Eliminating Exposure to Secondhand Smoke:

Outcome Indicators for Comprehensive Tobacco Control Programs–2017

National Center for Chronic Disease Prevention and Health Promotion

Acknowledgments

This technical assistance guide was developed by the Centers for Disease Control and Prevention's Office on Smoking and Health. This guide was developed as the third part of a three-part series of technical assistance guides intended to update the first three goal areas of the *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs*, released in 2005. The guide is intended to help state and territorial health departments plan and evaluate state tobacco prevention and control programs. We would like to extend special thanks to the following individuals for their assistance in preparing and reviewing this publication:

Expert Panel Members (Appendix B)

Outcome Indicator Workgroup (Appendix B)

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Preface

Purpose

Exposure to secondhand smoke has been causally linked to adverse health outcomes, including heart disease, stroke, and lung cancer in adults, and acute respiratory infections, ear problems, more frequent and severe asthma, and sudden infant death syndrome in children.[1-3] Among adult nonsmokers, secondhand smoke exposure causes an estimated 7,300 lung cancer deaths and 34,000 heart disease deaths each year.[3] The U.S. Surgeon General has concluded that there is no risk-free level of secondhand smoke exposure.[1]

Studies have shown that comprehensive laws prohibiting smoking in all indoor areas of public places, including worksites, restaurants, and bars; voluntary smokefree rules prohibiting smoking in homes and vehicles at all times; and smokefree policies in multiunit housing protect nonsmokers from the health hazards of secondhand smoke exposure in these environments.[1,3-7] There is a comprehensive body of scientific evidence demonstrating the positive population health benefits of smokefree policies. Meta-analyses have shown a variety of population-level health improvements immediately following smokefree policy implementation, including fewer cardiovascular events, preterm births, and childhood asthma exacerbations.[8-9] Furthermore, these policies have the additional benefit of reducing smoking rates among youth and adults by lowering the visibility of role models who smoke, reducing opportunities to smoke, and diminishing the social acceptability of smoking.[1,2,6,7] Studies have also shown that smokefree polices increase the number of tobacco users who quit and reduce initiation among young people.[3]

To sustain comprehensive tobacco prevention and control programs, it is important to demonstrate that these efforts continue to have the intended public health impact. To produce such evidence, it is critical for state tobacco prevention and control programs continue to evaluate their programs. Selecting appropriate outcome indicators is a key step in designing a rigorous evaluation. This guide is intended to help facilitate the selection of such indicators.

This publication is the third in a series of updates to the guide previously released by the Centers for Disease Control and Prevention's (CDC's) Office on Smoking and Health (OSH), *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs*,[10] hereafter referred to as KOI 2005. As a companion to the 2001 publication, *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*,[11] KOI 2005 was designed to provide information on selecting indicators and linking them to outcome objectives. This update provides a revised logic model and set of outcome indicators for Goal Area 2 of the National Tobacco Control Program (NTCP), which addresses eliminating exposure to secondhand smoke.

Additionally, the Addendum includes proposed non-rated outcome indicators to assess exposure to secondhand aerosol from electronic cigarettes (e-cigarettes). Although this update focuses on the elimination of secondhand smoke exposure, comprehensive tobacco prevention and control programs that simultaneously address initiation of smoking, the elimination of secondhand

smoke, and smoking cessation are more effective than programs that address these issues separately.[4]

This resource can be used in combination with outcome indicators from *Preventing Initiation of Tobacco Use: Outcome Indicators for Comprehensive Tobacco Control Programs—2014*[12] and *Promoting Quitting Among Adults and Young People: Outcome Indicators for Comprehensive Tobacco Control Programs—2015.*[13] Additionally, as with KOI 2005, this update supports application of CDC's *Framework for Program Evaluation in Public Health* Practice,[14] which consists of the following six steps of good evaluation:

1. Engage stakeholders.
2. Describe the program.
3. Focus the evaluation.
4. Gather credible evidence.
5. Justify your conclusions.
6. Ensure evaluation findings are used and share lessons learned.

This publication provides updated, new, and developmental indicators and supporting information relevant to recent changes in the tobacco control landscape regarding elimination of secondhand smoke exposure. In recent years, considerable progress has been made in increasing the proportion of the population covered by state or local comprehensive smoke-free laws that prohibit smoking in indoor public places, including worksites, restaurants, and bars.[15] However, these laws do not extend to private settings, such as homes. The home is the primary source of secondhand smoke exposure for children, and a major source for adults.[1] Moreover, individuals who reside in multiunit housing are particularly susceptible to secondhand smoke drifting between living units. In 2016, the U.S. Department of Housing and Urban Development issued a rule requiring all public housing authorities to adopt smokefree polices by prohibiting the use of "prohibited tobacco products," including cigarettes, cigars, pipes, and waterpipes.[14]

Furthermore, there has been a substantial increase in the use of emerging tobacco products over the past several years. For example, e-cigarettes are now the most commonly used tobacco product among U.S. youth, and in 2016, the U.S. Surgeon General concluded that e-cigarette aerosol is not harmless; it can contain harmful and potentially harmful constituents.[17-20] E-cigarettes include a diverse group of devices designed to deliver aerosolized nicotine and additives to users. These devices are referred to by companies, the media and consumers by various terms, themselves, and by consumers as "e-cigarettes," "e-cigs," "cigalikes," "e-hookahs," "mods," "vape pens," "vapes," and "tank systems." In this guide, the term "e-cigarette" is used to represent all the various products in this evolving product category.[20] State surveillance and evaluation efforts are critical to assess the impact of e-cigarette initiation and use within the broader tobacco prevention and control landscape, particularly in the context of youth.

Given these changes, OSH recognized the importance of revisiting and updating the outcome indicators for Goal Area 2, Eliminating Exposure to Secondhand Smoke. This update also incorporates developmental indicators for e-cigarettes to underscore the importance of assessing their public health impact within the context of tobacco prevention and control efforts relevant to secondhand smoke and secondhand e-cigarette aerosol exposure.

Tobacco prevention and control program managers and evaluators can use the information in this guide to focus their evaluations (step 3 of CDC's *Framework for Program Evaluation*). The guide informs the selection of indicators, linking indicators to related outcomes. To help users make informed choices about which indicators are most suitable for each program and context, an external panel rated each indicator on the following relevant criteria: overall quality, resources needed, strength of evaluation evidence, utility, and accepted practice.

The guide can also assist in gathering credible evidence (step 4 of the *Framework for Program Evaluation*) and establishes the value of each indicator for measuring the progress of state tobacco prevention and control program efforts by providing a summary of scientific evidence, example questions, and data sources for each indicator. A primary purpose of this publication is to assist state-specific and national evaluation and surveillance efforts and to measure and report these using protocols and operational definitions drawn from widely available state or national data collection systems. Special care was taken in choosing example data sources and survey questions; most are drawn from common state and national surveys and surveillance systems, and using them may help managers and evaluators compare their findings to data collected across states and nationally.

Technical Assistance

CDC/OSH helps state and territorial health departments plan, implement, and evaluate tobacco prevention and control programs. To contact them, please call (800) 232-4636 or e-mail tobaccoinfo@cdc.gov.

