

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the [submitting standards web page](#).

NQF #: 1657	NQF Project: Behavioral Health
(for Endorsement Maintenance Review)	
Original Endorsement Date:	Most Recent Endorsement Date: Last Updated Date: Sep 11, 2017
BRIEF MEASURE INFORMATION	
De.1 Measure Title: TOB-4 Tobacco Use: Assessing Status after Discharge	
Co.1.1 Measure Steward: The Joint Commission	
De.2 Brief Description of Measure: Hospitalized patients 18 years of age and older who are identified through the screening process as having used tobacco products (cigarettes, smokeless tobacco, pipe, and cigars) within the past 30 days who are contacted between 15 and 30 days after hospital discharge and follow-up information regarding tobacco use status is collected. This measure is intended to be used as part of a set of 4 linked measures addressing Tobacco Use (TOB-1 Tobacco Use Screening; TOB-2 Tobacco Use Treatment Provided or Offered (during hospital stay); TOB-3 Tobacco Use Treatment Provided or Offered at Discharge.	
2a1.1 Numerator Statement: The number of discharged patients who are contacted between 15 and 30 days after hospital discharge and follow-up information regarding tobacco use status is collected.	
2a1.4 Denominator Statement: The number of discharged patients 18 years of age and older identified as current tobacco users.	
2a1.8 Denominator Exclusions: There are 15 exclusions from the denominator as follows: <ol style="list-style-type: none"> 1. Patients less than 18 years of age 2. Patients who are cognitively impaired 3. Patients who are not current tobacco users 4. Patients who were not screened for tobacco use 5. Patients who expired during the hospital stay - identified by Discharge Disposition 6. Patients who have a length of stay less than or equal to one day 7. Patients with a length of stay greater than 120 days 8. Patients discharged/transferred to another hospital for inpatient care 9. Patients who left against medical advice 10. Patients discharged/transferred to another health care facility. 11. Patients discharged to home or another health care facility for hospice care 12. Patients who do not reside in the United States 13. Patients who do not have a phone or cannot provide contact information 14. Patients discharged to a detention facility, jail or prison 15. Patients re-admitted to the hospital within the follow-up time frame 	
1.1 Measure Type: Process 2a1. 25-26 Data Source: Electronic Health Record (Only), Paper Records 2a1.33 Level of Analysis: Facility, Other	
1.2-1.4 Is this measure paired with another measure? No	

De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed):

Not Applicable

STAFF NOTES (issues or questions regarding any criteria)

Comments on Conditions for Consideration:

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

1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5):

5. Similar/related [endorsed](#) or submitted measures (check 5.1):

Other Criteria:

Staff Reviewer Name(s):

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

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See [guidance on evidence](#).

Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria)

1a. High Impact: H ☒ M ☐ L ☐ I ☐

(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas (Check all the areas that apply):

De.5 Non-Condition Specific (Check all the areas that apply): [Screening](#)

1a.1 Demonstrated High Impact Aspect of Healthcare: [Affects large numbers, A leading cause of morbidity/mortality](#)

1a.2 If "Other," please describe:

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

Tobacco use is the single greatest cause of disease in the United States today and accounts for more than 435,000 deaths each year (CDC MMWR 2008; McGinnis 1993). Smoking is a known cause of multiple cancers, heart disease, stroke, complications of pregnancy, chronic obstructive pulmonary disease, other respiratory problems, poorer wound healing, and many other diseases (DHHS 2004). Tobacco use creates a heavy cost to society as well as to individuals. Smoking-attributable health care expenditures are estimated at \$96 billion per year in direct medical expenses and \$97 billion in lost productivity (CDC 2007). There is an increasing national interest in prevention of disease. One of the goals for the National Priorities Partnership has been identified as Population Health. The vision for this goal is that national, state and local systems of care will foster health and wellness through investing in the prevention of disease, injury and disability, and will be proactive in helping all people reduce the risk of burden of disease. The leading causes of death today are heart disease, cancer, cerebrovascular disease, accidents and chronic obstructive pulmonary disease. The three leading causes of smoking attributable death were lung cancer, ischemic heart disease, and chronic obstructive pulmonary disease.

Secondly, The National Commission on Prevention Priorities looked at the current recommendations for preventive services delivery recommended by the United States Preventive Services Task Force. In looking

through the medical literature two questions were asked 1: how much disease and death could be prevented, and 2) how much money could be saved for each dollar spent. Tobacco Use ranked #3, only Aspirin to prevent heart attack and stroke and childhood immunizations ranked higher.

1a.4 Citations for Evidence of High Impact cited in 1a.3:

- Centers for Disease Control and Prevention. Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States, 2000-2004. Morbidity and Mortality Weekly Report (MMWR) 2008. 57(45): 1226-1228. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm-/>.
- U.S. Department of Health and Human Services. The health consequences of smoking: a report of the Surgeon General. Atlanta, GA, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.
- Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs—2007. Atlanta, GA, Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2007.

1b. Opportunity for Improvement: H● M● L● I●

(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:

It was the expert opinion of our advisory panel that implementation of this measure would lead to increased rates of tobacco use cessation.

Hospitalization is an ideal time to encourage smokers to quit. During hospitalization, smokers are not allowed to smoke, are in contact with many health professionals, and may be more willing to accept assistance in quitting. (1) Many smokers quit, unaided, following hospitalization. (2) A meta-analysis also found that those who receive intensive treatment during hospitalization and outpatient follow-up treatment for at least one month are more likely to quit than smokers receiving no treatment.(1)

Follow up within thirty days was used for the measure follow up timeframe for standardization instead of at least one month as noted in the evidence. The number of days per month is not standardized or consistent, for example February has only 28 days and August has 31 days, while September has 30 days. The technical advisory panel felt that follow up within 30 days post discharge would allow sufficient time for the patient to participate in the referred outpatient counseling program, continue on prescribed medication and try a quit attempt, therefore greater chances of obtaining adequate outcome information might be feasible.

That said, we have noted that some hospitals may choose to combine follow-up contacts into the same call or contact, so for example on day one or two post discharge a call could be placed to see how the patient is doing post surgery, and also ask how they are doing with respect to tobacco use status. In this situation, useful information would not be obtained about the patient's post discharge tobacco use status. To resolve this issue, the specifications will be modified for data collection beginning with 7/1/2012 discharges to define the contact time frame as between 15 and 45 days post discharge. The early time frame of 15 days has been selected because most relapses occur within the first two weeks and it is felt that redefining the call time frame in this way will push past the most common relapse period and yield better outcome information.

