

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 #: 2020 NQF Project: Population Health: Prevention Project
(for Endorsement Maintenance Review) Original Endorsement Date: Most Recent Endorsement Date: Last Updated Date: Aug 17, 2012
BRIEF MEASURE INFORMATION
De.1 Measure Title: Adult Current Smoking Prevalence
Co.1.1 Measure Steward: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion
De.2 Brief Description of Measure: Percentage of adult (age 18 and older) U.S. population that currently smoke.
2a1.1 Numerator Statement: The numerator is current adult smokers (age 18 and older) in the U.S. who live in households.
2a1.4 Denominator Statement: The adult (age 18 and older) population of the U.S. who live in households. One adult per household is interviewed.
2a1.8 Denominator Exclusions: Adults 18 years or older are asked to take part in the survey and only one adult is interviewed per household. Adults living in vacation homes not occupied by household members for more than 30 days per year, group homes, institutions, prisons, hospitals and college dorms are excluded. Military services members and adults who speak a language other than English and Spanish are also excluded.
1.1 Measure Type: Structure 2a1. 25-26 Data Source: Other 2a1.33 Level of Analysis: Population : National, Population : State
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):

STAFF NOTES <i>(issues or questions regarding any criteria)</i>
Comments on Conditions for Consideration:
Is the measure untested? Yes <input type="checkbox"/> No <input type="checkbox"/> 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): Behavioral Health, Behavioral Health : Alcohol, Substance Use/Abuse, Behavioral Health : Tobacco Use, Cancer, Cancer : Lung, Esophageal, Cardiovascular, Cardiovascular : Acute Myocardial Infarction, Cardiovascular : Congestive Heart Failure, Cardiovascular : Hypertension, Mental Health : Alcohol, Substance Use/Abuse, Perinatal and Reproductive Health : Newborn, Perinatal and Reproductive Health : Perinatal, Prevention, Prevention : Tobacco Use, Pulmonary/Critical Care : Asthma

De.5 Cross Cutting Areas (Check all the areas that apply): Prevention

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):

THE COST OF TOBACCO

The Greatest Cost: Lives Lost to Tobacco

Tobacco use and exposure to secondhand smoke caused more than 400,000 in the U.S. in each year between 2000 and 2004, according to the CDC. These deaths represent more than 5 million years of potential life lost (YPLL).¹

At the state level, the median annual number of lives lost per state was 5,534, though there was a great deal of variation by state.² For example, in Alaska the estimated annual average number of deaths was 492, representing 7,762 YPLL, while in California the estimated annual average number of deaths was 36,687, representing 481,529 YPLL. States with the greatest smoking attributable mortality (SAM) rates were Kentucky, West Virginia and Nevada.

Overall and among males, SAM rates declined in every state except Oklahoma from the period 1996-1999 to 2000-2004.² Among females, however, SAM rates increased in 17 states (Alabama, Arizona, Arkansas, Georgia, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Michigan, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas) and in Washington DC.

National Cost of Tobacco Use

The Centers for Disease Control and Prevention (CDC) estimates that, in the U.S. in each year from 2001 through 2004, an average of \$96 billion was spent on health care due to smoking.¹ A 2007 study calculates the cost of smoking to the U.S. Medicaid system, concluding that the projected lifetime costs of smoking to Medicaid, for a single cohort—current 24-year-old smokers—is nearly \$1 billion.³ Extrapolation to other cohorts of young smokers suggests that smoking represents an enormous financial burden to Medicaid in the coming years, unless cessation rates markedly increase.

Cost to State Medicaid Programs

The proportion of Medicaid spending directly attributable to current smoking ranges from 2.8% to 8.2% across states. This translates into expenditures ranging from \$15 million (Wyoming) to \$1.5 billion (New York).³

On average, state Medicaid expenditures attributable to smoking for a 24-year-old male smoker will be \$353 over the course of his lifetime.³ Given that the average

24-year-old male smoker is estimated to pay \$347 through income taxes over his lifetime to finance smoking-attributable Medicaid expenditures, the net cost of smoking to Medicaid over the lifetime of a male smoker is about \$6. The figures for female smokers are starkly different. On average, state Medicaid expenditures attributable to smoking for a 24-year-old female smoker will be \$1,581 over the course of her lifetime. Because the average 24-year-old female smoker is estimated to pay only \$209 through income taxes over her lifetime to finance smoking-attributable Medicaid expenditures, the net cost of smoking to Medicaid over the lifetime of a female smoker is about \$1,372.³