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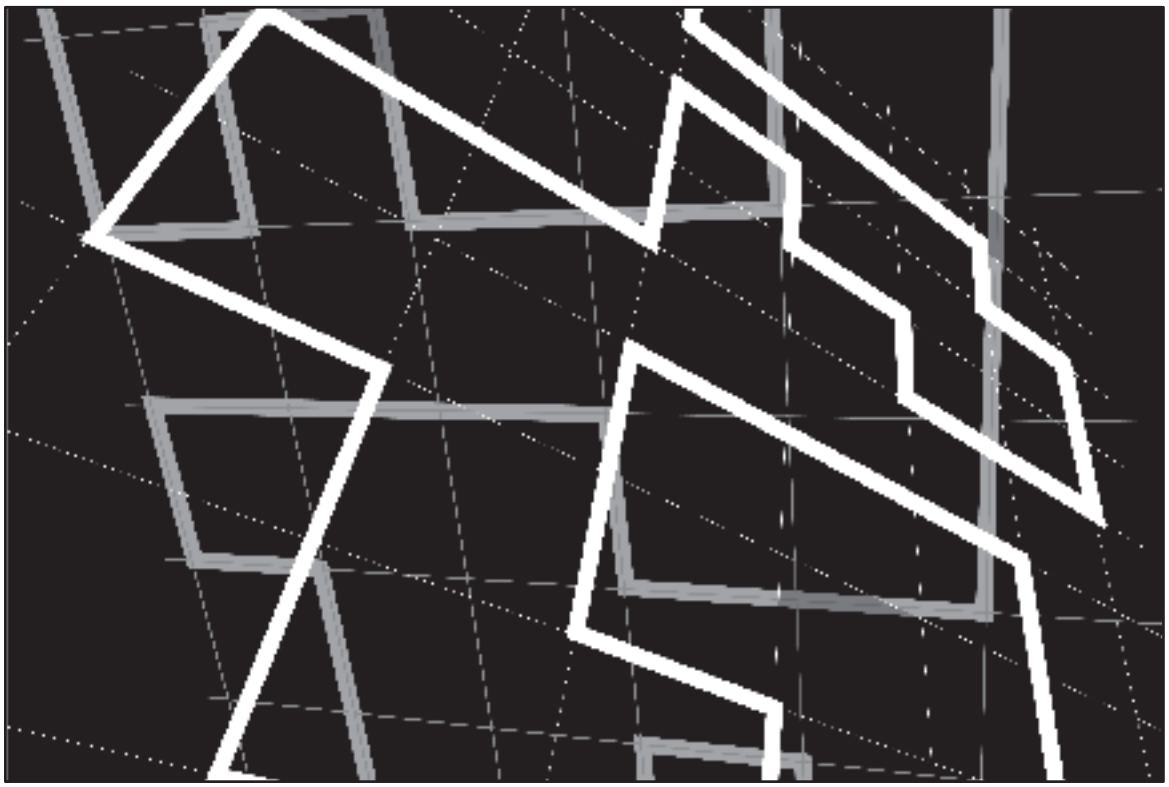
Table of Contents

CHAPTER 1

Introduction



Introduction

Purpose

The Centers for Disease Control and Prevention's (CDC's) Office on Smoking and Health (OSH) developed this publication to help state and territorial health departments plan and evaluate state tobacco prevention and control programs. This publication provides an updated logic model linking activities to outcomes for Goal Area 2—Eliminating Exposure to Secondhand Smoke—of the National Tobacco Control Program (NTCP). It contains in-depth information on indicators to measure progress toward outcomes, including *Consumer Reports*®–type ratings to allow for tailored selection of indicators at local, state, and territorial levels. Finally, it highlights how indicators can be used to integrate program and evaluation planning. This guide may be used in coordination with CDC's workbook, *Developing an Effective Evaluation Plan: Setting the Course for Effective Program Evaluation*,[1] and other OSH surveillance and evaluation resources, which can be accessed at http://www.cdc.gov/tobacco/tobacco_control_programs/surveillance_evaluation/index.htm.

Audience

The primary audiences for this publication consist of planners, managers, and evaluators of state and territorial tobacco prevention and control programs.

The National Tobacco Control Program

The goal of CDC's NTCP is to reduce tobacco-related disease, disability, and death. The NTCP seeks to achieve this goal by working in four areas:

- Preventing initiation of tobacco use.
- Eliminating exposure to secondhand smoke.
- Promoting quitting among adults and young people.
- Identifying and eliminating tobacco-related disparities.

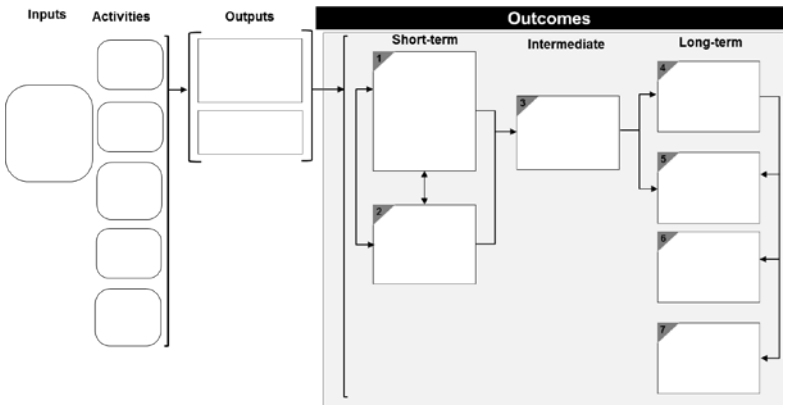
For more information on the NTCP, see Appendix A.

Logic Models

As explained in *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*, logic models depict the presumed causal pathways that connect program inputs, activities, and outputs with short-term, intermediate, and long-term outcomes.[2] Figure 1 presents an example of a basic logic model.

Figure 1: Example of Logic Model

Generic Logic Model



To help tobacco prevention and control programs with planning and evaluation, we numbered the outputs (i.e., direct results of program activities) and outcomes in each NTCP logic model to allow for easy reference in discussing the links between logic model components.

The NTCP logic models can be used in several ways:

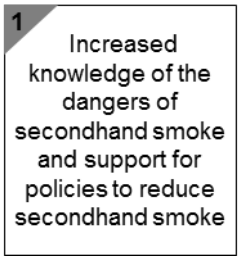
- To see the links between program activities; outputs; and short-term, intermediate, and long-term outcomes.
- To identify relevant short-term, intermediate, and long-term outcomes.
- To assist in selecting indicators to measure outcomes.

Outcome Components

The outcome components in the NTCP logic models are categorized as short-term, intermediate, or long-term to indicate a presumed causal sequence. For each outcome box, we summarize the scientific evidence that supports assumptions about the links between program activities, outputs, and short-term or intermediate outcomes, which affect long-term outcomes (last four boxes in the example model). Using the model in Figure 1, for example, a program may select box 3 as a primary intermediate outcome. Program activities designed to achieve changes in short-term Outcomes 1 and 2 (linked vertically on the logic model) would be expected to lead to changes in Outcome 3 and to affect long-term Outcomes 4 through 7.

The revised Goal Area 2 logic model includes the following changes to outcomes from the original 2005 *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs* (KOI 2005 hereafter):

- Changed the outcome "Increased knowledge of, improved attitudes toward, and increased support for the creation and active enforcement of tobacco-free policies" to "Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke" (Outcome 1). This change was intended to better reflect the link between increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke.



- Combined the outcome "Creation of tobacco-free policies" and "Enforcement of smokefree policies" into one outcome: "Implementation and enforcement of smokefree policies" (Outcome 2). This change was intended to clarify the implied logic and order of effects.

- Changed the outcome "Compliance with tobacco-free policies" to "Compliance with smokefree policies" (Outcome 3). This change was intended to better reflect the science in this area and account for the fact that secondhand smoke is smoke from combustible tobacco products, such as cigarettes, cigars, or pipes.

Indicators

Outcome indicators are specific, observable, and measurable characteristics or changes that represent achievement of an outcome.[6] For example, if your program is trying to increase "Adoption and enforcement of smokefree policies" (Outcome 2) and you measured the "Proportion of jurisdictions with comprehensive smokefree policies for indoor public places" (Indicator 2.2.a), the result would indicate the extent of your progress toward creating smokefree policies in indoor public places, including workplaces, restaurants, and bars in all jurisdictions.

Monitoring a single indicator can serve as a helpful guidepost, but it is important to include indicators from across the short-term, intermediate, and long-term outcomes within a logic model to help ensure a robust evaluation. By mapping a causal pathway across the logic model and measuring key indicators along this pathway, tobacco prevention and control programs can begin to see where efforts are making gains and where they are not. When a key indicator within the pathway fails to improve or begins declining, additional inquiry can determine whether the program itself is failing to achieve the intended effects or whether contextual factors along the causal pathway are responsible. In either case, understanding the roadblocks in achieving the intended public health goals provides important information to guide program improvement efforts. More information on using outcome indicators to develop an evaluation plan is provided in this section and in CDC's workbook, *Developing an Effective Evaluation Plan: Setting the Course for Effective Program Evaluation*,[1] which can be accessed at http://www.cdc.gov/tobacco/stateandcommunity/tobacco_control_programs/surveillance_evaluation/evaluation_plan/pdfs/developing_eval_plan.pdf.

Tobacco Products Other than Cigarettes

We updated the indicators to incorporate a wide breadth of tobacco products other than cigarettes to acknowledge the use of new and emerging tobacco products among adults and youth. In particular, this publication proposes non-rated developmental indicators relevant to secondhand aerosol from e-cigarettes in recognition of their prominent use and public health impact within the context of comprehensive tobacco prevention and control efforts. Indicators in this guide are particularly useful for measuring progress toward reducing *cigarette* use and exposure to smoke from combustible tobacco products (e.g., cigarettes, cigars, conventional pipes, waterpipes/hookah). However, programs are advised to consider all tobacco product use patterns in their community, including e-cigarettes, when making decisions regarding surveillance and evaluation activities. This can help to assess their impact on tobacco control efforts, including their effects on tobacco use and compliance with smokefree polices.