1b.2 Summary of Data Demonstrating Performance Gap (Variation or overall less than optimal performance across providers): [**For Maintenance** – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.] Most hospitals do not systematically address tobacco. Where treatment is provided, it is not evidence-based. A pooled analysis of 33 hospital studies found that smoking status was assessed in 60% of patients, 42% of identified smokers were advised to quit, 14% were given or advised to use nicotine replacement, and 12% received referrals or follow-up.(4) A study found that adding a tobacco treatment order set to an existing computerized order entry system increased identification, referral, and treatment of smokers, but

referral and treatment rates remained low (2.1% and 2.5%, respectively).(5) Even patients with tobacco-related illnesses fail to receive tobacco treatment.

1b.3 Citations for Data on Performance Gap: [For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1. Rigotti N, Munafo M, Stead L. Interventions for smoking cessation in hospitalised patients. Cochrane Database Syst Rev. 2007;CD001837.[PubMed]
2. McBride CM, Emmons KM, Lipkus IM. Understanding the potential of teachable moments: The case of smoking cessation. Health Educ Res. 2003 Apr;18:156–170.[PubMed]
3. Rigotti NA, Munafo MR, Stead LF. Smoking cessation interventions for hospitalized smokers: A systematic review. Arch Intern Med. 2008 Oct 13;168:1950–1960.[PubMed]
4. Freund M, et al. Smoking care provision in hospitals: A review of prevalence. Nicotine Tob Res. 2008;10:757–774.[PubMed]
5. Koplan KE, et al. A computerized aid to support smoking cessation treatment for hospital patients. J Gen Intern Med. 2008 Aug;23:1214–1217. Epub May 9, 2008. [PMC free article][PubMed]

1b.4 Summary of Data on Disparities by Population Group: [For Maintenance –Descriptive statistics for performance results for this measure by population group]

The US Public Health Service Clinical Practice Guideline Treating Tobacco Use and Dependence 2008 Update reviewed the literature on disparate populations in detail and found that treatment for general tobacco users is effective for treating tobacco users from disparate populations (see pages 143-176). The CPG recommendation (pg 143) is: "The interventions found to be effective in this Guideline have been shown to be effective in a variety of populations. In addition, many of the studies supporting these interventions comprised diverse samples of tobacco users. Therefore, interventions identified as effective in this Guideline are recommended for all individuals who use tobacco, except when medication use is contraindicated or with specific populations in which medication has not been shown to be effective (pregnant women, smokeless tobacco users, light smokers, and adolescents). (Strength of Evidence = B)." Also, in a July 28, 2011 presentation to the Interagency Committee on Smoking and Health, chaired by U.S. Surgeon General Regina Benjamin, the epidemiology of cessation interventions targeting vulnerable (disparate) populations was reviewed and presented showing that treatment recommendations for the general population are effective with disparate populations.

1b.5 Citations for Data on Disparities Cited in 1b.4: [For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

Fiore MC et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

National Health Interview Survey, United States - 1965-2009. <http://www.cdc.gov/nchs/nhis.htm>

1c. Evidence (Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.)

Is the measure focus a health outcome? Yes ☒ No ☐ If not a health outcome, rate the body of evidence.

Quantity: H ☐ M ☒ L ☐ I ☐ Quality: H ☐ M ☒ L ☐ I ☐ Consistency: H ☐ M ☒ L ☐ I ☐

Quantity	Quality	Consistency	Does the measure pass subcriterion 1c?
M-H	M-H	M-H	Yes <input checked="" type="radio"/>
L	M-H	M	Yes <input checked="" type="radio"/> IF additional research unlikely to change conclusion that benefits to

			patients outweigh harms: otherwise No
M-H	L	M-H	Yes IF potential benefits to patients clearly outweigh potential harms: otherwise No
L-M-H	L-M-H	L	No
Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service			Does the measure pass subcriterion1c? Yes IF rationale supports relationship
1c.1 Structure-Process-Outcome Relationship (<i>Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome</i>): The measure focus is the process of following up post-discharge with the patient who uses tobacco products in order to facilitate/encourage engagement in the prescribed outpatient treatment(intermediate clinical outcome) and enhance patient outcome relative to cessation, ultimately impacting population health (health outcome). When this process is initiated, it can lead to the desired outcome as follows: Tobacco treatment provided during hospitalization to tobacco users >> Tobacco treatment provided at discharge >> Contact made post discharge to determine use status >> Impact on smoking status >> Impact on morbidity/mortality			
1c.2-3 Type of Evidence (<i>Check all that apply</i>): Clinical Practice Guideline, Selected individual studies (rather than entire body of evidence), Systematic review of body of evidence (other than within guideline development)			
1c.4 Directness of Evidence to the Specified Measure (<i>State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population</i>): The guideline writers systematic review of the evidence largely addressed cigarette smoking as opposed to use of other forms of tobacco, as the small number of studies on the use of non-cigarette tobacco products other than smokeless tobacco precluded their separate analysis. The guideline panel believed that the results of the analysis are generalizable to all tobacco users. In addition the guideline meta-analysis largely addressed the outpatient setting and this measure focuses on follow up post discharge to determine compliance with treatment and tobacco use status. The analyses focused generally on the adult population which correlates to the measure set population. The analyses illustrates the effectiveness of various formats of psychosocial treatments that are often used as a follow up in the outpatient setting. These treatment formats are specifically noted in the measure specifications. Tobacco use treatment delivered by means of proactive telephone counseling/contact (quitlines, call-back counseling), individual counseling, and group counseling/contact all increase abstinence rates relative to no intervention (n=58 studies). The results are illustrated below: No format: Estimated odds ratio = 1.0 - Estimated abstinence rate = 10.8 Self help: Estimated odds ratio = 1.2 - Estimated abstinence rate = 12.3 Proactive telephone counseling: Estimated odds ratio = 1.2 - Estimated abstinence rate = 13.1 Group Counseling: Estimated odds ratio = 1.3 - Estimated abstinence rate = 13.9 Individual Counseling: Estimated odds ratio = 1.7 - Estimated abstinence rate = 16.8 Lastly, the 2007 Cochrane analyses in review of 33 trials found that post hospitalization follow up was a key component of effective interventions. Inpatient contact plus follow-up for at least 1 month was associated			

with a significantly higher quit rate compared to control conditions.

