Measure Information Form
Collected For: The Joint Commission Only
CMS Informational Only

Measure Set: Tobacco Treatment (TOB)

Set Measure ID #: TOB-2

Performance Measure Name:
TOB-2 Tobacco Use Treatment Provided or Offered
TOB-2a Tobacco Use Treatment

Description:
TOB-2 Patients identified as tobacco product users within the past 30 days who receive or refuse practical counseling to quit AND receive or refuse FDA-approved cessation medications during the hospital stay.
TOB-2a Patients who received counseling AND medication as well as those who received counseling and had reason for not receiving the medication.

The measure is reported as an overall rate which includes all patients to whom tobacco use treatment was provided, or offered and refused, and a second rate, a subset of the first, which includes only those patients who received tobacco use treatment. The Provided or Offered rate (TOB-2), describes patients identified as tobacco product users within the past 30 days who receive or refuse practical counseling to quit AND receive or refuse FDA-approved cessation medications during the hospital stay. The Tobacco Use Treatment (TOB-2a) rate describes only those who received counseling AND medication as well as those who received counseling and had reason for not receiving the medication. Those who refused are not included.

Rationale: 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 dollars per year in direct medical expenses and 97 billion dollars in lost productivity (CDC 2007).

There is strong and consistent evidence that tobacco dependence interventions, if delivered in a timely and effective manner, significantly reduce the user’s risk of suffering from tobacco-related disease and improve outcomes for those already suffering from a tobacco-related disease (DHHS 2000; Baumeister 2007; Lightwood 2003 and 1997; Rasmussen 2005; Hurley 2005; Critchley 2004; Ford 2007; Rigotti 2008). Effective, evidence-based tobacco dependence interventions have been clearly
identified and include brief clinician advice, individual, group, or telephone counseling, and use of FDA-approved cessation medications. These treatments are clinically effective and extremely cost-effective relative to other commonly used disease prevention interventions and medical treatments. Studies indicate that the combination of counseling and medications is more effective for tobacco cessation than either medication or counseling alone (Fiore 2008), except in specific populations for which there is insufficient evidence of the effectiveness and/or safety of the FDA-approved cessation medications. These populations include pregnant women, smokeless tobacco users, light smokers, and adolescents. Hospitalization (both because hospitals are a tobacco-free environment and because patients may be more motivated to quit as a result of their illness) offers an ideal opportunity to provide cessation assistance that may promote the patient’s medical recovery. Patients who receive even brief advice and intervention from their care providers are more likely to quit than those who receive no intervention.

**Type of Measure:** Process

**Improvement Noted As:** Increase in the rate

**Numerator Statement:**

TOB-2: The number of patients who received or refused practical counseling to quit AND received or refused FDA-approved cessation medications.

TOB-2a: The number of patients who received practical counseling to quit AND received FDA-approved cessation medications.

<table>
<thead>
<tr>
<th>Included Populations:</th>
<th>Patients who refuse counseling</th>
<th>Patients who refuse FDA-Approved cessation medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excluded Populations:</td>
<td>For Medications Only Smokeless tobacco users pregnant smokers light smokers patients with reasons for not administering FDA-approved cessation medication.</td>
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</tr>
<tr>
<td>Data Elements:</td>
<td>ICD-9-CM Other Diagnosis Codes ICD-9-CM Principal Diagnosis Code Reason for No Tobacco Cessation Medication During the Hospital Stay Tobacco Use Status Tobacco Use Treatment FDA-</td>
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</table>

Specifications Manual for National Hospital Inpatient Quality Measures
Discharges 01-01-12 (1Q12) through 06-30-12 (2Q12)
Denominator Statement: The number of hospitalized inpatients 18 years of age and older identified as current tobacco users.

Included Populations: Not applicable

Excluded Populations:
- Patients less than 18 years of age
- Patient who are cognitively impaired
- Patients who are not current tobacco users
- Patients who refused or were not screened for tobacco use during the hospital stay
- Patients who have a duration of stay less than or equal to one day and greater than 120 days

Data Elements:
- Admission Date
- Birthdate
- Cognitive Impairment
- Discharge Date
- Tobacco Use Status

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal and other ICD-9-CM diagnoses which require retrospective data entry.