Despite the high cost of tobacco-attributable disease to Medicaid, not all states provide treatment for tobacco use through Medicaid.⁴ In 2005, the most recent data available, only 39 state Medicaid programs offered coverage for at least one form of tobacco-dependence treatment (i.e., medication or counseling). Four additional states covered tobacco-dependence treatment for pregnant women only.⁴ Coverage for tobacco-dependence treatment for Medicare beneficiaries is likewise limited; coverage is available to beneficiaries who have an illness caused or complicated by tobacco use, or who take a medication which is impacted by tobacco use.⁵

Cost to Employers that Provide Health Insurance

A 2007 study shows the increased risk due to smoking for specific medical events, such as coronary heart disease and stroke.⁶ It calculates the health insurance costs (in 2006 dollars) for the year of the event and the years immediately following it, in which medical costs remain elevated. For example, coronary heart disease costs employers approximately \$66,000 in the year of the event, and an average of \$17,000 in each of the two following years. The study also examines the increased health insurance costs due to secondhand smoke exposure. Insurance costs for respiratory infection, pneumonia and bronchitis in children age 12 and younger more than triple among those children who have a parent that smokes.⁶

Cost to the Economy in Terms of Reduced Productivity

The CDC estimates that tobacco use and exposure to secondhand smoke cost the U.S. approximately \$97 billion in lost productivity in each year from 2000 through 2004.¹

A 2003 study by the Center for Prevention and Health Services concludes that male smokers use 4 more sick days and female smokers use 2 more sick days each year than nonsmokers.⁷ This study also reports findings from a national survey of nearly 30,000 employed individuals which shows that tobacco use was a primary cause of lost productivity in the workplace, that it contributed more to lost productivity than alcohol abuse, and that quitting smoking improves a worker's productivity.⁷

- 1a.4 Citations for Evidence of High Impact cited in 1a.3:**
1. Centers for Disease Control and Prevention (CDC). Smoking-attributable mortality, years of potential life lost, and productivity losses--United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2008 Nov 14;57(45):1226-8.
 2. Centers for Disease Control and Prevention (CDC). State-specific smoking-attributable mortality and years of potential life lost--United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2009 Jan 23;58(2):29-33. Erratum in: MMWR Morb Mortal Wkly Rep. 2009 Feb 6;58(4):91.
 3. Trogon J, Pais J. Saving Lives, Saving Money II: Tobacco-Free States Spend Less on Medicaid. A Policy Report of the American Legacy Foundation. 2007.
 4. Centers for Disease Control and Prevention (CDC). State Medicaid Coverage for Tobacco-Dependence Treatments --- United States, 2006 Morb Mortal Wkly Rep. February 8, 2008 / 57(05);117-122
 5. U.S. Medicare. Preventive services: Smoking cessation. Accessed on July 10 at: <http://www.medicare.gov/health/smoking.asp>. Page updated August 2008.
 6. Fitch K, Iwasaki K, Pyenson B. Covering Smoking Cessation as a Health Benefit: A Case for Employers. A Report of Milliman Consultants and Actuaries and American Legacy Foundation. 2006.
 7. Center for Prevention and Health Services, National Business Group on Health. Reducing the Burden of Smoking on Employee Health and Productivity. Washington, D.C., 2003.

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:

Measuring smoking status has many benefits. It is also essential for developing effective cessation and prevention campaigns, since smoking prevalence data shows where the greatest need is for interventions and allows for the evaluation of the impact of present campaigns and shows important areas for improvement. It is also important for informing tobacco-control policies that have a positive impact on reducing smoking rates. Data on smoking prevalence is also crucial in identifying inequalities between groups and addressing health disparities.

A specific example of the importance of tracking smoking status can be found in Legacy's report, "Saving Lives, Saving Money," which addresses the financial impact of smoking. In the report, researchers estimated the reduction in state Medicaid expenditures that would result from reducing or eliminating smoking through effective cessation and prevention programs. In order to calculate

the lifetime costs of a smoker to a state Medicaid program, data on smoking status was essential.

Information from the Legacy report, "Saving Lives, Saving Money":

http://www.legacyforhealth.org/PDFPublications/saving_lives_saving_money.pdf

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.]