Quitline effectiveness was also analyzed by the guideline panel due to the substantial growth in quitline research and the implementation of a national network of tobacco quitlines. During our pilot test, we found that quitlines were the most common mode of referral and follow up. The analysis found that that quitlines significantly increase abstinence rates compared to minimal or no counseling interventions (n=9 studies) as illustrated below:

Minimal or no counseling or self help: Estimated odds ratio = 1.0 - Estimated abstinence rate = 8.5

Quitline counseling: Estimated odds ratio = 1.3 - Estimated abstinence rate = 12.7

1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): 67 studies met criteria for guideline writers to evaluate the effectiveness of different formats of counseling. Thirty three studies were reviewed in the Cochrane Analysis and one Randomized Clinical Trial by Wilson et al.

1c.6 Quality of Body of Evidence (Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events): The quality of the body of evidence was evaluated by the guideline panel. Information relative to the quality of each RCT was kept in a table of findings. This information however, was not provided specifically in the guideline section on evidence. Attempts to retrieve the original tables with study quality documented were unsuccessful. The panel chair indicated the tables are no longer available.

1c.7 Consistency of Results across Studies (Summarize the consistency of the magnitude and direction of the effect): In a study by John R Hughes, the reliability of treatment effects for smoking cessation between the 2008 USPHS Guideline and the Cochrane Reviews was assessed. Additionally, a search of meta-analyses done in the last 5 years contributed to his study. He found that the USPHS, Cochrane and other reviews agreed on statistical significance (yes/no) on 17 of 17 treatments and neither recommended a treatment that the other did not. The reviews also had a high concordance on which treatments were not efficacious. The Odds Ratios were strikingly similar given that many meta-analyses of the same treatment differed dramatically in methods. The experimental reliability of effects was also striking. Among the 37 meta-analyses that reported individual study results, in 33 meta-analyses, >85% of the studies found a numerical superiority for active treatment over placebo. For example, among the 111 comparisons of nicotine replacement therapy (NRT) in the Cochrane meta-analyses, 102 (92%) reported numerical superiority for NRT. Similarly, among the 31 comparisons of bupropion in the Cochrane review, 31 (100%) reported a numerical superiority. Thus the concordance of Odds Ratios across the meta-analyses (despite multiple methodological differences and very different sample sizes, plus the high rates of numerical superiority for treatments), suggests the efficacy of smoking cessation treatments is extremely reliable.

1c.8 Net Benefit (Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms):

The existing evidence does not show that following up with the patient after their quit date will prevent relapse, but continued involvement on the part of the clinician may increase the likelihood that the patient will consult the clinician in later quit attempts should they be needed.

The USPSTF reviewed new evidence in the U.S. Public Health Service's 2008 clinical practice guideline and determined that the net benefits of tobacco cessation interventions in adults and pregnant women remain well established.

The USPSTF found convincing evidence that smoking cessation decreases the risk for heart disease, stroke and lung disease.

In non-pregnant adults, the USPSTF found convincing evidence that smoking cessation interventions,

including brief behavioral counseling sessions (<10 minutes) and pharmacotherapy are effective in increasing the proportion of smokers who successfully quit and remain abstinent for 1 year. Although less effective than longer interventions, even minimal interventions (<3 minutes) have been found to increase quit rates.

Finding no published studies that describe harms of counseling to prevent tobacco use in adults or pregnant women, the USPSTF judged the magnitude of these harms to be no greater than small. Harms of pharmacotherapy are dependent on the specific medication used. In non-pregnant adults, the USPSTF judged these harms to be small. Thus the USPSTF concluded that there is a high certainty that the net benefit of tobacco cessation interventions in adults is substantial. The USPSTF also concluded that there is a high certainty that the net benefit of augmented, pregnancy tailored counseling in pregnant women is substantial.

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

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: The Guideline Panel graded the evidence

Members and disclosures can be found at the following link.

http://www.surgeongeneral.gov/tobacco/treating_tobacco_use08.pdf

Appendix A, pgs 223-227.

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

1c.12 If other, identify and describe the grading scale with definitions: A = Multiple well designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings
B = Some evidence from randomized clinical trials supported the recommendation, but the scientific support was not optimal. For instance, few randomized clinical trials existed, the trials that did exist were somewhat inconsistent, or the trials were not directly relevant to the recommendation.

C= Reserved for important clinical situations in which the Panel achieved consensus on the recommendation in the absence of relevant randomized controlled trials.

1c.13 Grade Assigned to the Body of Evidence: The counseling formats on page 88 were graded A = Multiple well designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings.

1c.14 Summary of Controversy/Contradictory Evidence: We are not aware of any contradictory evidence

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

Wilson D, Wood G, Johnston N, Sicurella J. Randomized clinical trial of supportive follow-up for cigarette smokers in a family practice. Canadian Medical Association Journal/JANUARY 15, 1982/VOL. 126 pgs. 127-129.

1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #): Guideline Recommendations are located in the Treating Tobacco Use and Dependence Clinical Practice Guideline 2008 Update.

Proactive telephone counseling, group counseling, and individual counseling formats are effective and should be used in smoking cessation interventions (Strength of Evidence = A) page 88

Guideline statements regarding effectiveness of interventions for post hospitalized patients – No formal recommendations are given.

2007 Cochrane analyses revealed that intensive intervention (inpatient contact plus follow up for at least 1 month) was associated with a significantly higher quit rate compared to control conditions (OR = 1.65; 95%

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

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CI = 1.44 – 1.90, 17 trials). A specific Cochrane finding relevant to this follow-up measure:

- Post hospitalization follow up appears to be a key component of effective interventions. Interventions that have been shown to be effective in individual studies are: counseling and medication and other psychosocial interventions, including self-help via brochure or audio/videotape, chart prompt reminding physician to advise smoking cessation; hospital counseling; and post discharge counseling telephone calls. Page 144-145

The guidelines provide suggested interventions for hospitalized patients on page 150. The last activity suggested specifically addresses post hospitalization and states the following:

“Arrange for follow-up regarding smoking status. Supportive contact should be provided for at least a month after discharge”. Further noted is the statement “The importance of post hospitalization follow-up has been demonstrated by research”. Page 150

1c.17 Clinical Practice Guideline Citation: Fiore MC et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: U.S> Department of Health and Human Services. Public Health Service. May 2008.

