

How to Build a Tobacco Cessation Family of Measures

When implementing a quality improvement program, it is essential to measure your progress. There are three types of measures in quality improvement: outcome measures, process measures, and balancing measures. Taken together, these three measure types make up your family of measures.

Below are suggestions for how to build a tobacco cessation quality improvement project's family of measures.

- Review the measures in the tables below for outcomes, process, and balance measures to use in your quality improvement project. Adapt the measures as needed for your project.
- The “Data Source” column includes information on resources where data might be collected to calculate measures (e.g., claims, surveys), and information on any known measures steward.
- The “Notes” column provides other information of interest.
- You may also want to use measures you are currently collecting or develop your own measures based on the needs of your state.
- An ideal family of measures includes no more than seven to nine measures. Consider starting with one measure in each category and adding additional measures over time. These are the measures you will put into your run charts, which are graphs that displays performance on a process or outcome over time.
- **Outcome measures:** Outcome measures capture what your state quality improvement team is trying to achieve with your project and are used to measure your aim. Outcome measures answer the question, “What are you trying to accomplish?” and “How will you know there is an improvement?”
Recommendation: 1-2 measures.
- **Process measures:** Process measures capture how the incremental changes you are testing will collectively improve your outcome measure(s). What measures will best reflect the impacts of the changes in your quality improvement project? Your process measures should relate to your outcome and be calculated frequently (for example, monthly). *Recommendation: 3-4 measures.*
- **Balancing measures:** Balancing measures capture other consequences, both intended and unintended, that might result as part of your project. What measures are necessary to warn against unintended or negative consequences? What are other measures that you might want to observe? *Recommendation: 1 measure.*

Tobacco Cessation: Measurement Strategy

Outcome Measures	(Recommendation: 1-2 measures)		
Measure Name	Description	Data Source	Notes
Medical Assistance with Smoking and Tobacco Use Cessation (NQF #0027)	<p>Percentage of adults age 18 and older who were current smokers or tobacco users and who received advice to quit during the measurement year.</p> <p>The measure assesses three facets of providing medical assistance with smoking and tobacco use cessation:</p> <ul style="list-style-type: none"> • Advising Smokers and Tobacco Users to Quit. A rolling average represents the percentage of beneficiaries age 18 and older who were current smokers or tobacco users and who received advice to quit during the measurement year. • Discussing Cessation Medications. A rolling average represents the percentage of beneficiaries age 18 and older who were current smokers or tobacco users and who discussed or were recommended cessation medications during the measurement year. • Discussing Cessation Strategies. A rolling average represents the percentage of beneficiaries age 18 and older who were current smokers or tobacco users and who discussed or were provided cessation methods or strategies during the measurement year. 	CAHPS Survey	<p>The measure steward for this measure is NCQA (HEDIS).</p> <p>The measure is included in the Medicaid Adult Core Set.</p>

Outcome Measures		(Recommendation: 1-2 measures)	
Measure Name	Description	Data Source	Notes
Tobacco Use: Screening and Cessation Intervention (NQF #0028/#0028e)	<p>Percentage of patients 18+ who were screened for tobacco use one or more times within 24 months AND received tobacco cessation intervention if identified as a someone who used tobacco.</p> <p>The measure includes three rates:</p> <ul style="list-style-type: none"> • Patients who were screening for tobacco use at least once within 24 months • Patients who received tobacco cessation intervention • Patients who were screening for tobacco use at least once within 24 months AND received tobacco cessation intervention if identified as a tobacco user 	<p>EHR (NQF #0028)</p> <p>Administrative data, registry data (NQF #0028e)</p>	<p>This measure steward for this measure is PCPI(R) Foundation.</p> <p>This metric is similar to NQF #0027 as this measure includes a claims data option and could potentially be adapted for various populations.</p>
Abstinence rate	<p>Percent of former tobacco users who have abstained from tobacco use since receiving tobacco cessation services, following a pre-determined grace period. The grace period is intended to establish initial abstinence from tobacco and is usually set at 2 weeks.</p> <p>Numerator: Number of tobacco users who stopped using tobacco</p> <p>Denominator: Number of tobacco users who received tobacco cessation services</p>	<p>Survey, Quitline Data</p>	<p>States commonly use specific periods of time to measure abstinence, such as 30 days, 6 months, and 12 months.</p>

Outcome Measures		(Recommendation: 1-2 measures)	
Measure Name	Description	Data Source	Notes
<p>Tobacco cessation among pregnant people: Percent of pregnant tobacco users who quit during their pregnancy</p>	<p>Percent of pregnant tobacco users that used tobacco during the first trimester and did not smoke during the rest of their pregnancy and stayed quit during the postpartum period</p> <p>Numerator- Pregnancy: Number of pregnant tobacco users that did not smoke in the second or third trimester of pregnancy</p> <p>Numerator- 30-days Postpartum: Number of pregnant tobacco users that did not smoke during the first 30-days postpartum</p> <p>Numerator- 6-months Postpartum: Number of pregnant tobacco users that did not smoke during the first 6-months postpartum</p> <p>Denominator: Number of pregnant tobacco users that smoked in the first trimester of pregnancy</p>	Survey	States use different postpartum periods to measure cessation postpartum. States may also choose to use to different pregnancy numerators, one for the second trimester and one for the third trimester.

Process Measures		(Recommendation: 3-4 measures)	
Measure Name	Description	Data Source	Notes
<p>Number of people calling the state Quitline</p>	<p>Numerator: Number of unique Medicaid beneficiaries calling the state Quitline</p> <p>Denominator: None</p>	State Quitline data	This measure would be good to use with change ideas to increase Quitline use.