Challenges to Developing a Body of Knowledge about the Effects of Mass Media Campaigns by SES or Race/ethnicity

The lack of evidence related to the effects of public health interventions to reduce tobacco use with respect to SES or race/ethnicity is often due to funding constraints, making it difficult to conduct appropriate formative research and which often results in insufficient sample sizes for racial/ethnic subgroups. This issue is compounded by inconsistent evaluation measures and analytic approaches, which also hinders comparison across those few studies that are conducted. Each of these issues is discussed in greater detail below.

Costs Associated with Conducting Formative Research

Developing and implementing a campaign requires extensive planning, dedicated staff time, and establishment of relationships with vendors, contractors, media and creative agencies, all of which can be costly. Consider the case of an agency that has obtained funding to air a local or state-wide mass media campaign at a fairly low level of GRPs and for an undetermined length of time. Such an agency may not feel they have the resources—financial or otherwise—to conduct formative research with several segments of the target audience. Formative research would entail, at the very least, conducting focus groups of individuals recruited from these populations to generate concepts for the campaign, the brand and the messaging. After a subsequent period of creative development, the campaign concept and messages should be pre-tested with the audience. A third round of testing would ideally be conducted to assess the advertising executions prior to their airing publicly.

Organizations that feel they don't have the resources to conduct formative research will often make decisions about the messaging based on existing research or on their own intuition. Unfortunately, what has worked well in one set of circumstances may not necessarily translate to another setting, and messages that are developed without input from the target audience may not be well-received, or may have unintended effects. The best advertising campaigns are designed and executed with substantive input from the specific target audience.

Costs Associated with Evaluation

In order to determine whether a campaign has impacted the awareness, cognitions or behavior of a group of individuals, one must have a sufficient sample size with which to conduct the analysis. This is referred to as "power." Since the expected overall effects of mass media campaigns are relatively small, larger sample sizes are generally needed in order to have an adequately powered sample. If a sample is 'underpowered,' it is possible to statistically calculate a null effect even if the campaign is producing 'true' effects in a population (the problem of a false negative). Unfortunately, because many evaluation initiatives are limited by funding constraints, they often do not achieve an adequate sample size to determine whether there was a campaign effect within racial/ethnic or other subgroups.

Telephone surveys have become increasingly expensive over the past decade as a result of lower respondent participation.⁶⁴ Furthermore, while random digit dial (RDD) surveys—those in which the sample of phone numbers is randomly generated—are the gold standard, random samples often yield insufficient numbers of minority respondents to evaluate a campaign within those populations. A technique called "oversampling" can be used to supplement the RDD sample with listed numbers—for example, lists of phone numbers from geographic areas which are predominantly low SES or African American or lists of those in the phone directory with Hispanic surnames. However, oversampling does incur additional costs which may act as a barrier to obtaining sufficient samples for underrepresented populations. Online surveys are becoming more common, in large part because they are highly cost-efficient. Some online surveys utilize an RDD sampling frame followed by online data collection, which reduces costs and results in nationally representative data. One technique used to reduce SES bias in online samples is to provide a computer free of cost to respondents who agree to participate in an online panel.

Lack of Methodological Continuity

Among those who have evaluated campaign effects by SES or race/ethnicity, there is often a lack of continuity across measures and analytic approaches. SES is often categorized using a variety of variables including: 1) income, education, employment; 2) mother's, father's or parents' education; and 3) geographic measures of neighborhood SES. Unfortunately, there are limitations to each of these measures. Income data tend to have high rates of missingness in surveys, and thus, are often replaced with other variables with better response rates. In addition, the level of aggregation for geographic variables, such as census block-group or zip code, vary substantially in their ability to validly serve as a proxy for individual-level SES.⁶⁹ Challenges also occur when establishing categories of 'low' versus 'high' SES. Definitions often vary and are typically tailored to a specific hypothesis; however, this often prevents comparability across studies. Measurement of behavioral outcomes also varies substantially. Although there are accepted definitions of current and heavy smoking established by the Centers for Disease Control, there is less standardization in relation to measurement of cessation behavior. For example, successful cessation is often defined in relation to a particular study's project period rather than an established measure related to sustained abstinence from smoking. While measures of race/ethnicity are fairly standard, some studies combine racial and ethnic minority groups into larger categories, or even a single category representing all individuals who are non-white. This practice obscures starkly different patterns of smoking and cessation across race/ethnicity, and contributes little to our body of knowledge on campaign impact among minority populations. Analytic approaches are likewise tailored to individual campaigns and their hypothesized effects occurring within a specific time frame and target audience. While the variety of study designs is beneficial in that it provides a nuanced and multi-faceted view of the effects of mass media campaigns, it also makes it difficult to compare and contrast findings to establish guidelines for future campaign development.

