotherapy management of chronic obstructive pulmonary disease (COPD) exacerbation: percentage of COPD exacerbations for members 40 years of age and older who had an acute exacerbation in 1-2 encounters between January 1 to November 30 of the measurement year and who were dispensed a bronchodilator within 30 days of the event.**
- **Chronic obstructive pulmonary disease (COPD) exacerbation: percentage of patients with chronic obstructive pulmonary disease (COPD) whose physician inquired about smoking cessation (if patient a smoker) at every visit.**
- **Chronic obstructive pulmonary disease (COPD) exacerbation: percentage of COPD exacerbations for members 40 years of age and older who had an acute exacerbation in 1-2 encounters between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid within 14 days of the event.**
- **Chronic obstructive pulmonary disease (COPD):** Percentage of patients aged 18 years and older with a diagnosis of COPD and an oxygen saturation less than or equal to 89% or a PaO2 less than or equal to 55 mm Hg who prescribed long term oxygen therapy.

### References

- **Agency for Healthcare Research and Quality Physicians Consortium for Performance Improvement.**
- **National Committee for Quality Assurance.**
- **American Medical Association.**
- **Medicare - Medical Specialty Society.**
### Appendix B

#### Pneumothorax

- **Intratracheal pneumothorax (area-level): rate per 100,000 population.** 1
  - This measure is used to assess the number of cases of intratracheal pneumothorax per 100,000 population.

- **Intratracheal pneumothorax in non-invasive rate per 1,000 eligible admissions.** 1
  - This measure is used to assess the number of patients with an intratracheal pneumothorax per 1,000 eligible admissions.

- **Intratracheal pneumothorax (provider-level): rate per 1,000 discharges.** 1
  - This measure is used to assess the number of cases of intratracheal pneumothorax per 1,000 discharges.

#### Influenza

- **Influenza Vaccination.** 1
  - Percentage of patients who received an influenza vaccination.

- **Influenza Immunization Received for Current Flu Season.** 1
  - Percentage of patients age 50-64 who report having received an influenza vaccination during the past influenza vaccination season.

- **Influenza Flu Shot for Older Adults.** 1
  - Percentage of patients age 65 and over who received an influenza vaccination from September through December of the year.

- **Influenza vaccination.** 1
  - Percentage of patients who received an influenza vaccination.

- **Influenza vaccination of Nursing Home/ Skilled Nursing Facility Residents.** 1
  - Percentage of eligible home care patients who are screened for eligibility for influenza vaccination.

- **Influenza vaccination for all nursing home residents.** 1
  - Percentage of nursing home residents who are screened for eligibility for influenza vaccine status and are either not eligible, or are eligible and receive the vaccine.

- **Influenza Vaccination Coverage among Healthcare Personnel.** 1
  - Percentage of healthcare personnel (HCP) who receive the influenza vaccine.

#### Dyspnea

- **Dyspnea - symptom: percentage of patients with improvement in dyspnea.** 1
  - This measure is used to assess the percentage of home health care patients whose dyspnea improved compared to a prior assessment. The measure identifies the patient’s level of shortness of breath.

- **Dyspnea - symptom: Cancer Care- 6 measures.** 1
  - This measure is used to assess the percentage of patients with a malignant pleural effusion who underwent thoracentesis for whom there was a repeat assessment of dyspnea within one week.

- **Dyspnea - symptom: Cancer - dyspnea: percentage of patients with primary lung cancer or advanced cancer with dyspnea on admission who were offered symptomatic management or treatment directed at an underlying cause within 24 hours.** 1
  - This measure is used to assess the percentage of patients with primary lung cancer or advanced cancer with dyspnea on admission who were offered symptomatic management or treatment directed at an underlying cause within 24 hours.
### Appendix B

#### Postoperative Respiratory Failure

**Number of adult patients with postoperative respiratory failure per eligible elective admissions.**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postoperative Respiratory Failure (PSI 11)</td>
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#### EMERGENCY - PULMONARY - 1 measure

<table>
<thead>
<tr>
<th>EMERGENCY - PULMONARY - 1 measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of patients who died from cancer admitted to the ICU in the last 30 days of life</td>
<td>1</td>
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</tbody>
</table>

#### MISCELLANEOUS

**Tobacco Dependence - 15 measure**

<table>
<thead>
<tr>
<th>MISCELLANEOUS - 15 measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco Dependence - 15 measure</td>
<td>11</td>
</tr>
</tbody>
</table>
Appendix B

(1) Smoking and tobacco use cessation: percentage of members 18 years of age and older who were current smokers or tobacco users who received smoking cessation advice or counseling during hospital stay. This measure is used to assess the percentage of members who received advice to quit during the hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

1 Tobacco Screening and Cessation

This measure is used to assess the percentage of members who received advice to quit smoking cessation interventions within the past year, or that they received advice to quit smoking cessation specialty program within the past year.