Identifying and Eliminating Disparities

To achieve health equity in tobacco prevention and control, it is critical for tobacco prevention and control programs to maintain a focus on identifying and eliminating tobacco-related disparities across all elements of the logic model. This involves designing and implementing initiatives that effectively reach and have an impact on all populations, including those experiencing tobacco-related disparities. This includes ensuring culturally meaningful outputs, and collecting and analyzing data to identify populations experiencing tobacco-related disparities and to monitor outcomes in these populations. In considering what outcomes to monitor, it is important to remember that disparities in secondhand smoke exposure are not caused by a single factor and the impact outcomes have on reducing secondhand smoke among disparate populations involves a complex interaction of multiple factors.[6]

It is important for programs to consider their local context when making decisions regarding capturing information by population characteristics, such as race/ethnicity, geography, age group, educational attainment, employment status, and poverty status. Throughout this guide, we have highlighted population characteristics associated with particular indicators when the evidence is particularly strong in demonstrating an association between the indicator and its effect on reducing secondhand smoke exposure in those populations. Programs can consistently measure all indicators by population characteristics to better understand the reach and impacts of their activities on all populations and to build the evidence base needed for improved tobacco control.

In this publication, indicators are organized by outcome component in the logic model. Indicators to measure distal outcomes (i.e., reduced tobacco-related morbidity, mortality, and disparities) are not included in this guide for two reasons. First, the research base establishing linkages between behavioral outcomes (e.g., reductions in tobacco consumption and tobacco use prevalence) and distal outcomes is well established. Therefore, tobacco prevention and control programs could consider demonstrating an effect on behavioral outcomes, which in turn would be expected to lead to favorable health effects. Second, we determined that the greatest expressed needs by states for evaluation assistance would be addressed by identifying short-term and intermediate outcome indicators.

This does not mean that programs should not monitor their effect on the distal outcomes in the logic model. Some long-standing programs (e.g., California Tobacco Control Program[7]) have been able to show an effect on long-term outcomes, but some states have not had comprehensive programs in place long enough to show such effects.[9-11] We also do not intend to imply that measuring outcomes is sufficient for evaluating a tobacco prevention and control program. Equally important is process evaluation, which focuses on measuring the process of program implementation. (See *Introduction to Process Evaluation in Tobacco Use Prevention and Control*[12] for information on process evaluation.)

Indicator Selection and Rating

To develop this guide, CDC proposed a set of outcome indicators (including new, existing, and revised indicators from KOI 2005) and engaged a panel of 13 experts (see Appendix B) in tobacco control practice, evaluation, and research to assess each indicator on the basis of the following criteria: overall quality, resources needed, strength of evaluation evidence, utility, face validity to decision makers, conformity with accepted practice, uniqueness, and how essential the indicator is for evaluating state tobacco prevention and control programs. In addition to rating the indicators that CDC proposed, the experts suggested other indicators and sources of data for those indicators.

CDC reviewed the experts' responses, comments, and suggestions and compiled the results into an individual rating across criteria for each indicator. A few indicators, however, have no ratings because they were added at the suggestion of the experts after the rating process was complete. These indicators have the symbol NR, which stands for "Not Rated," after their numbers. The "uniqueness" criterion was used to narrow the indicator lists (see Appendix C). For detailed information on how CDC selected indicators, how the expert panelists conducted their tasks, and how the ratings were calculated, see Appendix C.

Indicator Rating Tables

For each outcome component of the logic model, we provide an indicator rating table that lists the indicators associated with the outcome component and the ratings for each indicator by criterion. Using this table makes it easy to compare all of the indicators for one outcome.

Figure 2 presents an example of an indicator rating and an explanation of how to read it. The ratings are based on the following criteria:

- **Overall quality.** A summary rating that reflects the overall quality and general worth of the indicator as it relates to evaluating state tobacco prevention and control programs.
- **Resources needed.** Intensity of resources warranted to collect reliable and precise measures and to analyze primary or secondary data on the indicator. Considerations affecting cost include availability of existing data (e.g., archival records or other secondary data) versus need for primary data collection, and methodological and sampling issues. Dollar signs show the amount of resources (funds, time, and effort) needed to collect and analyze data on the indicator using the most commonly available data source: the more dollar signs (maximum four), the more resources needed. The dollar signs do not represent specific

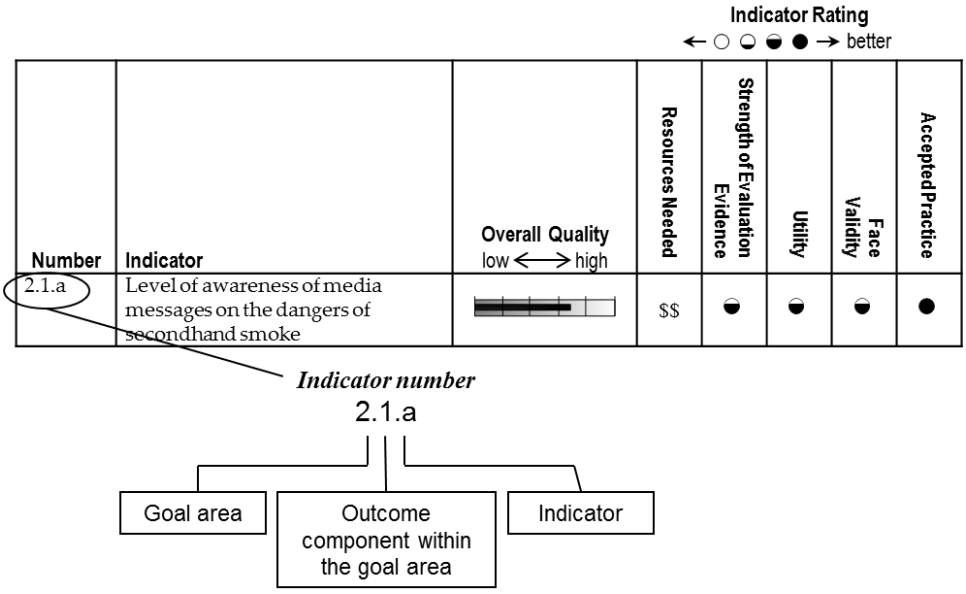
amounts because the actual cost of measuring and analyzing an indicator varies according to the existing capacity of a state health department or organization to evaluate its programs.

- **Strength of evaluation evidence.** The degree to which scientific evidence supports the assumption that implementing interventions to effect change in a given indicator will lead to a measurable downstream outcome. This includes the extent to which reviewers believed that the scientific literature supports use of the indicator for the evaluation of comprehensive, statewide tobacco prevention and control programs, and considers conflicting evidence and concerns regarding the methodology of supporting studies. Indicators with the highest ratings have a strong demonstrated relationship between the indicator and a downstream logic model outcome. Indictors with moderate ratings demonstrate an association between the indicator and an outcome in the logic model. However, the extent of evidence and/or the study designs supporting this association may not be strong. Indicators with low ratings may have substantial conflicting literature and/or weak methodological designs.
- **Utility.** The extent to which the indicator would help to answer important comprehensive tobacco prevention and control program evaluation questions.
- **Face validity.** The degree to which data on the indicator would appear valid to tobacco program stakeholders, such as decision makers who may be users of tobacco prevention and control program evaluation results.
- **Accepted practice.** The degree to which use of the indicator is consistent with currently accepted, real-world tobacco control practice.

Figure 2: Example of Rating Table

Outcome 1

Increased Knowledge of the Dangers of Secondhand Smoke and Support for Policies to Reduce Secondhand Smoke



In addition, the following symbols are associated with some of the ratings:

- An asterisk (*) indicates low reviewer response. If fewer than 75% of reviewers provided a valid rating on a criterion for an indicator, the criterion is flagged as having low reviewer response. For the purposes of this assessment, invalid responses included "don't know," missing data, and rating errors (e.g., selection of two non-adjacent ratings). A low response suggests a high degree of uncertainty among raters. An example of a rating for which there was low reviewer response is the strength of literature support score for Indicator 2.3.a: Compliance with smokefree policies in public places and workplaces.
- A dagger (†) indicates a low level of agreement among reviewers. For the resources warranted, strength of evaluation evidence, utility, face validity, and accepted practice criteria, a rating was considered to have a low level of agreement if fewer than 75% of valid reviewer responses were within ±1 point of the median. For the overall quality criterion, a rating was considered to have a low level of agreement if fewer than 75% of valid reviewer responses were within ±2 points of the median (denoted by a double dagger ††). An example of a rating with a low level of agreement is the overall quality score for Indicator 2.2.k: Number and type of enforcement actions issued regarding smokefree policies. This low level of agreement represents a relatively high degree of variability in the raters' responses for the criterion.