1c.18 National Guideline Clearinghouse or other URL:

http://www.surgeongeneral.gov/tobacco/treating_tobacco_use08.pdf

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? **Yes**

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: The guideline panel graded the recommendation. Members and disclosures can be found at the following link.

http://www.surgeongeneral.gov/tobacco/treating_tobacco_use08.pdf Appendix A pgs 223-227.

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

1c.22 If other, identify and describe the grading scale with definitions: A = Multiple well designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings
B = Some evidence from randomized clinical trials supported the recommendation, but the scientific support was not optimal. For instance, few randomized clinical trials existed, the trials that did exist were somewhat inconsistent, or the trials were not directly relevant to the recommendation.

C= Reserved for important clinical situations in which the Panel achieved consensus on the recommendation in the absence of relevant randomized controlled trials.

1c.23 Grade Assigned to the Recommendation: A = Multiple well designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings (for counseling formation on page 88). Other guideline statements referenced relative to follow-up were not graded.

1c.24 Rationale for Using this Guideline Over Others: The United States Department of Health and Human Services Public Health Service Clinical Practice Guideline Treating Tobacco Use and Dependence 2008 Update reflects a distillation of over 8,700 research articles and is the primary Guideline for evidence-based tobacco dependence treatment. The Guideline is sponsored by the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), National Cancer Institute (NCI), National Heart, Lung, and Blood Institute (NHLBI), National Institute for Drug Abuse (NIDA), Robert Wood Johnson Foundation (RWJF), American Legacy Foundation, and University of Wisconsin School of Medicine and Public Health Center for Tobacco Research and Intervention. The Guideline has been endorsed by almost 60 organizations, for example, the American Academy of Family Physicians, the American Academy of Nurse Practitioners, American Academy of Physician Assistants, American College of Cardiology, American Medical Association, American Nurses Association, National Committee for Quality Assurance, Society of General Internal Medicine, American Heart Association, American Lung Association,

and the American Cancer Society.

The Agency for Healthcare Research and Quality also supports the U.S. Preventive Services Task Force (USPSTF) Guide to Community Preventive Services and Guide to Clinical Preventive Services. These provide evidence-based recommendations across the prevention spectrum. Their recommendations for tobacco dependence treatment match those of the United States Department of Health and Human Services Public Health Service Clinical Practice Guideline Treating Tobacco Use and Dependence 2008 Update. We use the Treating Tobacco Use and Dependence Guideline because it focuses solely on tobacco dependence treatment, provides an evidence-based brief intervention model and provides comprehensive treatment detail and background.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: [High](#) 1c.26 Quality: [High](#) 1c.27 Consistency: [High](#)

1c.28 Attach evidence submission form:

1c.29 Attach appendix for supplemental materials:

Was the threshold criterion, *Importance to Measure and Report*, met?

(1a & 1b must be rated moderate or high and 1c yes) Yes ☐ No ☒

Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.

For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (**evaluation criteria**)

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See [guidance on measure testing](#).

S.1 Measure Web Page (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained? [Yes](#)

S.2 If yes, provide web page URL:

http://www.jointcommission.org/specifications_manual_for_national_hospital_inpatient_quality_measures/

2a. RELIABILITY. Precise Specifications and Reliability Testing: H ☒ M ☒ L ☒ I ☒

2a1. Precise Measure Specifications. (The measure specifications precise and unambiguous.)

2a1.1 Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):

The number of discharged patients who are contacted between 15 and 30 days after hospital discharge and follow-up information regarding tobacco use status is collected.

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

Any time between 15 and 30 days post discharge.

2a1.3 Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses):*

Five data elements are used to satisfy the numerator. Follow-up Contact Date and Follow-up Contact, Tobacco Use Status Post Discharge - Counseling, Tobacco Use Status Post Discharge - Medication, and Tobacco Use Status Post Discharge - Quit Status. Follow-up contact can be made through a variety of modes including phone call, clinic visit, e-mail or letter through U.S. mail. The contact may also be made by someone other than a hospital employee, however if this is done, information must be cataloged at the hospital. The contact date must be between 15 and 30 days post discharge. The contact date for e-mail or letter would be the date that information was received from the patient, not the date the e-mail or letter was sent. The 3 post discharge data elements (Tobacco Use Status Post Discharge - Counseling, Tobacco Use Status Post Discharge - Medication, Tobacco Use Status Post Discharge - Quit Status) must be answered in order to receive credit for the measure. The allowable values provide options for patient refusal to provide information, as well as quit using or not quit using. In the measure calculation, the hospital is not held accountable for the patient's compliance with the recommended treatment or the quit status, but is accountable for collecting the information. Full specifications can be viewed on the Joint Commission web site at the following link:

http://www.jointcommission.org/specifications_manual_for_national_hospital_inpatient_quality_measures/

2a1.4 Denominator Statement *(Brief, narrative description of the target population being measured):*

The number of discharged patients 18 years of age and older identified as current tobacco users.

2a1.5 Target Population Category *(Check all the populations for which the measure is specified and tested if any):* Elderly

2a1.6 Denominator Time Window *(The time period in which cases are eligible for inclusion):*

Any time during the hospital stay from admission to discharge to identify use.

2a1.7 Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):*

There are six data elements that define the denominator: Admission Date, Birthdate, Cognitive Impairment, Discharge Date, Discharge Disposition, and Tobacco Use Status. The Admission Date, Birthdate and Discharge Date are used to determine the patient age and length of stay. The data element Tobacco Use Status is used to identify patients who use tobacco products. The data element identifies the product, and the volume used. Discharge Disposition is used to identify those patients who would be excluded for a variety of reasons such as death, transfer to another hospital for inpatient care, those who leave AMA or who are transferred to hospice, etc.

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

There are 15 exclusions from the denominator as follows:

1. Patients less than 18 years of age
2. Patients who are cognitively impaired
3. Patients who are not current tobacco users
4. Patients who were not screened for tobacco use
5. Patients who expired during the hospital stay - identified by Discharge Disposition
6. Patients who have a length of stay less than or equal to one day
7. Patients with a length of stay greater than 120 days
8. Patients discharged/transferred to another hospital for inpatient care
9. Patients who left against medical advice
10. Patients discharged/transferred to another health care facility.

- 11. Patients discharged to home or another health care facility for hospice care
 - 12. Patients who do not reside in the United States
 - 13. Patients who do not have a phone or cannot provide contact information
 - 14. Patients discharged to a detention facility, jail or prison
 - 15. Patients re-admitted to the hospital within the follow-up time frame
- Patients who were not screened for tobacco use

2a1.9 Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):*

Patients who are less than 18 years of age are identified by subtracting the patient birthdate from the admission date.