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]

CDC. Tobacco Use Among U.S. Racial/Ethnic Minority Groups African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, Hispanics A Report of the Surgeon General. Atlanta, GA U.S. Department of Health and Human Services; 1998.

Allen JA, Vallone D, Richardson A. Reducing Tobacco-Related Health Disparities: Using Mass Media Campaigns to Prevent Smoking and Increase Cessation in Underserved Populations. In: A. Lemelle (ed). Handbook of African American Health: Social and Behavioral Interventions. Springer Publications, 2011.

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

In 1964, the release of the Surgeons General's Report marked the commencement of efforts to inform the American public of the serious health consequences of tobacco use. This landmark event occurred when 43% of Americans over age 18 smoked cigarettes, including about half of all men and one third of all women (NHIS 1965 data) (USDHHS, 1989). Over four decades later, the US adult smoking rate has declined to 20% (NHIS 2007 data) (Schiller, Heyman and Barnes, 2008). Today, as in the mid-1960s, smoking and smoking-attributable disease reflect a socioeconomic position (SEP) gradient such that those with greater resources smoke at lower rates, quit at higher rates, and experience lower rates of morbidity and mortality from tobacco use (USPHS, 1964; USDHHS, 1989; Giovino, 2002; Fagan, Shavers, Lawrence, et al., 2007; Albano, Ward, Jemal et al., 2007). Since 1964, however, smoking and smoking-attributable disease have become increasingly concentrated among the most poor and least educated segments of U.S. society. From 1966 to 2006, current smoking declined by 76% among college graduates, 48% among those with some college, 36% among those with a high school degree/GED and 21% among those who did not finish high school (USDHHS, 1989; Pleis and Lethbridge-Cejku, 2007). Today, only 8% of college graduates smoke, compared with 26% of those with a high school degree/GED (NHIS 2006) (Pleis and Lethbridge-Cejku, 2007).

Numerous studies demonstrate an association between socioeconomic position and adverse health outcomes related to tobacco use (USPHS, 1964; Marmot and McDowall, 1987; Devesa, Diamond, 1983; Wong, Shapiro, Boscardin et al., 2002; Lawlor, Sterne, Tynelius, et al., 2006; Albano, Ward, Jemal et al., 2007).

Individuals with lower levels of education and income are more likely than others to experience a period without health insurance, most often as a result of cost or a lapse in Medicaid coverage (Adams, Lucas, Barnes, 2008). Not surprisingly, these individuals

are also more likely to report delaying or not receiving medical care due to cost (Adams, Lucas, Barnes, 2008). A recent study shows that education and income are negatively associated with successful quitting, particularly in the long term (Fagan, Shavers, Lawrence, et al., 2007). Race and ethnicity play a role. Several studies show that African American and Hispanic smokers are less likely than white smokers to be advised by a physician to quit; an intervention associated with a 30% greater likelihood of quitting (Hymowitz N, Jackson J, Carter, et al., 1996; Levinson, Pérez-Stable, Espinoza et al., 2004; Cokkinides, Halpern, Barbeau, 2008; Fiore, Bailey, Cohen, et al., 2000). African American and Hispanic smokers are also less likely than white smokers to report use of cessation aids, perhaps for cultural reasons (Hymowitz N, Jackson J, Carter, et al., 1996; Levinson, Pérez-Stable, Espinoza et al., 2004; Cokkinides, Halpern, Barbeau, 2008; Yerger, Wertz, McGruder, et al., 2008).

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]

Yerger VB, Wertz M, McGruder C, Froelicher ES, Malone RE. Nicotine replacement therapy: perceptions of African-American smokers seeking to quit. J Natl Med Assoc. 2008 Feb;100(2):230-6.

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 subcriterion1c?
M-H	M-H	M-H	Yes <input type="checkbox"/>
L	M-H	M	Yes <input type="checkbox"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No <input type="checkbox"/>
M-H	L	M-H	Yes <input type="checkbox"/> IF potential benefits to patients clearly outweigh potential harms: otherwise No <input type="checkbox"/>
L-M-H	L-M-H	L	No <input type="checkbox"/>

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 (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):

This is a public health measure which is strongly associated with population-level morbidity and mortality.

1c.2-3 Type of Evidence (Check all that apply):

Other

public health policy

1c.4 Directness of Evidence to the Specified Measure (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):

Numerous studies show the direct impact of population-level smoking on health outcomes.