Indicator Profiles

Each indicator listed in this publication is associated with one short-term, intermediate, or long-term outcome component of the NTCP Eliminating Exposure to Secondhand Smoke (Goal 2) logic model. The number of indicators for each logic model component varies considerably (e.g., Outcome 3 has five indicators, whereas Outcome 2 has 12 indicators).

We provide a profile for each indicator that presents the following detailed information:

- **Indicator number and name.** Each indicator is uniquely identified by two numbers and a letter. The first number represents the goal area, the second number represents the outcome component (box) within the goal area logic model, and the letter represents the indicator. For example, Indicator 2.1.a is first on the list of indicators (designated by the "a") associated with outcome component 1 in the logic model for NTCP Goal Area 2.
- **Outcome box.** The title of the outcome component (i.e., logic model box) is provided in the logic model.
- **What to measure.** A description is included of what to measure in order to gather data on the indicator. Definitions of key terms are included in the "Glossary and Acronyms" section at the end of this guide.
- **Why this indicator is useful.** The rationale is provided for using the indicator as a measure of a specific outcome in the logic model.
- **Example data source(s).** Listed are some example surveys and sources of data to measure the indicator as well as the population from which the data could be collected (if not apparent from the title). Most data sources that we list are well known and widely used state or national surveys or surveillance systems.[13] We also list nonstandardized, topic-specific data sources (e.g., media tracking, policy tracking, worksite surveys, environmental scans,

and other tobacco-related state surveys) that may not be as widely used by state tobacco programs but can be useful for evaluation. If similar survey questions are included in multiple data sources, we list the data sources most commonly available to state tobacco prevention and control programs.

- **Population group(s).** The population group(s) includes the individuals from which data about this indicator are most commonly collected, if applicable.
- **Example survey question(s).** These are usually survey questions from state or national surveys or surveillance systems. Where appropriate, the range of possible responses to the survey questions is also given. If no state or national survey has an appropriate question, we, at times, created an example question.
- **Comments.** Here we provide additional information we have on this indicator that may be useful for program planning and/or evaluation purposes. For example, we may suggest other uses for the indicator, the indicator's limitations (if any) as a measure of a program's progress, potential elements of a model policy that may be used to guide measurement, or sources of information on data collection methods. Additionally, we alert readers when collecting sociodemographic data, such as survey respondents' age, sex, race, ethnicity, city or county of residence, educational status, and income may greatly enhance the utility of the indicator. For indicators with survey items specific to cigarettes, we recommend capturing information about broader groups or different types of tobacco products. Please note that changes to existing survey items should be made with caution. It is important to conduct sufficient cognitive testing to ensure that the modified item captures the original intent of the question and still makes sense to the respondent.
- **Reviewers' ratings.** The rating tables include the criterion ratings given to the indicator by the panel of experts.

Using This Guide to Plan a State Tobacco Control Program Outcome Evaluation

Engaged data is one of the five essential core components of infrastructure according to the evidence-based Component Model of Infrastructure.[15] It is critical for states to have accurate and timely evaluation data to demonstrate the effects of the program, account for funding, and enhance programs. Effective tobacco prevention and control programs require careful planning, implementation, and evaluation.

Managers and evaluators can use this publication to help them focus their evaluations and guide the collection of credible evidence through the selection of appropriate program outcomes and indicators. It is important that programs avoid two common pitfalls: (1) implementing interventions without sufficient plans or funds for evaluation, and (2) selecting indicators primarily for research purposes rather than for program evaluation.[2]

Below are the six major steps involved in planning and evaluating a state tobacco prevention and control program outlined in CDC's *Framework for Program Evaluation in Public Health Practice*[13] and the workbook *Developing an Effective Evaluation Plan: Setting the Course for Effective Program Evaluation*.[1] This book provides assistance for facilitating and developing a

written evaluation plan as well as implementing additional steps of CDC's *Framework for Program Evaluation in Public Health Practice*.[13]

Step 1. Engage stakeholders

Identify the purpose and users of the evaluation. The stated purpose of the evaluation will drive the expectations and set the boundaries for what the evaluation can and cannot deliver. Careful selection and ongoing, meaningful engagement of an Evaluation Stakeholder Workgroup (ESW) throughout the planning and implementation process will aid the program in determining and prioritizing key evaluation questions, facilitating data collection, implementing evaluation activities, increasing the credibility of analysis and interpretation of evaluation information, and ensuring that evaluation results are used.[1] This guide assists in clarifying the purpose of evaluation related to preventing tobacco use initiation and helps in engaging the ESW to clarify the scope of the evaluation and provide the basic information needed to complete step 2, describe the program.

Step 2. Describe the program

This guide assists in clarifying a comprehensive tobacco prevention and control program's efforts and expected outcomes related to the goal of preventing tobacco use initiation. An updated logic model is included that shows how activities lead to outcomes based on evidence from research and practice.

For program planning, it is often helpful to read logic models backward; that is, to begin with the long-term outcomes and trace a causal pathway back through immediate outcomes, to short-term outcomes, to program outputs and program activities. This exercise, done in coordination with the ESW, can help to clarify the scope of the evaluation and provide basic information needed to complete step 2, describe the program.

It is critical for program staff and stakeholders to agree on the program description, including public health goals. Using this guide to help map a program's causal pathway(s) provides an opportunity for stakeholders to work through concerns and challenges regarding the goals and objectives of the work and to set the stage for identifying key evaluation questions, focusing the evaluation, and connecting program planning and evaluation.

To assist with this step, use the outcome overviews for the long-term outcome components to obtain information regarding the rationale and empirical support for the logic model pathway that links specific program activities with specific outcomes. If you need more information, read some of the related articles listed after the references for each outcome overview in the section titled "For Further Reading." Then, on the basis of this information, select one or more long-term outcomes and related short-term and intermediate outcomes, again keeping in mind your state and program's context, resources, and needs.

Step 3. Focus the evaluation

The scope and depth of any program evaluation is dependent on program and stakeholder priorities; available resources, including financial resources; staff and contractor availability; and

amount of time committed to the evaluation. This guide can be used to select indicators of progress toward your selected short-term, intermediate, and long-term outcomes.

Examine the indicator rating tables relevant to the short-term, intermediate, and long-term outcomes you have selected. Compare ratings pertaining to the indicators' overall quality, resources needed, strength of evaluation evidence, utility, face validity, and accepted practice. Select candidate indicators and learn more about them by reading each indicator profile. On the basis of your reading and your program's circumstances, select indicators to measure and monitor progress toward your selected short-term, intermediate, and long-term outcomes.

Step 4. Planning for gathering credible evidence

Once the focus and scope of the evaluation, as well as the key evaluation questions, have been decided, it is necessary to select the appropriate data collection methods that best meet the objectives of the evaluation. Use the example data source and survey questions included in the indicator profiles to help create a detailed plan for gathering evidence.

Step 5. Planning for conclusions

Justifying evaluation findings includes working in coordination with the ESW to analyze, interpret, and draw conclusions from the collected data in order to turn them into meaningful, useful, and accessible information. This guide summarizes evidence in the outcome summaries and indicator profiles, as well as through the graphic display of connections across the logic model that may help stakeholders understand how indicator information is connected and, if gaps or shortcomings occur in intended effects of programmatic activities, where they may be occurring.

Step 6. Planning for dissemination and sharing of lessons learned

The final step in the evaluation process is the dissemination of results. It is important to plan for the use of evaluation results and identify how lessons learned may best be communicated from the beginning of the evaluation planning process. Planning for use is directly tied to the identified purposes of the evaluation and program and stakeholder priorities.

The Importance of Coordinating Program and Evaluation Planning Early and Often in the Planning Process

When a program is organized and planned on the basis of the goal area's logic model, managers and evaluators essentially have an outline of their outcome evaluation plan early in the program planning process. As the program evolves, managers and staff can make adjustments to program activities and, at the same time, the evaluation plan.

An additional step to coordinate program and evaluation planning is to carefully identify program objectives for ongoing monitoring. These objectives may be used to monitor state trends over time or potentially to compare with national data and with those of other states.

Good program objectives are SMART (i.e., specific, measurable, achievable, relevant, and time-bound).[2] An example of a SMART objective is increasing the proportion of the population that

thinks secondhand smoke is harmful to their health (Indicator 2.1.c) from 60% in January 2016 to 75% in January 2018. For more information on creating SMART objectives, see *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*.[2]

Planning an Evaluation of a State Tobacco Prevention and Control Program: A Hypothetical Example

It is important to evaluate the entire comprehensive tobacco prevention and control program effectively, including all NTCP goals. For the purpose and scope of this update, the following example focuses on eliminating exposure to secondhand smoke. In practice, concurrent evaluation efforts of work related to the other goal areas would be occurring, providing numerous synergies in terms of program and evaluation planning.