Data Accuracy: Data accuracy is enhanced when all definitions are used without modification. The data dictionary should be referenced for definitions and abstraction notes when questions arise during data collection.

Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: Hospitals may wish to identify those patients that refused either counseling or medications or both so as to have a better understand of which treatment type is refused so that efforts can be directed toward improving care.
Specifications Manual for National Hospital Inpatient Quality Measures
Discharges 01-01-12 (1Q12) through 06-30-12 (2Q12) TOB-2-4

Sampling: Yes, please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Selected References:
TOB-2: Tobacco Use Treatment Provided or Offered

Numerator: The number of patients who received or refused practical counseling to quit AND received or refused FDA-approved cessation medications.

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

### Flowchart Description

1. **START**
   - 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. **Patient Age**
   - Patient Age (in years) = Admission Date minus 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 algorithm.

3. **Patient Age**
   - ≥ 18 years
   - Length of Stay (in days) = Discharge Date – Admission Date

4. **Length of Stay**
   - ≤ 1 day
     - TOB-2 B
   - > 1 day
     - Cognitive Impairment
       - Missing = N
       - TOB-2 B
     - Tobacco Use Status
       - Missing = 1, 2
         - TOB-2 B
       - TOB-2 X
         - Tobacco Use Treatment Practical Counseling
           - Missing = 3
             - TOB-2 D
           - TOB-2 J

**Variable Key:**
- Patient Age
- Length of Stay
- TOB-2: Tobacco Use Treatment Provided or Offered
  - X: Missing
  - J: Missing
  - B: = Y
  - D: ≥ 18 years
  - ≥ 1 day
  - ≤ 1 day

**Specifications Manual for National Hospital Inpatient Quality Measures**
Discharges 01-01-12 (1Q12) through 06-30-12 (2Q12)
TOB-2a: Tobacco Use Treatment Provided or Offered

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

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

Variable key: Patient Age Length of Stay

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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   c. If Cognitive Impairment equals No, continue processing and proceed to check Tobacco Use Status.

7. 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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   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 for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   c. If Tobacco Use Status equals 1, 2, 3, 4, 5, 9, 10, 11, 12, 13 or 14, continue processing and proceed to check Tobacco Use Treatment Practical Counseling.

8. Check Tobacco Use Treatment Practical Counseling
   a. If Tobacco Use Treatment Practical Counseling is missing, the case will proceed to a Measure Category Assignment of X and will be rejected for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   b. If Tobacco Use Treatment Practical Counseling equals 3, the case will proceed to Measure Category Assignment of D and will be in the Measure Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   c. If Tobacco Use Treatment Practical Counseling equals 1 or 2, continue processing and proceed to ICD-9-CM Principal Diagnosis Code.

9. Check ICD-9-CM Principal Diagnosis Code
   a. If ICD-9-CM Principal Diagnosis Code is on Table 12.3, the case will proceed to a Measure Category Assignment of E and will be in the
Numerator Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.

b. If ICD-9-CM Principal Diagnosis Code is not on Table 12.3, continue processing and proceed to ICD-9-CM Other Diagnosis Code.

10. Check ICD-9-CM Other Diagnosis Code
   a. If at least one of the ICD-9-CM Other Diagnosis Code is on Table 12.3, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   b. If all ICD-9-CM Other Diagnosis Code are missing or none is on Table 12.3, continue processing and proceed to recheck Tobacco Use Status.

11. Recheck Tobacco Use Status
   a. If Tobacco Use Status equals 2, 3, 4 or 11, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   b. If Tobacco Use Status equals 1, 5, 9, 10, 12, 13 or 14, continue processing and proceed to Tobacco Use Treatment FDA-Approved Cessation Medication.