1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): While I do not know the number of studies which demonstrate that population-level smoking is associated with health, I estimate the number of quality studies to be in the thousands. This measure simply applies what is know about the effects of tobacco at the individual level and extrapolates to the national level, which is the level at which the effects of national policy can be observed and measured.

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 body of evidence on the relationship between smoking and health has a history stretching back to 1964. This measure simply applies what is know about

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

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the effects of tobacco at the individual level and extrapolates to the national level, which is the level at which the effects of national policy can be observed and measured.

1c.7 Consistency of Results across Studies (*Summarize the consistency of the magnitude and direction of the effect*): While studies may differ in terms of the magnitude of the precise effect of, for example, tobacco use on population level cancer incidence, there is very strong consistency in the general story, which is that tobacco use and smoking in particular are seriously damaging to the public health.

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

Benefit of reduced smoking prevalence include lower rates of morbidity and mortality, lower healthcare costs, and increased productivity.

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? No

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

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

1c.12 If other, identify and describe the grading scale with definitions: NA

1c.13 Grade Assigned to the Body of Evidence: NA

1c.14 Summary of Controversy/Contradictory Evidence: NA

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

1c.16 Quote verbatim, the specific guideline recommendation (*Including guideline # and/or page #*):
NA

1c.17 Clinical Practice Guideline Citation: Please see the Clinical Practice Guideline: Treating Tobacco Use and Dependence, 2008 Update
<http://www.ncbi.nlm.nih.gov/books/NBK63952/>

1c.18 National Guideline Clearinghouse or other URL: NA

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? No

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

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

1c.22 If other, identify and describe the grading scale with definitions: NA

1c.23 Grade Assigned to the Recommendation: NA

1c.24 Rationale for Using this Guideline Over Others: The measure is rigorously collected and reported by the Federal government, and has been collected annually over many years.

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.cdc.gov/brfss/>

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 numerator is current adult smokers \(age 18 and older\) in the U.S. who live in households.](#)

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

[The time period for current tobacco use is defined by survey respondents who endorse that they "NOW smoke cigarettes every day or some days." The survey is conducted monthly and new estimates of prevalence are available each year.](#)

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*):

[The numerator, Adult Current Smoking, is a measure collected by means of the Behavioral Risk Factor Surveillance System \(BRFSS\), a state-based system of health surveys that generate information about health risk behaviors, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury. The BRFSS is conducted by the Centers for Disease Control and Prevention \(CDC\). The BRFSS has been conducted since its beginning in 1984 with the goal of collecting state-specific estimates of health risk behavior data. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS.](#)

[Adults 18 years or older are asked to take part in the survey and only one adult is interviewed per household. Adults living in vacation homes not occupied by household members for more than 30 days per year, group homes, institutions, prisons, hospitals and college dorms are excluded. Military service members and adults who speak languages other than English and Spanish are also excluded.](#)

Information obtained from:

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm?s_cid=mm6122a3_w

<ftp://ftp.cdc.gov/pub/Data/Brfss/userguide.pdf>
<http://dhds.cdc.gov/methods>

The measure is composed of two survey items, both of which respondents must endorse in order to be considered current smokers (below). See this BRFSS document for details:

http://www.cdc.gov/brfss/technical_infodata/surveydata/2010.htm

Section 7: Tobacco Use

7.1 Question Text: Have you smoked at least 100 cigarettes in your entire life? NOTE: 5 packs = 100 cigarettes

1 Yes

2 No

7 Don't know / Not sure

9 Refused

Question Text:

Do you now smoke every day, some days, or not at all (asked of those who smoked 100 cigarettes in the above question)?

1 Every day

2 Some days

3 Not at all

7 Don't know / Not sure

9 Refused

BRFSS is a cross-sectional telephone survey conducted by state health departments with technical and methodological assistance provided by the CDC. The data is collected monthly via telephone and all data is then forwarded to the CDC, where it is aggregated for each state. The data is then returned to the states and then published on the BRFSS website.

Information from: <http://www.cdc.gov/brfss/faqs.htm>

Citation for survey questions:

Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Questionnaire. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2010.

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

The adult (age 18 and older) population of the U.S. who live in households. One adult per household is interviewed.

2a1.5 Target Population Category (Check all the populations for which the measure is specified and tested if any): **Adult/Elderly Care, Populations at Risk**

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

The BRFSS is conducted monthly but compiled by CDC annually, so the denominator time window is one year.