In this example, assume that recent data from a state tobacco survey show an increase in exposure of adult nonsmokers to secondhand smoke and that state legislators are concerned about this increase. The State Health Officer announced that new funds may become available if the state tobacco prevention and control program can show that it is effective in reducing nonsmokers' exposure to secondhand smoke.

On the basis of these factors, the state tobacco prevention and control program follows the evaluation planning steps previously described as follows:

Step 1: Engage stakeholders

The state tobacco prevention and control program clarifies the primary purpose of the evaluation plan as facilitating improvement to aid program development and reaches out to individuals who have a vested interest in the evaluation findings, such as clients, community groups, and staff involved in running the tobacco prevention program. In this example, the program organizes an ESW of 10 members who will serve a consultative role on all phases of the evaluation.

Step 2. Describe the program.

The ESW considers the purpose of the initiative. The State Health Officer is providing funds specifically to eliminate secondhand smoke exposure. Therefore, the ESW chooses NTCP Goal Area 2: Eliminating Exposure to Secondhand Smoke and reviews the logic model. The group decides to focus on the following long-term outcome: Outcome 4. "Reduced exposure to secondhand smoke." To learn more about Outcome 4, program staff review the outcome component overview (page 92), cited references, and materials recommended for further reading and present the information to the ESW to help select short-term and intermediate outcomes for the program.

Following our recommendations, the ESW members read the logic model for NTCP Goal Area 2 backward (starting at the long-term outcome) to select intermediate and short-term outcomes that are linked to the long-term outcome. They select the intermediate outcome: Outcome 3. Compliance with smokefree policies.

This intermediate outcome (Outcome 3) serves as a funnel between the long-term outcome and two short-term outcomes in the logic model of NTCP Goal Area 2:

- Outcome 1: Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
- Outcome 2: Implementation and enforcement of smokefree policies

The ESW understands that, based on the evidence, achieving these short-term and intermediate outcomes should lead to achieving the selected long-term outcome, as well as the distal outcomes of reducing tobacco-related morbidity and mortality and decreasing tobacco-related disparities. Again, to learn more about the outcomes identified in their backward review of the logic model, the ESW members review outcome component overviews, cited references, and materials recommended for further reading.

Step 3. Focus the evaluation

As part of focusing the evaluation, the ESW develops evaluation questions and selects indicators of progress toward selected short-term, intermediate, and long-term outcomes. To do this, they first identify a set of indicator selection criteria (e.g., overall quality, resources needed, strength of evaluation evidence, utility, face validity, and accepted practice) that are most important to the program given its stage of development.

Since the State Health Officer expressed an interest in this effort, the ESW wants to select indicators that have a high rating for face validity to policy makers. Also, given budget constraints, they want to emphasize efficient use of resources during the selection of indicators.

The program staff take this information and begin to look at the list of indicators associated with each selected outcome component (1, 2, and 3), beginning with Outcome 1. The staff examine the indicator rating table for Outcome 1 (page 27). By doing so, they can begin to assess which indicators meet the criteria selected by the ESW. In addition to reviewing the rating information, the program staff also read the information in the indicator profiles associated with outcome component 1 (pages 28–44).

To finalize indicator selection, the program staff present the summarized information to the ESW for consideration and decision-making.

Step 4. Planning for gathering credible evidence

The ESW plans for gathering credible evidence by reflecting on the evaluation purpose, the logic model and program description, the stage of development of the program, and the evaluation questions. Given the limited resources available, the group also considers the feasibility of the evaluation plan.

The ESW realizes that data collection for all of the indicators would be equally expensive if they were to design and implement a new survey. However, they realize that two indicators associated with outcome component 1 can be measured using the state Adult Tobacco Survey that they conduct regularly:

2.1.c Proportion of the population that thinks secondhand smoke is harmful;
2.1.d Level of support for adopting smokefree policies in public places and workplaces.

The planners and evaluators use the same process to select indicators for outcome components 2 and 3:

- 2.2.a Proportion of jurisdictions with comprehensive smokefree policies for indoor public places;
- 2.2.c Proportion of the employed population covered by a workplace smokefree policy;
- 2.3.a Compliance with smokefree policies in public places and workplaces.

Step 5. Planning for conclusions

As part of their comprehensive tobacco prevention and control program, based on the goals and objectives of the initiative and the strength of the core components of the comprehensive program infrastructure, the program planners select and design evidence-based interventions that decrease availability of tobacco to young people.

The program staff implement the intervention activities and work with the ESW to monitor continuously (1) whether the activities are being implemented as intended and (2) the extent to which the program is reaching its target audiences.

To assist in coordinating program and evaluation planning, the program staff and ESW translate indicators into SMART program objectives. For example, for Indicator 2.2.a (Proportion of jurisdictions with comprehensive smokefree policies for indoor public places), they create the following objective: Increase the proportion of jurisdictions with comprehensive smokefree policies for indoor public places from 40% in July 2016 to at least 60% in June 2017.

As data are collected and shared with the program, the ESW is engaged once again to plan for analysis and interpretation. With an appreciation for the compressed project timeline, the program staff and ESW coordinate to develop a feasible plan that will best support program improvement. Additionally, during this phase, the ESW identifies key contextual information that will be needed to ensure that the evaluation results can be meaningfully interpreted. A date is set to reconvene with the purpose of reviewing interim data and assisting with the interpretation process to justify the evaluation conclusions.

Step 6. Planning for dissemination and sharing of lessons learned

To prepare for release of evaluation findings, program staff and ESW carefully consider how, when, and to whom information will be shared. Given the focus on program development and improvement, information regarding performance and identified gaps will be shared throughout implementation with program staff, community partners and clients. Reporting of this information will be tailored so that it is most useful to the target audience. Additionally, a plan is developed for creation of a document to engage the State Health Officer and other health department decision makers. This document is intended to be succinct and graphic and to highlight the program's impact on public health outcome indicators. The graphic Goal 2 logic model is used as a framing device to present information on selected indicators. Additionally, information is included tracking change over time and comparing data with those from similar states.