Patients who are not tobacco users are identified through allowable value 6 for the data element Tobacco Use Status.

Patients with a length of day of one day or less and those with a stay greater than or equal to 120 days are identified by the admission and discharge date.

Patients who are not residents of the USA or who do not have contact information or a phone or patients who are readmitted to the hospital within the follow up time frame are excluded through allowable value 3 for the data element Follow-up Contact.

Those patients who expire, are transferred to another facility for inpatient care, hospice, federal health care facility, detention, or leave AMA are identified by virtue of the data element Discharge Disposition.

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses):*

Not Applicable, the measure is not stratified

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13):* No risk adjustment or risk stratification **2a1.12 If "Other," please describe:**

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.):*

Not Applicable

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score):*
Better quality = Higher score

2a1.20 Calculation Algorithm/Measure Logic *(Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.):*

TOB-4: Tobacco Use: Assessing Status after Discharge

Numerator: The number of discharged patients who are contacted between 15 and 30 days after hospital discharge and follow-up information regarding tobacco use status is collected.

Denominator: The number of discharged patients 18 years of age and older identified as current tobacco users.

Variable key: Patient Age

Length of Stay

Follow-up Days

Complete Plan Counter

1. Start processing. Run cases that are included in the Global Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of Admission Date and Birthdate to yield the most accurate age. Only cases with valid Admission Date and Birthdate will pass the front end edits into the measure specific algorithms.
3. Check Patient Age
 - a. If Patient Age is less than 18 years, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - b. If Patient Age is equal to or greater than 18 years, continue processing and proceed to calculate Length of Stay.
4. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.
5. Check Length of Stay
 - a. If Length of Stay is equal to or less than 1 day, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - b. If Length of Stay is greater than 1 day, continue processing and proceed to check Cognitive Impairment.
6. Check Cognitive Impairment
 - a. If Cognitive Impairment is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Cognitive Impairment equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Cognitive Impairment equals No, continue processing and proceed to check Discharge Disposition.
7. Check Discharge Disposition
 - a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Discharge Disposition equals 2, 3, 4, 5, 6 or 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Discharge Disposition equals 1 or 8, continue processing and proceed to check Tobacco Use Status.
8. Check Tobacco Use Status
 - a. If Tobacco Use Status is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Tobacco Use Status equals 6, 7 or 8, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

- c. If Tobacco Use Status equals 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, or 14 continue processing and proceed to check Follow-up Contact.
9. Check Follow-up Contact
 - a. If Follow-up Contact is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Follow-up Contact equals 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Follow-up Contact equals 1, 2 or 4 continue processing and proceed to recheck Follow-up Contact.
10. Recheck Follow-up Contact
 - a. If Follow-up Contact equals 2 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - b. If Follow-up Contact equals 1, continue processing and proceed to check Follow-up Contact Date.
11. Check Follow-up Contact Date
 - a. If Follow-up Contact Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Follow-up Contact Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If Follow-up Contact Date equals a Non Unable to Determine Value, continue processing and proceed to Follow-up Days Calculation.
12. Calculate Follow-up Days. Follow-up Days, in days, is equal to the Follow-up Contact Date minus the Discharge Date.
13. Check Follow-up Days
 - a. If Follow-up Days is less than zero days the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Follow-up Days is greater than or equal to zero days and less than 15 days or Follow-up Days is greater than 30 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If Follow-up Days is greater than or equal to 15 days and less than or equal to 30 days, the case will proceed to initialize Complete Plan Counter.
14. Initialize Complete Plan Counter. Initialize Complete Plan Counter to equal 0 and proceed to check Tobacco Use Status Post Discharge – Counseling.
15. check Tobacco Use Status Post Discharge – Counseling
 - a. If Tobacco Use Status Post Discharge – Counseling is missing the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Tobacco Use Status Post Discharge – Counseling equals 1, 2, or 3, add 1 to Complete Plan Counter, and the case will proceed to check Tobacco Use Status Post Discharge – Medication.
 - c. If Tobacco Use Status Post Discharge – Counseling equals 4 the case will proceed to check Tobacco Use Status Post Discharge – Medication.
16. check Tobacco Use Status Post Discharge – Medication
 - a. If Tobacco Use Status Post Discharge – Medication is missing the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Tobacco Use Status Post Discharge – Medication equals 1, 2, or 3, add 1 to Complete Plan Counter, and the case will proceed to check Tobacco Use Status Post Discharge – Quit Status.

- c. If Tobacco Use Status Post Discharge – Medication equals 4 the case will proceed to check Tobacco Use Status Post Discharge – Quit Status.
17. check Tobacco Use Status Post Discharge – Quit Status
- a. If Tobacco Use Status Post Discharge – Quit Status is missing the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Tobacco Use Status Post Discharge – Quit Status equals 1, 2, or 3, add 1 to Complete Plan Counter, and the case will proceed to check Complete Plan Counter.
- c. If Tobacco Use Status Post Discharge – Quit Status equals 4 the case will proceed to check Complete Plan Counter.
18. check Complete Plan Counter
- a. If Complete Plan Counter is less than 3 the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
- b. If Complete Plan Counter equals 3 the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

Attachment

TOB4__MIF_and_algorithm.docx

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):

The global Initial Patient Population is defined and identified by two data elements (Admission Date and Discharge Date). All patients discharged from acute inpatient care with Length of Stay (Discharge Date minus Admission Date less than or equal to 120 days are included in the Global Initial Population and are eligible for sampling. Hospitals that choose to sample have the option of sampling quarterly or monthly. The sample is taken randomly as follows for a monthly sample.

- Average monthly Initial Patient Population > or = 510 results in a minimum random sample size of 102
- Average monthly Initial Patient Population > or = 255 – 509 results in a random sample of 20% of the population size
- Average monthly Initial Patient Population > or = 51 – 254 results in a random sample of 51
- Average monthly Initial Patient Population < 51: No sampling, 100% population required.

2a1.25 Data Source (*Check all the sources for which the measure is specified and tested*). If other, please describe:

Electronic Health Record (Only), Paper Records

2a1.26 Data Source/Data Collection Instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): Each data element in the data dictionary includes suggested data sources.