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):

The denominator, the adult population of the U.S., is a measure collected by means of the Behavioral Risk Factor Surveillance System (BRFSS), a state-based system of health surveys that generate information about health risk behaviors, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury. The BRFSS is conducted by the Centers for Disease Control and Prevention (CDC). The BRFSS has been conducted since its beginning in 1984 with the goal of collecting state-specific estimates of health risk behavior data. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS.

Information from:

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm?s_cid=mm6122a3_w

<ftp://ftp.cdc.gov/pub/Data/Brfss/userguide.pdf>

<http://dhds.cdc.gov/methods>

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

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The survey is conducted among the adult (age 18 and older) U.S. civilian, noninstitutionalized population, and is weighted to U.S. census data so that it is nationally representative.

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

Adults 18 years or older are asked to take part in the survey and only one adult is interviewed per household. Adults living in vacation homes not occupied by household members for more than 30 days per year, group homes, institutions, prisons, hospitals and college dorms are excluded. Military services members and adults who speak a language other than English and Spanish are also excluded.

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*):

Adults living in vacation homes not occupied by household members for more than 30 days per year, group homes, institutions, prisons, hospitals and college dorms are excluded. Military services members and adults who speak a language other than English and Spanish are also excluded.

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*):

The BRFSS questionnaire is made up of three parts. The core component is the standard set of questions asked by all of the states. This component includes questions about current health-related perceptions, conditions, and behaviors (such as tobacco use and HIV/AIDS risks) and demographic questions. The second part of the BRFSS is the optional CDC modules, which are sets of questions about specific topics, such as women's health, that states can choose to use on their questionnaires. These sections are agreed upon each year by the states and CDC. Many questions are taken from established national surveys in order to ensure that questions have been tested and also to allow BRFSS data to be compared to results from other national surveys. Any new questions are subjected to cognitive testing and field testing before being added to the survey.

The third part of the BRFSS is state-added questions, which are questions that are developed and obtained by participating states and added to their questionnaires. This section of the BRFSS is the only part that is not edited or evaluated by CDC. States are selective about which optional modules and state-specific questions they include in their survey.

In the past, post-stratification weights are used, which may partially correct for any bias caused by non-telephone coverage. These weights adjusted for differences in probability of selection and nonresponse, as well as noncoverage, and must be used for getting representative population-based estimated of risk behavior prevalence. As of 2011, the BRFSS has adopted an advanced weighting method called iterative proportional fitting, also known by its nickname, "raking." "Raking is different from post-stratification because" it incorporates adjustor variables one at a time in an iterative process, rather than imposing weights for demographic subgroups in a single process" (BRFSS FAQs). An advantage of this is that many more variables are used than post stratification.

Information from:

http://www.cdc.gov/surveillancepractice/reports/brfss/brfss_faqs.html

http://www.cdc.gov/brfss/technical_infodata/surveydata/2011.htm

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

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

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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 = Lower 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.):

[NA](#)

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

[URL](#)

[NA](#)

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):

[Please see documentation for the BRFSS: ftp://ftp.cdc.gov/pub/Data/Brfss/userguide.pdf](ftp://ftp.cdc.gov/pub/Data/Brfss/userguide.pdf)

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

[Other](#)

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.): [BRFSS. Please see:](#)

http://www.cdc.gov/brfss/technical_infodata/surveydata/2011.htm

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment: [URL](#)

<http://www.cdc.gov/brfss/questionnaires/pdf-ques/2011brfss.pdf>

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

[URL](#)

<http://www.cdc.gov/brfss/questionnaires/pdf-ques/2011brfss.pdf>

2a1.33 Level of Analysis (Check the levels of analysis for which the measure is specified and tested): [Population : National,](#)

[Population : State](#)

2a1.34-35 Care Setting (Check all the settings for which the measure is specified and tested): [Other:Specified for general population, including adults/elderly, young adults and populations at risk.](#)

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):

[A study by Arday et al. examined whether there were any systematic differences between the state cigarette smoking prevalence estimates from BRFSS and the Current Population Survey \(CPS\), which is a house-based survey conducted by the Census Bureau.](#)

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

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

Using the most recent data available, all survey data was weighted on the basis of age, sex and race distribution and prevalence estimates were calculated.