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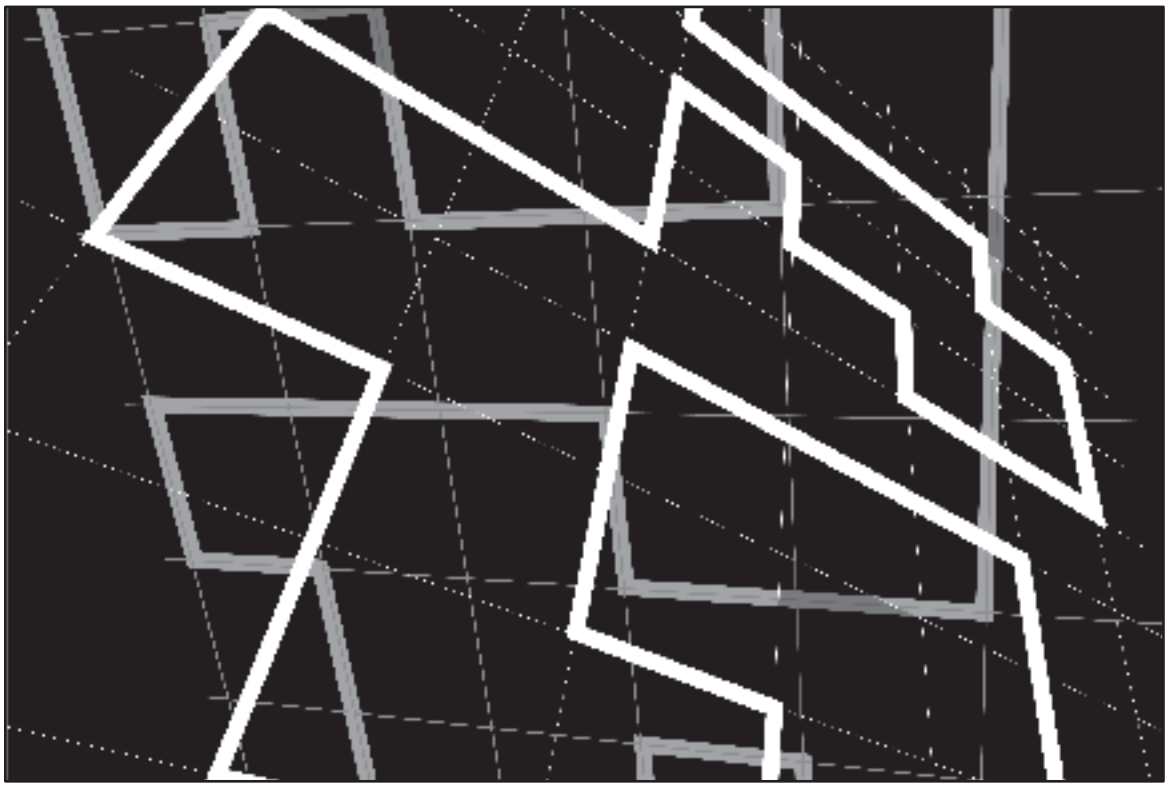
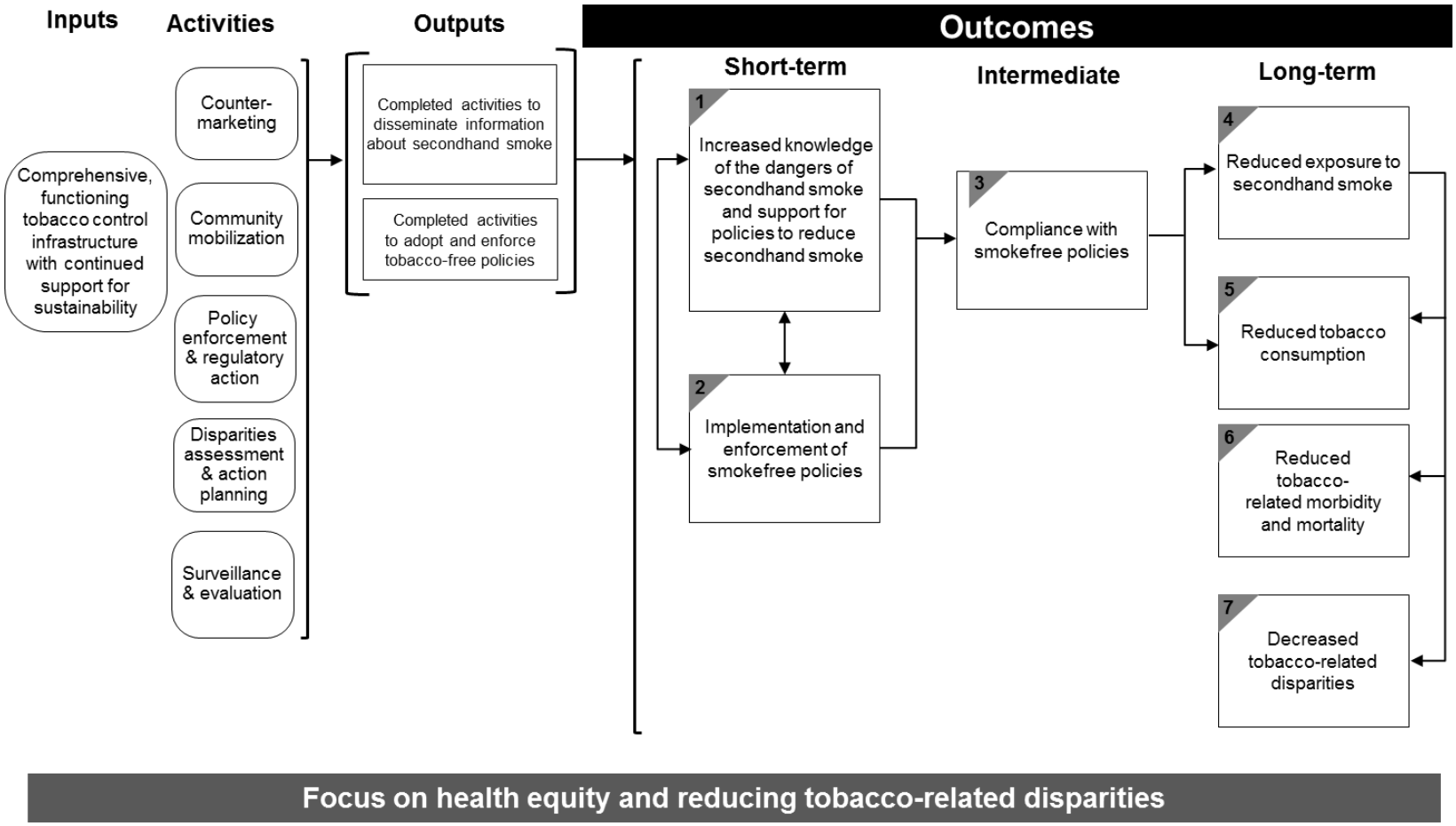
Goal Area 2: Eliminating Exposure to Secondhand Smoke



Eliminating Exposure to Secondhand Smoke



Goal Area 2

Eliminating Exposure to Secondhand Smoke

Short-term Proposed Indicators

- **Outcome 1: Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke**
  - **2.1.a** Level of awareness of media messages on the dangers of secondhand smoke
  - **2.1.b** Level of receptivity to media messages about secondhand smoke
  - **2.1.c** Proportion of the population that thinks secondhand smoke is harmful
  - **2.1.d** Level of support for adopting smokefree policies in public places and workplaces
  - **2.1.e[NR]** Level of support for adopting tobacco-free policies in childcare settings, schools, or school districts
  - **2.1.f[NR]** Level of support for adopting tobacco-free policies on college campuses
  - **2.1.g** Level of support for adopting smokefree rules for homes or vehicles

- **Outcome 2: Implementation and enforcement of smokefree policies**
  - **2.2.a** Proportion of jurisdictions with comprehensive smokefree policies for indoor public places
  - **2.2.b** Proportion of jurisdictions with smokefree policies for outdoor public places
  - **2.2.c[NR]** Proportion of the employed population covered by a workplace smokefree policy
  - **2.2.d** Proportion of the population that lives in a jurisdiction with comprehensive smokefree policies
  - **2.2.e** Proportion of childcare settings, schools, school districts, or college campuses with 100% tobacco-free policies
  - **2.2.f** Proportion of the population reporting 100% smokefree rules for homes or vehicles
  - **2.2.g** Proportion of jurisdictions that have enacted laws prohibiting smoking in multiunit housing
  - **2.2.h** Proportion of public housing authorities that have adopted smokefree policies in all of their buildings
  - **2.2.i** Proportion of multiunit housing operators that have adopted a smokefree policy in their buildings
  - **2.2.j** Proportion of multiunit housing residents living in smokefree buildings
  - **2.2.k** Number and type of enforcement actions issued regarding smokefree policies
  - **2.2.l** Proportion of states with tobacco control laws that preempt local smokefree policies

Intermediate Proposed Indicators

■ Outcome 3: Compliance with smokefree policies

- ► **2.3.a** Compliance with smokefree policies in public places and workplaces
- ► **2.3.b** Compliance with tobacco-free policies in childcare settings, schools or school districts, and college campuses
- ► **2.3.c**[NR] Compliance with smokefree policies in multiunit housing
- ► **2.3.d** Compliance with 100% smokefree rules for homes
- ► **2.3.e** Compliance with smokefree rules for vehicles

Long-term Proposed Indicators

■ Outcome 4: Reduced exposure to secondhand smoke

- ► **2.4.a** Proportion of nonsmokers exposed to secondhand smoke
- ► **2.4.b** Proportion of the employed population exposed to secondhand smoke in the workplace
- ► **2.4.c** Proportion of the population exposed to secondhand smoke in indoor public places
- ► **2.4.d** Proportion of the population exposed to secondhand smoke in outdoor public places
- ► **2.4.e**[NR] Proportion of children, youth, and young adults exposed to secondhand smoke in childcare or school settings
- ► **2.4.f**[NR] Proportion of students, faculty, and staff exposed to secondhand smoke on college campuses
- ► **2.4.g** Proportion of multiunit housing residents exposed to secondhand smoke in their homes from nearby units or shared areas
- ► **2.4.h** Proportion of the population exposed to secondhand smoke originating in their homes
- ► **2.4.i** Proportion of the population exposed to secondhand smoke in vehicles

■ Outcome 5: Reduced tobacco consumption

- ► **2.5.a** Per capita consumption of tobacco products
- ► **2.5.b** Average number of each tobacco product used per day by tobacco users
- ► **2.5.c** Tobacco use prevalence
- ► **2.5.d** Proportion of young people who have never tried a tobacco product
- ► **2.5.e** Proportion of tobacco users who have sustained abstinence from tobacco use

[NR] Denotes an indicator that is not rated (see Appendix C for an explanation).