The Joint Commission developed a web-based data collection tool that was used by hospitals and for reliability testing during the pilot test. When the measures are made part of The Joint Commission's ORYX data collection and reporting program, the data will be collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy of the data collection tool with the specifications. Contracted vendors may not offer measure sets to hospitals until the vendor has passed verification for the measure set.

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:

Attachment

[Tobacco_Treatment_Data_Dictionary.doc](#)

2a1.33 Level of Analysis *(Check the levels of analysis for which the measure is specified and tested):*

Facility, Other

2a1.34-35 Care Setting *(Check all the settings for which the measure is specified and tested):*

[Behavioral Health : Inpatient, Hospital](#)

2a2. Reliability Testing. *(Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)*

2a2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

Original reliability testing of these measures was conducted in 2010. At the request of the Steering Committee, follow-up testing was carried out in November and December, 2012. A total of 90 medical records were reviewed at five hospitals across the country. The hospitals ranged in bed size from 25 to 633 beds.

2a2.2 Analytic Method *(Describe method of reliability testing & rationale):*

Five hospitals comprised the convenience sample. Hospital types included academic, public and critical access. The objectives of the reliability site visits included: assessment of data element and measure reliability; assessment of data collection and implementation effort, and identification of potential measure specification enhancements, including data element definitions, abstraction guidelines, etc. A web-based data collection tool developed by the Joint Commission was used for the pilot test. In preparation for the reliability test, a separate section was created in the web-based tool where re-abstracted case data could be housed and compared to the pilot hospitals' previously submitted original case abstractions. During the reliability site visit, Joint Commission staff re-abstracted data from a number of cases randomly selected by the Joint Commission biostatistician. These data were entered blindly into the web-based tool and then compared to the original abstraction while on site. Data element differences were coded with respect to the reasons contributing to the differences and the differences were then adjudicated. These adjudicated results were then used as the "gold standard" for the purpose of comparing the adjudicated data with the originally abstracted data. Focus group interviews were conducted at each hospital and differences in abstraction findings were shared with each hospital for use as an opportunity for improvement. A comparison of calculated indicator rates using data originally abstracted by hospitals and the data that were re-abstracted by the Joint Commission staff and adjudicated on each measure and the individual data elements was performed. Measure data element agreement rates were calculated to assess data element accuracy. At the measure level the sensitivity and specificity were calculated with their corresponding 95% confidence interval to assess the measure reliability for both the determination of eligibility for the measure denominator and eligibility for the measure numerator.

2a2.3 Testing Results *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted):*

Of the 90 cases re-abstracted, the overall measure agreement rate was 93.3% (84/90). A perfect agreement rate between originally abstracted data and reabstracted data would be 100%, and an agreement rate below 75% is considered suboptimal. Improvement from original test data was noted in the areas of follow up contact (agreement rate 91.8%) and follow up contact date (agreement rate 85.0%).

These areas are central to the calculation of the measure rate. Application of skip logic, refinement of the data definitions and the notes for abstraction following the original development and testing of the measure contributed to the improvement. The sensitivity was 96.3% CI (87.3%, 99.6%) and the specificity was 91.4% CI (76.9%, 98.2%) for the measure denominator. For the measure numerator, given the case fell into the measure denominator, the sensitivity was 100% CI (15.8%, 100%) and the specificity was 100% CI (88.4%, 100%).

2b. VALIDITY. Validity, Testing, including all Threats to Validity: H M L I

2b1.1 Describe how the measure specifications (measure focus, target population, and exclusions) are consistent with the evidence cited in support of the measure focus (criterion 1c) and identify any differences from the evidence:

The measure focus is the process of following up with hospitalized adult patients who use tobacco products to determine their use status 30 days post discharge and to determine if they are complying with their prescribed outpatient treatment. Exclusions for receipt of FDA approved medications include those who use smokeless products, light smokers, and pregnant smokers.

The systematic review of the evidence largely addressed cigarette smoking as opposed to use of other forms of tobacco, as the small number of studies on the use of non-cigarette tobacco products other than smokeless tobacco precluded their separate analysis. The guideline panel believed that the results of the analysis are generalizable to all tobacco users.

The analyses focused generally on the adult population which correlates to the measure set population. The patients excluded from receipt of FDA- approved medications for tobacco cessation (smokeless tobacco users, pregnant smokers, and light smokers) is consistent with the evidence as the effectiveness of the medications has not been proven in this population of patients.

A Cochrane review indicated that follow up was a critical piece to successful cessation which is consistent with the measure.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.*)

2b2.1 Data/Sample (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*):

Early in the measure development process, face validity of the original candidate measures was assessed through public comment. The measures were rated on a 5 point scale relative to 10 characteristics. 2,177 persons responded to the public comment. Issues identified were addressed through revisions to measure specification as appropriate and a final set of measures to be pilot tested was finalized. Due to the number of changes made to the original candidate measures, an alpha test was incorporated into the last months of the pilot test so as to re-evaluate the measures. The purpose was threefold: to gather information regarding face validity, to determine feasibility of data collection, and to gather information about each data element regarding clarity and suggested enhancement that could be made. A total of 11 hospitals completed the evaluation.

Lastly, once the final specifications were completed, the 11 members of the TAP were asked to rate each measure on a 5 point scale (disagree, somewhat disagree, neutral, somewhat agree, and agree) relative to 5 questions. Eight TAP members responded.

Our advisory panel included six physicians, one nurse, one pharmacist, one education specialist, one research investigator, and one PhD working in the field of alcohol solutions.

Michael Fiore MD Director UW Center for Tobacco Research and Intervention University of Wi

Nancy Rigotti MD Director Tobacco Research & Treatment Harvard Medical School

Linda Sarna RN DNSC FAAN Professor of Nursing UCLA School of Nursing

Frank Vitale, MA National Director, The Pharmacy Partnership for Tobacco Cessation U of Pittsburgh

Stephen Schroeder MD Distinguished Professor of Medicine Smoking Cessation Leadership Center University of California, San Francisco

Robert Adsit, M.Ed Education and Outreach Programs Supervisor University of Wisconsin
Eric Goplerud PhD, MA Director of Ensuring Solutions to Alcohol Problems George
Washington University

Larry Gentilello MD FACS Professor of Surgery UT Southwestern Medical Ctr at Dallas

Steve Bernstein MD Associate Professor Surgery Emergency Medicine Yale University

Constance Weisner DrPH, MSW Investigator, Kaiser Permanente Division of Research
Kaiser

Katherine Bradley MD, MPH Core Investigator, Health Services Research and Development Veterans
Affairs, Puget Sound Health Care System

2b2.2 Analytic Method *(Describe method of validity testing and rationale; if face validity, describe systematic assessment):*

Pilot survey: A survey was designed and made available on line during the month of July, 2010 to all participating pilot sites. Five questions relative to face validity were rated on a 5 point scale (1. disagree, 2. somewhat disagree, 3. neutral, 4. somewhat agree, and 5. agree). Six questions were asked relative to the measure set in general and eight questions were designed to be measure specific. A table of the required data elements with specifications was also provided so respondents could comment on the clarity of the specifications and provide suggestions for enhancements.