Tobacco Screening and Cessation

Measurement pair - a. Tobacco use prevention for infants, children and adolescents: percentage of patients' charts showing either that there is no tobacco use prevention for infants, children and adolescents or that they received advice to quit smoking cessation specialty program within the past year.

This measure is used to assess the percentage of patients who were current smokers or tobacco users who received advice to quit smoking cessation specialty program within the past year.

Tobacco Screening and Cessation

Preventive care and screening: percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

This measure is used to assess the percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

Tobacco Screening and Cessation

Chronic stable coronary artery disease (CAD): percentage of patients queried one or more times about cigarette smoking.

This measure is used to assess the percentage of patients with chronic stable coronary artery disease (CAD) who were queried one or more times about cigarette smoking.

Tobacco Screening and Cessation

This measure is used to assess the percentage of patients who received smoking cessation intervention during hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

Tobacco Screening and Cessation

This measure is used to assess the percentage of patients who received smoking cessation intervention during the two-year measurement period. Percentage of patients identified as tobacco users who received cessation intervention during the two-year measurement period. This measure is used to assess the percentage of patients aged greater than or equal to 18 years who were queried about tobacco use one or more times during the two-year measurement period.

Tobacco Screening and Cessation

Preventive care and screening: percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

This measure is used to assess the percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

Tobacco Screening and Cessation

Chronic stable coronary artery disease (CAD): percentage of patients identified as cigarette smokers who received a smoking cessation intervention.

This measure is used to assess the percentage of patients who were identified as cigarette smokers who received a smoking cessation intervention.

Tobacco Screening and Cessation

Measurement pair - a. Tobacco use prevention for infants, children and adolescents: percentage of patients' charts showing either that there is no tobacco use prevention for infants, children and adolescents or that they discussed or were recommended cessation medications during the measurement year. (1) Smoking and tobacco use cessation: percentage of members 18 years of age and older who were current smokers or tobacco users who discussed or were recommended cessation medications during the measurement year. (2) Smoking and tobacco use cessation: percentage of members 18 years of age and older who were current smokers or tobacco users who discussed or were recommended cessation medications during the measurement year.

Tobacco Screening and Cessation

Preventive care and screening: percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

This measure is used to assess the percentage of patients who were queried about tobacco use one or more times during the two-year measurement period.

Tobacco Screening and Cessation

Chronic stable coronary artery disease (CAD): percentage of members 18 years of age and older who were current smokers or tobacco users who received smoking cessation advice or counseling during hospital stay. This measure is used to assess the percentage of members who received cessation intervention during hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

Tobacco Screening and Cessation

Measurement pair - a. Tobacco use prevention for infants, children and adolescents: percentage of patients' charts showing either that there is no tobacco use prevention for infants, children and adolescents or that they discussed or were recommended cessation medications during the measurement year.
### Tobacco Screening and Cessation

| Smoking Cessation, Medical assistance: a. Advising Smokers to Quit smoking | Percentage of patients who received advice to quit smoking |
| Discussing Smoking Cessation Medications, c. | Percentage of patients whose practitioner recommended or discussed smoking cessation medications |

13.9

8/10/2009

Appendix B
## Support for a Measure Gap Area

### Section 1: Criteria for Measure Gap Area Selection

<table>
<thead>
<tr>
<th>Desired characteristics that support the identification of measure gap area</th>
<th>Details</th>
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<tbody>
<tr>
<td>Gaps and Variations in Care</td>
<td>Documented evidence of deviation (or observed patterns of deviation) in care from established norms or standards of care. Gaps in care may be manifested by underuse, overuse, or misuse of health services.</td>
</tr>
<tr>
<td>Evidence Base</td>
<td>One or more national, widely-accepted clinical guidelines OR One or more documented quality improvement (QI) initiatives or research projects that have demonstrated improvement in the quality of care (based on measures of access, processes, outcomes or the patient experience of care)</td>
</tr>
<tr>
<td>High Impact</td>
<td>High prevalence of the clinical problem or condition, significant burden of illness, high cost, or nationally identified clinical priority area (eg, Institute of Medicine, National Priority Partners) OR A measure topic that does not address a high prevalence condition or national priority, but should be a high impact area within a specialty area or medical domain.</td>
</tr>
</tbody>
</table>