The table below summarizes changes made to Goal 2 indicators since KOI 2005. As shown, we deleted 5 KOI 2005 indicators, revised the titles of 22 KOI 2005 indicators, and added 13 new indicators. Indicator deletions were based on changes in the tobacco control landscape and scientific evidence base that made a subset of the previous indicators obsolete or unwarranted. Indicator additions were used to fill gaps created where new evidence demonstrated the utility of certain constructs to measure outcomes that had no existing indicators. Title revisions were made to enhance the utility of indicators for state comprehensive tobacco prevention and control programs.

2017 Revised and 2005 KOI Goal 2 Indicators Crosswalk

Revised Indicator Number	Original KOI Number	Revised Title
Outcome 1		
2.1.a	2.3.1	✓
2.1.b	2.3.2	
2.1.c	2.3.5	
Deleted	2.3.3	
Deleted	2.3.4	
Deleted	2.3.6	
2.1.d	2.3.7	✓
2.1.e[NR]	2.3.10[NR]	✓
2.1.f[NR]	**New**	
2.1.g	2.3.8	✓
Deleted	2.3.9	
Outcome 2		
2.2.a	2.4.1	✓
2.2.b	**New**	
2.2.c[NR]	2.4.2	✓
2.2.d	2.4.3	✓
2.2.e	2.4.5	✓
2.2.f	2.4.4	✓
2.2.g	**New**	
2.2.h	**New**	
2.2.i	**New**	
2.2.j	**New**	
2.2.k	2.5.1, 2.5.2, 2.5.3	✓
2.2.l	2.4.6	✓

2017 Revised and 2005 KOI Goal 2 Indicators Crosswalk (continued)

Revised Indicator Number	Original KOI Number	Revised Title
Outcome 3		
2.3.a	2.6.1, 2.6.2	✓
Deleted	2.6.3	
2.3.b	2.6.5	✓
2.3.c[NR]	**New**	
2.3.d	2.6.4	✓
2.3.e	2.6.4	✓
Outcome 4		
2.4.a	2.7.5	✓
2.4.b	2.7.1	✓
2.4.c	2.7.2	✓
2.4.d	**New**	
2.4.e[NR]	2.7.4	✓
2.4.f[NR]	**New**	
2.4.g	**New**	
2.4.h	2.7.3	✓
2.4.i	**New**	
Outcome 5		
2.5.a	2.8.1	
2.5.b	2.8.2	✓
2.5.c	2.8.3	✓
2.5.d	**New**	
2.5.e	**New**	

[NR] Denotes an indicator that is not rated (see Appendix C for more information).

Outcome 1

Increased Knowledge of the Dangers of Secondhand Smoke and Support for Policies to Reduce Secondhand Smoke

In the logic model for Goal 2 (eliminating exposure to secondhand smoke), the outcomes path starts with increasing knowledge of the dangers of secondhand smoke and support for smokefree policies. Long-term monitoring of indicators in this outcome box provides evidence for changes in social norms about the acceptability of exposing others to secondhand smoke and support for smokefree policies. Evaluation of public knowledge of the dangers of secondhand smoke and support for smokefree policies continues to be important after policies are adopted to facilitate implementation and compliance. Education efforts about the harmful effects of secondhand smoke can promote norms about the acceptability of smoking, increase support for smokefree policies, ease policy enforcement efforts, and can draw attention to areas not yet covered by smokefree policies.[1-2]

Practice-based evidence suggests that interventions intended to increase knowledge of and support for smokefree policies can inform the policy implementation process.[3-5] As the number of smokefree laws and voluntary policies has grown, support for those policies has increased significantly, even among cigarette smokers.[6] Furthermore, many jurisdictions have made steady progress in achieving smokefree policies in indoor public spaces, including worksites, restaurants, and bars. However, many states and localities do not have such policies; moreover, the public is not fully protected yet in spaces such as college campuses, multiunit housing, and outdoor public areas. For initiatives intended to expand smokefree protections to these spaces, measuring knowledge of the dangers of secondhand smoke and support for smokefree policies can gauge the level of desire for smokefree policies and the initiative's effectiveness.[7-9]

The following indicators are associated with this outcome:

- **2.1.a** Level of awareness of media messages on the dangers of secondhand smoke
- **2.1.b** Level of receptivity to media messages about secondhand smoke
- **2.1.c** Proportion of the population that thinks secondhand smoke is harmful
- **2.1.d** Level of support for adopting smokefree policies in public places and workplaces
- **2.1.e** Level of support for adopting tobacco-free policies in childcare settings, schools, or school districts
- **2.1.f** Level of support for adopting tobacco-free policies on college campuses
- **2.1.g** Level of support for adopting smokefree rules for homes or vehicles

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Outcome 1

Increased Knowledge of the Dangers of Secondhand Smoke and Support for Policies to Reduce Secondhand Smoke

Indicator Rating
← ○ ◒ ◒ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.1.a	Level of awareness of media messages on the dangers of secondhand smoke		$$	◒	◒	◒	●
2.1.b	Level of receptivity to media messages about secondhand smoke		$$	◒	◒	◒	●
2.1.c	Proportion of the population that thinks secondhand smoke is harmful		$$	●	●	●	●
2.1.d	Level of support for adopting smokefree policies in public places and workplaces		$	●	●	●	●
2.1.e[NR]	Level of support for adopting tobacco-free policies in childcare settings, schools or school districts	⊘	⊘	⊘	⊘	⊘	⊘
2.1.f[NR]	Level of support for adopting tobacco-free policies on college campuses	⊘	⊘	⊘	⊘	⊘	⊘
2.1.g	Level of support for adopting smokefree rules for homes or vehicles		$	●	●	●	●

$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but are instead a relative measure of expert reviewers' ratings regarding resources required to collect and analyze data to measure the indicator.

⊘ Denotes no data.

NR Denotes an indicator that is not rated (see Appendix C for more information).

Indicator 2.1.a

Level of Awareness of Media Messages on the Dangers of Secondhand Smoke

Indicator	2.1.a
KOI 2005	2.3.1
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Level of aided, unaided, or confirmed awareness of media messages about the dangers of secondhand smoke among the target population
Why this indicator is useful	Evaluating awareness of messages is critical to understanding the behavioral effects of anti-tobacco advertising on target populations and should be used to guide health communication planning.[1] Research has shown that increasing awareness through media messages can increase support for smokefree policies.[1,2]
Example data source(s)	**Centers for Disease Control and Prevention (CDC) 2014 *Tips From Former Smokers* (*Tips*) Campaign, Pilot Campaign Survey** Information available at: http://www.cdc.gov/tobacco/campaign/tips/. **Evaluation of the National Tobacco Prevention and Control Public Education Campaign, Wave 2 Smoker Follow-up Questionnaire, 2014 (NTP)** Information available at: http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201411-0920-011&icID=210357. **Maine Center for Public Health "Wherever You Live and Breathe, Go Smoke-free" Media Campaign Evaluation Survey, 2010** Information available at: http://www.tobaccofreemaine.org/channels/communities/documents/Overview.pdf
Population group(s)	General population
Example survey question(s)	**Aided awareness** ***Television*** **From NTP** Now we would like to show you some screenshots from a television advertisement that has been shown in the U.S. Once you have viewed the images displayed below, please click on the forward arrow below to continue with the survey. [Display images for ad] Have you seen this ad on television in the past 3 months? • Yes • No ***Marketing Collateral*** Have you recently seen a business card size handout from the Healthy Maine Partnerships and the Maine Center for Disease Control and Prevention? • Yes • Maybe, not sure • No

Unaided awareness

Modified from New York and Florida ATS items

In the past month, do you remember seeing, hearing, or reading any TV, radio, newspaper, or online advertising about a [campaign describing the dangers of secondhand smoke]?

- Yes
- No
- Don't know/Not sure
- Refused

What can you tell me about this/these [advertisements]? Please describe for me anything specific you saw, heard, or read in the [advertisements].

What [were] the [advertisements] about?

What was the name of the program mentioned in the [advertisements]?

Have you recently seen any anti-tobacco or antismoking ads on television [or other relevant medium of interest]?

What happened in the ad(s)?[3,4]

Confirmed awareness

Radio

From Maine SHS Media Survey

Have you recently heard an anti-tobacco or antismoking advertisement on the radio that begins with [describe portion of ad]?

- Yes
- Maybe, not sure
- No

Can you describe what happens in this advertisement?

[Code open-ended responses to determine confirmed awareness]

Comments

Media messages should be pretested for credibility, resonance, and receptivity with the target audience before implementation.

Evaluators should select survey items appropriate to the communication medium used in their intervention efforts (e.g., television, radio, online, out-of-home, print). To allow greater variation in responses and provide for dose-response analyses, evaluators may wish to determine frequency of exposure by asking how often the respondent saw or heard messages.