TAP Survey: A survey was e-mailed to each of the TAP members by the TAP chair. Five questions relative to face validity were rated on a 5 point scale (1. disagree, 2. somewhat disagree, 3. neutral, 4. somewhat agree, and 5. agree). The surveys were returned via e-mail and analyzed. The mean score was calculated for each question as well as the frequency distribution noted.

2b2.3 Testing Results *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):*

Eleven hospitals completed the evaluation. The measure rated 4.80 on a 5 point scale with respect to clarity of measure specifications; 3.4 with respect to its usefulness; 3.7 regarding interpretability, 2.2 with respect to data accessibility and ease of collection, and 3.6 regarding a recommendation for national use and endorsement.

Eight TAP members completed the evaluation. The measure rated 4.9 on a 5 point scale with respect to clarity of measure specifications; 4.9 with respect to its usefulness; 4.6 regarding interpretability, 2.75 with respect to data accessibility and ease of collection, and 4.6 regarding a recommendation for national use and endorsement.

At the time of the testing, many hospitals did not have a process in place to follow up with patients after discharge; however, all of the hospitals agreed with the importance of follow up and many have since begun developing effective methods for capturing and recording follow up data.

POTENTIAL THREATS TO VALIDITY. *(All potential threats to validity were appropriately tested with adequate results.)*

2b3. Measure Exclusions. *(Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.)*

2b3.1 Data/Sample for analysis of exclusions *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

The data sample was the 9038 records submitted from the 19 pilot hospitals during the 6 month pilot test (March through August 2010). Pilot test hospitals ranged in size from 15 to 900 beds. Eight of the hospitals were Veterans Administration (VA) Hospitals, and six hospitals were participating in the SBIRT (Screening, Brief Intervention, and Referral to Treatment) project. Seven hospitals used electronic health records and seven used paper medical records; the remainder used a combination of electronic and paper records.

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

The data were analyzed to determine the frequency and percentage of those patients unable to be

screened due to cognitive impairment as well as those patients who had a length of stay less than or equal to one day because hospitals in the pilot test found it quite difficult to reach patients with such a short length of stay. Data were also analyzed to determine the frequency and percentage of the various values for discharge status which are used to determine transfers to another acute care facility, expiration, leaving AMA, transfer to hospice, etc. The measure excludes these cases as it is difficult to refer to outpatient counseling, provide prescriptions and conduct follow-up for such patients.

Not evaluated by this data sample was the exclusion for cases with a length of stay greater than 120 days which is a standard exclusion for all TJC and CMS aligned measures. The decision to exclude this population was made jointly by the two organizations to prevent cases from spanning more than 1 specification manual, and therefore, potentially slightly different measure specifications. Revisions are made only twice each year and it is possible that some cases could fail still providing the appropriate care if this exclusion was not provided.

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

There were 1266 (14%) patients with a length of stay of one day or less. Combining all of the exclusions identified through discharge status, we found 1444 patients at 15.9%. A breakdown of the individual status is as follows:

1. Transfer to hospice = 121 patients at 1.3%
2. Transfer to acute care facility = 555 patients at 6%
3. Expired = 205 patients at 2.26%
4. AMA = 190 patients at 2%
5. Transfer to another health care facility = 373 patients at 4%

While these percentages may seem small, this represents only 19 hospitals in a pilot test. In light of the expected use of the measure for public reporting, there has been significant push from the healthcare community for measure developers to make "perfect measures". There is little tolerance from the field at this point for keeping inappropriate cases in a measure population than can easily be excluded through data elements such as Discharge Status. The balance between data collection and abstraction and inclusion of false positive or negative cases must always be weighed and in this case the ease of excluding such cases outweighed their inclusion.

2b4. Risk Adjustment Strategy. *(For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.)*

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

Not Applicable

2b4.2 Analytic Method *(Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables):*

Not Applicable

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata):*

Not Applicable

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: Not Applicable

2b5. Identification of Meaningful Differences in Performance. *(The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.)*

2b5.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

The data sample was the 9038 records submitted from the 19 pilot hospitals during the six month pilot test (March through August 2010). Pilot test hospitals ranged in size from 15 to 900 beds. Eight of the hospitals were Veterans Administration (VA) Hospitals, and six hospitals were participating in the SBIRT (Screening, Brief Intervention, and Referral to Treatment) project. Seven hospitals used electronic health records and seven used paper medical records; the remainder used a combination of electronic and paper records.

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

The overall measure rate was calculated as well as analyzed in subsets of SBIRT (Screening, Brief Intervention and Referral to Treatment), Non-SBIRT and VA hospitals. SBIRT hospitals are those who have engaged in a national initiative to identify and treat substance use issues. It was felt that their processes might be more rigorous and measure rates might be different from the other subsets. The VA is a single system where follow-up with patients is easier than with other facilities. It was felt that measure rates might also be different with this subset of facilities. A secondary analysis was performed by plotting each hospitals rate (within each subset) on dot plots to identify variability.

2b5.3 Results (Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):

The VA hospitals demonstrated the best performance (45%) although a decline from baseline (56.3%) and the SBIRT hospitals while demonstrating the lowest rates (19%) showed the greatest increase from baseline (2.3%). The baseline is the rate of compliance with the measure prior to the implementation of the measure set. The dot plot analysis showed considerable variation for the VA subset with measure rates ranging from 10-90%. Variation existed in the SBIRT and non-VA subsets as well with rates ranging from 9-50% and 0-30% respectively.