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

The study found that overall estimates of smoking prevalence from the BRFSS were slightly lower from CPS (-1.9% difference in 1992/1993, p<.05) but that there was variation among different states. However, the study concluded that the BRFSS generally provides state estimates of smoking prevalence similar to those from CPS and that the BRFSS is appropriate for ongoing state surveillance of smoking prevalence.

Arday DR, Tomar SL, Nelson DE, Merritt RK, Schooley MW. State Smoking Prevalence Estimates: A Comparison of the Behavioral Risk Factor Surveillance System and Current Population Survey. *American Journal of Public Health*. 1997;87(10):1665–1669.

The following are more studies that explore the reliability of BRFSS:

Nelson, et al. did the most comprehensive review of the BRFSS, looking at over 200 studies that examine the reliability and validity of the BRFSS and measures similar to the BRFSS. The “current smoker” measure was found to be highly reliable. In fact, of all of the measures examined, only one had low reliability.

Nelson DE, Holtzman D, Bolen J, Stanwyck CA, Mack KA. Reliability and validity of measures from the Behavioral Risk Factor Surveillance System (BRFSS). *Social and Preventive Medicine*, 2001;46Suppl 1:S03-S42.

A study by Shea et al. examined the reliability of the parts of the BRFSS related to cardiovascular disease, including smoking. The study found acceptable to highly reliable at the individual level for the BRFSS items related to the smoking measure, among other mentions. The study also found high consistency at the group level.

Shea S, Stein a D, Lantigua R, Basch CE. Reliability of the behavioral risk factor survey in a triethnic population. *American Journal of Epidemiology*. 1991;133(5):489–500. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/2000859>.

A study by Iachan et al. found that the BRFSS and the National Health Interview Survey (NHIS) gave consistent results for most of the measures that were looked at.

Ronaldo Iachan, Jane Schulman, Eve Powell-Griner, David E. Nelson, Peter Mariolis, and Carol Stanwyck. “Pooling state telephone survey health data for national estimates: The CDC Behavioral Risk Factor Surveillance System, 1995 Pp. 221–226 in Conference on Health Survey Research Methods (7th:1999:Williamsburg, VA.), Seventh Conference on Health Survey Research Methods, 2001, Marcie L. Cynamon and Richard A. Kulka (eds.), Hyattsville, MD: DHHS Publication No. (PHS) 01–1013.

More information found here:

<http://www.cdc.gov/brfss/pubs/quality.htm>

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:**

This measure is not different and is used in other nationally representative surveys on the general population to assess smoking status.

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*):

See 2b23

2b2.2 Analytic Method (*Describe method of validity testing and rationale; if face validity, describe systematic assessment*):
See 2b2.3

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*):

Nelson, et al. did the most comprehensive review of the BRFSS, looking at over 200 studies that examine the reliability and validity of the BRFSS and measures similar to the BRFSS. The "current smoker" measure was found to be highly valid. In fact, of all of the measures examined, only a few had low validity.

Nelson DE, Holtzman D, Bolen J, Stanwyck CA, Mack KA. Reliability and validity of measures from the Behavioral Risk Factor Surveillance System (BRFSS). *Social and Preventive Medicine*, 2001;46Suppl 1:S03-S42.

More information found here:

<http://www.cdc.gov/brfss/pubs/quality.htm>

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*):

See 2b3.3

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

See 2b3.3

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

- 1) The survey excludes institutionalized individuals
- 2) The data are based on self-reports, which can be subject to recall bias.
- 3) People without a landline are excluded. Accordingly, BRFSS might exclude certain people of lower socioeconomic status or households with cellular phones only. However, starting in 2011, the BRFSS has begun making interview calls to people with cellular phones.

Information from: Centers for Disease Control and Prevention. Public health surveillance for behavioral risk factors in a changing environment: recommendations from the Behavioral Risk Factor Surveillance Team. *MMWR* 2003;52 (No. RR-9): 1-12. *MMWR*. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/12817947>.

http://www.cdc.gov/surveillancepractice/reports/brfss/brfss_faqs.html

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*):

NA

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

NA

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):

NA

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

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):

NA

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

NA

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):

NA

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):

NA

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

NA

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):

NA

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): BRFSS results are stratified by gender, age, race, income and level of education. Please see the attached document for the stratified results. Results obtained from:

Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2010.

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

2.1-2.3 Supplemental Testing Methodology Information:

[Attachment](#)

[smoking_status_stratified_NQF.docx](#)

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 Health/Disease Surveillance, Public Reporting](#)

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions): [Public Reporting, Public Health/ Disease Surveillance](#)

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.]