Process Measures		(Recommendation: 3-4 measures)		
Measure Name	Description		Data Source	Notes
Quit attempts: Percent of tobacco users who attempted to quit	<p>The number of tobacco users answering “yes” to questions like “During the past 30 days, have you stopped smoking for one day or longer because you were trying to quit?”</p> <p>Numerator: Number of tobacco users who made a quit attempt</p> <p>Denominator: Number of tobacco users who received tobacco cessation services</p>		Survey	<p>Increasing the number of quit attempts can be a good leading indicator on the way to tobacco cessation.</p> <p>States commonly use specific periods of time to measure quit attempts such as 30 days or 12 months.</p>
Quit attempts using evidence-based cessation services: Percent of tobacco users who made a quit attempt using (1) medication or (2) counseling services	<p>The number of tobacco users who attempted to quit using</p> <ul style="list-style-type: none"> (1) Medication: nicotine patch, gum, lozenge, nasal spray, inhaler, or prescription pill (2) Counseling services: Quitline, one-on-one counseling, smoking classes, app or text message program <p>Numerator- Medication: Number of tobacco users who made a quit attempt using medication</p> <p>Numerator- Counseling: Number of tobacco users who made a quit attempt using counseling</p> <p>Denominator: Number of tobacco users who made a quit attempt</p>		Survey	<p>States commonly use specific periods of time to measure quit attempts such as 30 days or 12 months.</p>

Process Measures		(Recommendation: 3-4 measures)	
Measure Name	Description	Data Source	Notes
<p>Tobacco users who are aware of tobacco cessation services: Percent of tobacco users who are aware of tobacco cessation services</p>	<p>The number of tobacco users answering “yes” to the following questions:</p> <ul style="list-style-type: none"> • “Are you aware of any telephone Quitline services that are available to help you quit smoking” • “Are you aware that Medicaid covers [insert covered individual or group counseling services, other than Quitline]” • “Are you aware that Medicaid covers tobacco cessation medication, such as [insert covered tobacco cessation medications]” • “Are you aware that Medicaid covers tobacco cessation services, including [insert covered services]” <p>Numerator: Number of tobacco users answering “yes” to any or all questions above</p> <p>Denominator: Number of tobacco users</p>	<p>Survey</p>	<p>This measure could be used to establish a baseline before doing a change idea focused on beneficiary education.</p>

Process Measures		(Recommendation: 3-4 measures)		
Measure Name	Description		Data Source	Notes
Provider awareness of tobacco cessation treatment options: Percent of providers who are aware of Medicaid covered tobacco cessation services	<p>The number of providers answering “yes” to the following questions:</p> <ul style="list-style-type: none"> “Are you aware of telephone Quitline services that are available to help your patients quit smoking” “Are you aware that Medicaid covers [insert covered individual or group counseling services, other than Quitline] to help your patients quit smoking” “Are you aware that Medicaid covers tobacco cessation medication, such as [insert covered tobacco cessation medications] to help your patients quit smoking” “Are you aware that Medicaid covers tobacco cessation services, including [insert covered services] to help your patients quit smoking” <p>Numerator: Number of providers answering “yes” to any or all questions above</p> <p>Denominator: Number of providers surveyed</p>		Survey	This measure could be used to establish a baseline before doing a change idea focused on provider education.
Number of tobacco users receiving tobacco cessation services from Tobacco Treatment Specialists (TTS) or Community Health Workers (CHWs)	<p>Numerator: Number of tobacco users receiving tobacco cessation services from TTS or CHWs</p> <p>Denominator: None</p>		Collected from site partners	<p>This measure could be used when bring TTS specialists into a program.</p> <p>States sometimes elect to limit the numerator to “new tobacco users”</p>

Process Measures		(Recommendation: 3-4 measures)	
Measure Name	Description	Data Source	Notes
Tobacco users screened by a health care professional: Percent of tobacco users screened for tobacco use	<p>The number of tobacco users answering “yes” to questions like “in the past 12 months, has any doctor, nurse, or other health professional asked if you smoke”</p> <p>Numerator: Number of tobacco users who answer yes to the question above</p> <p>Denominator: Number of tobacco users</p>	Administrative data , Survey	<p>States may use other time periods for the measure, including “in the past 30 days”, “in the past 6 months”</p>
TOB-2: Tobacco Use Provided or Offered	<p>Hospitalized patients identified as tobacco 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.</p> <p>Numerator: Number of patients who received or refused practical counseling to quit AND received or refused FDA-approved cessation medications during the hospital stay.</p> <p>Denominator: Number of patients who received practical counseling to quit AND received FDA-approved cessation medications during the hospital stay.</p> <p>Exclusions:</p> <p>The denominator has four exclusions:</p> <ul style="list-style-type: none"> • Smokeless tobacco users • Pregnant smokers • Light smokers • Patients with reasons for not administering FDA-approved cessation medication. 	Administrative data, medical records	<p>This measure steward for this measure is The Joint Commission</p> <p>The Joint Commission has similar measures you may wish to consider (TOB-3)</p>

Balancing Measures		(Recommendation: 1 measure)	
Measure Name	Description	Data Source	Notes
E-cigarette use	<p>Numerator: Number of unique Medicaid beneficiaries who have used e-cigarette products in the past 30 days</p> <p>Denominator: None</p>	Survey	
Provider satisfaction	<p>Numerator: Number of providers who report being satisfied with the time required to provide tobacco cessation</p> <p>Denominator: None</p>	Survey	
Patient satisfaction	<p>Numerator: Number of patients who report being satisfied with the tobacco cessation discussions had with providers</p> <p>Denominator: None</p>	Survey	

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