2b6. Comparability of Multiple Data Sources/Methods. (If specified for more than one data source, the various approaches result in comparable scores.)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

The medical record is the only data source used for this measure

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

Not Applicable

2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

Not Applicable

2c. Disparities in Care: H M L I NA (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts): The measure is not stratified for disparities

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:

The reason the measure is not specified to detect disparities is related to the findings noted in section 1.4b; that literature has shown that the tobacco interventions are effective in disparate populations and are recommended for all individuals, thus the measure focuses on overall performance. There are no plans to stratify this measure based on race or ethnicity; however, beginning with January 1, 2013 discharges The

Joint Commission will capture data elements for race and Hispanic ethnicity which hospitals can use in their improvement opportunities to determine if their rates are higher for any particular race or Hispanic ethnicity. Further stratification by race or Hispanic ethnicity could result in a small “n” making it difficult to make meaningful comparisons. Measure data could be evaluated however, by sex, age and geographic location.

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met? (Reliability and Validity must be rated moderate or high) Yes ☒ No ☐

Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (**evaluation criteria**)

C.1 Intended Actual/Planned Use (Check all the planned uses for which the measure is intended): Public Reporting, Quality Improvement (external benchmarking to organizations), Quality Improvement (Internal to the specific organization), Regulatory and Accreditation Programs

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions): Public Reporting, Regulatory and Accreditation Programs

3a. Usefulness for Public Reporting: H ☒ M ☒ L ☐ I ☐

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

3a.1. Use in Public Reporting - disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]**

The Joint Commission website for Quality Check

<http://www.qualitycheck.org/consumer/searchOCR.aspx>

The Tobacco Treatment measures were noted in the recent IPPS rule for future consideration.

3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: The measure is publicly reported on the Joint Commission’s website “Quality Check” as one of 4 measures in a set. All 4 measure rates are reported which together tell a story of performance related to tobacco treatment.

The measure was rated 3.4 on a 5 point scale by pilot test users with respect to its ability to be used for benchmarking and identifying best practices, and its support for quality improvement efforts. Respondents also scored the measure at 3.7 with respect to its ability to be easily interpreted and reported in a way that is useful and meaningful to various stakeholders.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): [Used in The Joint Commission Accreditation Program.](#)
[Internal reports generated for hospitals](#)

3b. Usefulness for Quality Improvement: H M L I

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

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):

[For Maintenance – *If not used for QI, indicate the reasons and describe progress toward using performance results for improvement***].**

[Not applicable](#)

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated (e.g., *QI initiative*), describe the data, method and results:

[Not Applicable](#)

Overall, to what extent was the criterion, Usability, met? H M L I

Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (**evaluation criteria**)

4a. Data Generated as a Byproduct of Care Processes: H M L I

4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*

Data used in the measure are:

[generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information \(e.g., DRG, ICD-9 codes on claims\), Abstracted from a record by someone other than person obtaining original information \(e.g., chart abstraction for quality measure or registry\)](#)

4b. Electronic Sources: H M L I

4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields):* [Some data elements are in electronic sources](#)

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources: [The Joint Commission plans on seeking funding for the development of e-specifications for this measure.](#)

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H M L I

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:

[No unintended consequences of measurement were identified during testing or in review of the literature/RCTs.](#)

[A few reliability issues surfaced because abstractors accepted follow up phone calls for reasons other than](#)

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

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gaining information about tobacco use status. While it was clear in the specifications that follow up must be for tobacco use status, this has been re-enforced by addressing it in the data element question.

4d. Data Collection Strategy/Implementation: H ☐ M ☐ L ☐ I ☐

A.2 Please check if either of the following apply (regarding proprietary measures):

4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues (e.g., fees for use of proprietary measures):

During the pilot test it became clear that implementation of the follow-up measure was difficult to achieve for a variety of reasons. The measure specifically specified that follow-up had to be done by hospital employees and must be done by phone or post discharge clinic visit. The TAP and staff agreed that it was necessary to allow more flexibility in the final specifications for meeting the intent of the measure. As a result, the follow up need not always be done by hospital staff, for example, hospitals could choose to contract the service, or the Quitline could provide the follow up information back to the hospital. Secondly, a greater variety of follow up methods are allowed in the final specifications including phone calls, clinic visits, e-mail, and letters via U.S. mail. If using e-mail and U.S. mail, the contact date would be the date information was received by the hospital.

Sampling was not allowed during the pilot test so that sufficient data could be collected during the six month pilot test. A sampling scheme has been introduced for implementation on a national scale. The sampling is described in the specifications section.

The Joint Commission plans on seeking funding for the development of electronic specifications for the measure set.

Overall, to what extent was the criterion, *Feasibility*, met? H ☐ M ☐ L ☐ I ☐
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes ☐ No ☐

Rationale:

If the Committee votes No, STOP.

If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures (either same measure focus or target population) or competing measures (both the same measure focus and same target population), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible):

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): [The Joint Commission, One Renaissance Boulevard, Oakbrook Terrace, Illinois, 60181](#)

Co.2 Point of Contact: [JohnMarc, Alban, jalban@jointcommission.org, 630-792-5304-](#)

Co.3 Measure Developer if different from Measure Steward: [The Joint Commission, One Renaissance Boulevard, Oakbrook Terrace, Illinois, 60181](#)

Co.4 Point of Contact: [Jerod M., Loeb, PhD, jloeb@jointcommission.org, 630-792-5920-](#)

Co.5 Submitter: [Ann, Watt, MBA, RHIA, awatt@jointcommission.org, 630-792-5944-, The Joint Commission](#)

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

Co.7 Public Contact: [Celeste, Milton, MPH, BSN, RN, cmilton@jointcommission.org, 630-792-5925-, The Joint Commission](#)

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development

Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

[The technical advisory panel determined priority areas in substance abuse for measure development. They reviewed public comments and were actively involved in all phases of the project to identify and develop the numerator and denominator statements. Measure recommendations for National Quality Forum endorsement were made after careful review of the pilot results and site feedback.](#)

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.3 Year the measure was first released: [2011](#)

Ad.4 Month and Year of most recent revision: [07, 2012](#)

Ad.5 What is your frequency for review/update of this measure? [Biannually](#)

Ad.6 When is the next scheduled review/update for this measure? [07, 2013](#)

Ad.7 Copyright statement: [The Specifications Manual for National Hospital Inpatient Quality Measures](#)

(Specifications Manual) is the result of the collaborative efforts of the Centers for Medicare & Medicaid Services (CMS) and The Joint Commission to publish a uniform set of national hospital quality measures. A primary objective of this collaborative effort is to promote and enhance the utility of these measures for all hospitals.

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Ad.8 Disclaimers:

Ad.9 Additional Information/Comments:

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