These results are compiled by the CDC, returned to the individual states and made available to the public. Results are available here:

<http://apps.nccd.cdc.gov/brfss/>

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: [These data are frequently reported to the public--typically when new results are released on an annual basis. The smoking prevalence estimate is one that the majority of adults can grasp, due to its simplicity, and thus represents an effective communication tool. I do not know of any cognitive testing to this effect, however.](#)

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): [NA](#)

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].

Describes uses of BRFSS for maintenance:

<http://www.cdc.gov/chronicdisease/resources/publications/AAG/brfss.htm>

Healthy People objectives for 2020 are to reduce smoking prevalence among adults from 20.6% measured using the NHIS 2008, to 12% in 2020. See this page for detail:

<http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=41>

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:

[This estimate is rigorously measured and estimates are representative of each state. They are collected monthly and compiled](#)

annually and are already a critical tool in terms of our public health and tobacco control policy.

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:

Other

BRFSS data is collected by each state health department monthly and sent to CDC, which compiles the data yearly.

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): ALL data elements are in a combination of 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:

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:

Interview procedures are designed to minimize errors in data collection. However, there are still opportunities for error. One type of error is noncoverage error, which occurs when not all members of the general population are included in the sample. For example, those purposely excluded from the survey, such as those living in institutions, as well as those without telephones, may result in noncoverage errors. To minimize the effects of noncoverage errors, data is often weighted to account for adults without telephones, for example. However, starting in 2011, the BRFSS has begun making interview calls to people with cellular phones.

Another potential error is a sampling error, which occurs because estimates are based on a sample of a population rather than the entire population.

Nonresponse error also occurs. This can occur when respondents are not available or refuse to participate in the survey or when respondents refuse to answer specific survey questions or answer them untruthfully.

Measurement error refers to the validity of a variable. Facts that may bias responses and thus lead to measurement errors are: wording, format and order of questions, interviewer's adherence to wording, and mistakes made in the editing and coding of data. Measurement errors can be decreased if the questions are phrased properly on the questionnaire, read properly by the interviewer, understood and answered truthfully by the respondent, and checked for errors.

Information found here:

<ftp://ftp.cdc.gov/pub/Data/Bfss/userguide.pdf>

http://www.cdc.gov/surveillancepractice/reports/brfss/brfss_faqs.html

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):

Although there are some threats to the validity of BRFSS data, such as the exclusion of individuals without landlines, BRFSS data

has been found to be both valid and reliable compared to other national surveys (CDC, 2003). Since the BRFSS is the largest telephone survey in the world, its ongoing data collection and substantial sample size “allows for stratification to further examine the risk by selected variables of interest”(CDC, 2003).

Centers for Disease Control and Prevention. Public health surveillance for behavioral risk factors in a changing environment: recommendations from the Behavioral Risk Factor Surveillance Team. MMWR 2003;52 (No. RR-9): 1-12. MMWR. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/12817947>.

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:

0028 : Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention

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? Yes

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):

The only other tobacco and smoking related measures are those that involve clinicians screening for individual-level tobacco use. This measure provides estimates of population-level smoking, which is a public health measure.

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 4770 Buford Highway, NE, Mailstop K-66, Atlanta, Georgia, 30341

Co.2 Point of Contact: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention an, cdcinfo@cdc.gov, 888-232-6348-

Co.3 Measure Developer if different from Measure Steward: Centers for Disease Control and Prevention, National Center for

Chronic Disease Prevention and Health Promotion, 4770 Buford Highway, NE, Mailstop K-66, Atlanta, Georgia, 30341

Co.4 Point of Contact: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention an, cdcinfo@cdc.gov, 888-232-6348-

Co.5 Submitter: Donna, Vallone, dvallone@legacyforhealth.org, 202-454-5555-, Legacy

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

Co.7 Public Contact: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention an, cdcinfo@cdc.gov, 888-232-6348-, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion

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.

NA

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: NA

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.3 Year the measure was first released:

Ad.4 Month and Year of most recent revision:

Ad.5 What is your frequency for review/update of this measure? annually

Ad.6 When is the next scheduled review/update for this measure?

Ad.7 Copyright statement: NA

Ad.8 Disclaimers: NA

Ad.9 Additional Information/Comments: To clarify the final section on contact information, CDC is the developer and intellectual property owner of the measure. This form, however, was filled out by Legacy.

Date of Submission (MM/DD/YY): 05/02/2012