12. Check Tobacco Use Treatment FDA-Approved Cessation Medication
   a. If Tobacco Use Treatment FDA-Approved Cessation Medication is missing, the case will proceed to a Measure Category Assignment of X and will be rejected for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   b. If Tobacco Use Treatment FDA-Approved Cessation Medication equals 3, continue processing and proceed to Reason for No Tobacco Cessation Medication During Hospital Stay.
   c. If Tobacco Use Treatment FDA-Approved Cessation Medication equals 1 or 2, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
13. Check Reason for No Tobacco Cessation Medication During Hospital Stay
   a. If Reason for No Tobacco Cessation Medication During Hospital Stay is missing, the case will proceed to a Measure Category Assignment of X and will be rejected for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   b. If Reason for No Tobacco Cessation Medication During Hospital Stay equals N, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
   c. If Reason for No Tobacco Cessation Medication During Hospital Stay equals Y, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for the overall measure rate TOB-2. Continue processing and proceed to Step 14 to Initialize Measure Category Assignment for sub-measure TOB-2a.
TOB-2a: Tobacco Use Treatment

**Numerator:** The number of patients who received practical counseling to quit and received FDA-approved cessation medications.

**Denominator:** The number of hospitalized inpatients 18 years of age and older identified with alcohol or drug disorder.

14. Initialize Measure Category Assignment for sub-measure TOB-2a to Measure Category Assignment of B. Do not change the Measure Category Assignment that was already calculated for the overall measure TOB-2. The rest of the algorithm will reset the appropriate Measure Category Assignment to TOB-2a.

15. Check Overall Rate Category Assignment
   a. If the Overall Rate Category Assignment equals B or X, the case will proceed to Measure Category Assignment of B and will not be in the Measure Population for the sub-measure TOB-2a. Stop processing.
   b. If Overall Rate Category Assignment equals D or E, continue processing and proceed to recheck Referral for Tobacco Use Treatment Practical Counseling.

16. Recheck Tobacco Use Treatment Practical Counseling
   a. If Tobacco Use Treatment Practical Counseling equals 2 or 3, the case will proceed to Measure Category Assignment of D and will be in the Measure Population for sub-measure TOB-2a. Stop processing.
   b. If Tobacco Use Treatment Practical Counseling equals 1, continue processing and proceed to recheck ICD-9-CM Principal Diagnosis Code.

17. Recheck ICD-9-CM Principal Diagnosis Code
   a. If ICD-9-CM Principal Diagnosis Code is on Table 12.3, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for sub-measure TOB-2a. Stop processing.
   b. If ICD-9-CM Principal Diagnosis Code is not on Table 12.3, continue processing and proceed to recheck ICD-9-CM Other Diagnosis Code.

18. Recheck ICD-9-CM Other Diagnosis Code
   a. If at least one of the ICD-9-CM Other Diagnosis Code is on Table 12.3, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for sub-measure TOB-2a. Stop processing.
   b. If all ICD-9-CM Other Diagnosis Code are missing or none is on Table 12.3, continue processing and proceed to recheck Tobacco Use Status.
19. Recheck Tobacco Use Status
   a. If Tobacco Use Status equals 2, 3, 4 or 11, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for sub-measure TOB-2a. Stop processing.
   b. If Tobacco Use Status equals 1, 5, 9, 10, 12, 13 or 14, continue processing and proceed to recheck Tobacco Use Treatment FDA-Approved Cessation Medication.

20. Recheck Tobacco Use Treatment FDA-Approved Cessation Medication
   a. If Tobacco Use Treatment FDA-Approved Cessation Medication equals 2, the case will proceed to Measure Category Assignment of D and will be in the Measure Population for sub-measure TOB-2a. Stop processing.
   b. If Tobacco Use Treatment FDA-Approved Cessation Medication equals 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for sub-measure TOB-2a. Stop processing.
   c. If Tobacco Use Treatment FDA-Approved Cessation Medication equals 3, continue processing and proceed to recheck Reason for No Tobacco Cessation Medication During Hospital Stay.

21. Recheck Reason for No Tobacco Cessation Medication During Hospital Stay
   a. If Reason for No Tobacco Cessation Medication During Hospital Stay equals N, the case will proceed to Measure Category Assignment of D and will be in the Measure Population for sub-measure TOB-2a. Stop processing.
   b. If Reason for No Tobacco Cessation Medication During Hospital Stay equals Y, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population for sub-measure TOB-2a. Stop processing.