### National Priorities

These national priority areas that have been identified by the Institute of Medicine, National Priority Partners, and National Strategy for Quality Improvement in Health Care. Potential topics should feasibly foster measure development in these domains.

| Care Coordination | Improve coordination of care among a patient’s multiple providers and during entire episodes of illness addressing one of the following domains: healthcare “home” (ie, a source of usual care selected by the patient, integration of care across the community and longitudinally), proactive plan of care and follow-up, communication, integrated electronic information systems |
| Patient Safety | • Reduce healthcare associated infections, including surgical site infection, catheter associated blood stream infections, catheter associated urinary tract infections, ventilator associated pneumonia. • Reduce surgical mishaps: wrong site surgery, foreign objects retained after surgery, air embolism • Reduce adverse drug events • Reduce preventable complications: pressure ulcers, falls, blood product injury |
| Appropriateness/Overuse | Address at least one of nine targeted areas: • Inappropriate medication use • Unnecessary laboratory tests • Inappropriate maternity care interventions • Inappropriate diagnostic procedures |
- Inappropriate procedures
- Unnecessary consultations
- Preventable emergency department visits and hospitalizations
- Inappropriate non-palliative services at end of life
- Potentially harmful preventive services with no benefit

**Patient and Family Engagement**

Health care should give each individual patient and family an active role in their care. Care should adapt readily to individual and family circumstances, as well as differing cultures, languages, disabilities, health literacy levels, and social backgrounds. Requires shared power and responsibility in decision-making and care management. It also requires giving the patient access to understandable information and decision support tools that help patients manage their health and navigate the health care delivery system.

Examples include:
- assuring integration of patients’ feedback on their preferences, desired outcomes, and experiences,
- integrating patient-generated data in EHRs,
- finding additional ways to involve patients and families in managing their care effectively.

**Affordability of care**

- Reduce redundant and harmful care, (by reducing health care-acquired conditions);
- Establish common measures to assess the cost impact of new programs and new payment systems on families, employers, and the public sector, along with how well these programs support innovation and effective care;
- Build measurement of cost and resource use—along with patient experience and outcomes—
- Reduce waste from undue administrative burdens;
- Make health care costs and quality more transparent to consumers and providers

**Promotion of Best Practices for to foster population health**

The broad goal of promoting better health and healthy behaviors such as:
- not using tobacco or
- fostering healthy environments that make it easier to exercise and
  - access to healthy foods.
- adoption of clinical preventive services for children and adults.

**Quality Improvement Collaboratives**

Measures that can be used in quality improvement collaboratives that can accelerate the spread of measures use.

---

**Section 2: Information required for preliminary review** *(section 2 should not exceed four pages)*

- **Measure gap topic area:** Provide information on the aspect of care that this measure gap area would address.
- **Existing relevant quality measures (if any)**
- **Documentation of gap and/or variation in care:** Provide evidence (including citations to source) that demonstrate a quality gap or room for improvement in the measure topic area
<table>
<thead>
<tr>
<th>Evidence base to support measure the need for measure development: Provide a list of applicable guidelines including a description of the guideline development methodology or rating scheme for the strength of the evidence/recommendation. If a QI initiative, provide evidence (including citations to source) that demonstrate improvement in the quality of care.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential impact of topic area: Include data regarding prevalence, burden of illness (estimates of morbidity and mortality), cost, or national identification as clinical priority area</td>
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</table>
## Pulmonary Measure Gap Survey Results

Please rate the priority of the following measure gap area from 1 (lowest priority) to 5 (highest priority).

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<th>Main Area</th>
<th>Subcategory</th>
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References


2 http://www.qualityforum.org/docs/measure_evaluation_criteria.aspx

3 http://qualitymeasures.ahrq.gov/