Individual-level awareness and recognition of advertisements can be measured in three ways: *aided awareness, unaided awareness*, and *confirmed awareness*. *Aided awareness* is also referred to as recognition or encoded exposure in the health communication research literature. *Aided awareness* items consist of an interviewer providing respondents with a verbal description of an ad's content in phone interviews, or respondents watching or listening to all or part of an advertisement during in-person or online interviews. The respondent is then asked whether they recognize the ad. *Unaided awareness* items provide little or no cues about the content of an advertisement and require the respondent to describe the details of an ad from memory. *Confirmed awareness* items provide a brief description of an ad (or show stills of an ad if the survey is conducted online) and then ask the respondent to provide additional details about the message.

Each awareness item captures different information. For example, *aided awareness* helps determine specific campaign and ad awareness,[5] whereas *unaided awareness* allows for tracking which campaign messages are most prominent in the minds of the target population. When selecting an awareness item, consider the type of information to be captured and data collection mode. Online administration of surveys allows

advertisements and other materials (e.g., Web site banner ads, television ads) to be shown directly to survey respondents, rather than relying on crude interviewer descriptions of advertisements as in phone interviews. Examples of each type of measure are included in "Example Survey Question(s)" above.

For *aided awareness* items, evaluators may choose to include decoy responses to determine "yea-saying" bias. Research has questioned the marginal utility of *confirmed awareness* items compared with aided awareness measures, and given the extra respondent and interviewer burden of open-ended *confirmed awareness* items, aided awareness measures may be preferable.[6]

Evaluators can work closely with media campaign managers to (1) develop a separate series of questions for each main media message, and (2) coordinate data collection with the timing of the media campaign.[7]

This indicator may be used in conjunction with E-Cigarette 2.1, which measures perceived harm from secondhand aerosol.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	◒	◒	◒	●

← ○ ◒ ◒ ● → better

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Indicator 2.1.b

Level of Receptivity to Media Messages about Secondhand Smoke

Indicator	2.1.b
KOI 2005	2.3.2
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Level of receptivity to media messages by the intended audience. Receptivity is generally defined as the extent to which people are willing to listen to a persuasive message. For tobacco public education campaigns, the intended audience's perceptions regarding the effectiveness of advertisements have been widely used in formative and outcome evaluation. See "Comments" below for more information.
Why this indicator is useful	Message awareness is necessary but not sufficient to change knowledge of and attitudes toward secondhand smoke and smokefree policies. Media messages are effective only if they reach and resonate with the intended audience.[1,2] Message receptivity measures have been shown to predict changes in attitudes toward social issues.[1-6] Well-received messages help ensure campaign effectiveness.[3,7-9] Measures to gauge the perceived persuasiveness of messages, perceptions of the salience of the messages, and other general impressions about the campaign can be employed. These indicators are an important tool for assessing the likelihood of success of potential health messages before a campaign is aired, especially when large-scale efficacy pretesting for behavioral impacts is impractical.[10] Empirical evidence indicates that measures of media message receptivity predict changes in attitudes, such as increased perceived benefits of quitting and intentions to quit; these measures also predict changes in behaviors, such as increased quit attempts and decreased cigarette consumption.[3,4,6,9-12]
Example data source(s)	**Evaluation of the National Tobacco Prevention and Control Public Education Campaign, Smoker Follow-up Questionnaire, 2014 (NTP)** Information available at: http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201411-0920-011&icID=210357.
Population group(s)	General population
Example survey question(s)	**From NTP** ***Perceived ad effectiveness:*** Now we would like to show you some screenshots from a television advertisement that has been shown in the U.S. Once you have viewed the images displayed below, please click on the forward arrow below to continue with the survey. [Display images for ad] Please tell us if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statements. This ad is worth remembering. This ad grabbed my attention. This ad is powerful. This ad is informative. This ad is meaningful to me. This ad is convincing. This ad is ridiculous.

This ad is terrible.

This ad was difficult to watch.

Negative emotional reaction:

On scale of 1 to 5, where 1 means "not at all" and 5 means "very", please indicate how much this ad made you feel…

- Sad
- Afraid
- Irritated
- Ashamed
- Discouraged
- Angry

Motivational reaction:

- Hopeful
- Motivated
- Understood

Would this ad make you want to encourage someone you care about to quit smoking?

- Yes
- No

Comments

Perceived effectiveness is a critical element of receptivity. Perceived effectiveness has been standardized and shown to be predictive of outcomes.[3] Other receptivity measures, such as negative emotion and motivational reaction, tend to be more content-specific and may be useful depending on the specific content of an advertisement.

Evaluators may want to assess media message receptivity by communication medium (e.g., television, social media, radio, billboard, print).

Evaluators should work closely with counter marketing campaign managers to

(1) develop a separate series of questions for each main media message,

(2) formatively test media messages, and

(3) coordinate data collection with the timing of the media campaign.[6]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	◒	◒	◒	●
		← ○ ◒ ◒ ● → better			

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1. National Cancer Institute. *The role of the media in promoting and reducing tobacco use. Tobacco Control Monograph No. 19*. NIH Publication No. 07-6242. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; June 2008.
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Indicator 2.1.c

Proportion of the Population that Thinks Secondhand Smoke Is Harmful

Indicator	2.1.c
KOI 2005	2.3.5
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Proportion of the population that believes exposure to secondhand smoke is harmful to health
Why this indicator is useful	The perception that secondhand smoke is harmful is associated with strong support for smokefree policies and action to reduce exposure to secondhand smoke.[1-4]
Example data source(s)	**Adult Tobacco Survey Questions (ATS), Core Survey, 2014** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm. **National Youth Tobacco Survey (NYTS), 2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	General population
Example survey question(s)	**From ATS** Do you think that breathing smoke from other people's cigarettes or from other tobacco products is… • Very harmful to one's health • Somewhat harmful to one's health • Not at all harmful to one's health • Don't know/Not sure • Refused **From NYTS** Do you think that breathing smoke from other people's cigarettes or other tobaccos products causes… • No harm • Little harm • Some harm • A lot of harm **From SCS-TC** Secondhand smoke seeping into apartment and condominium units is a health risk. • Strongly agree • Agree • Disagree • Strongly disagree • Don't know/Not sure

	In your opinion, how much does smoking in a car affect the health of children? Would you say…? • Not at all • A little bit • Somewhat • A lot • A great deal
Comments	In addition to the national example data sources included in this profile, local data sources may provide useful measures on perceived harms of secondhand smoke (e.g., Kentucky Health Issues Poll[5]). Evaluators may wish to ask about harm perceptions related to specific conditions linked to secondhand smoke exposure (e.g., sudden infant death syndrome, heart disease). Evaluators might also want to ask about perceptions of secondhand aerosol from electronic cigarettes or emerging combustible products. Evaluators might also ask specifically about perceptions of harmfulness of secondhand smoke to children and pregnant women, populations especially vulnerable to the harms of secondhand smoke.[6]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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1. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.
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Indicator 2.1.d

Level of Support for Adopting Smokefree Policies in Public Places and Workplaces

Indicator	2.1.d Level of support for adopting smokefree policies in public places and workplaces
KOI 2005	2.3.7
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Proportion of adults who support the creation of policies that restrict smoking in public places and workplaces
Why this indicator is useful	Strong public support for smokefree policies in public and workplaces increases the likelihood of adoption and compliance.[1-5]
Example data source(s)	**Adult Tobacco Survey Questions (ATS), Core Survey, 2014** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm. **Behavioral Risk Factor Surveillance System (BRFSS), Secondhand Smoke Module, 2011** Information available at: http://www.cdc.gov/brfss/. **California Adult Tobacco Survey (CATS) Questions, 2008** Information available at: https://www.cdph.ca.gov/data/surveys/Pages/CaliforniaTobaccoSurveys.aspx.
Population group(s)	Adults aged 18 or older
Example survey question(s)	**From ATS** Should smoking indoors in bars, casinos, or clubs: • Always be allowed • Be allowed only at some times or in some places • Never be allowed • Don't know/Not sure • Refused **From BRFSS** At workplaces, do you think smoking indoors should be: • Always allowed • Allowed only at some times or in some places • Never allowed **From CATS** Smoking should not be allowed at a public beach. • Agree • Disagree • Don't know/Not sure • Refused

	Smoking should not be allowed in outdoor entertainment areas, such as amusement parks, zoos, and fairgrounds. • Agree • Disagree • Don't know/Not sure • Refused
Comments	These example questions could also be asked of decision makers, employers, opinion leaders, or young people.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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1. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.
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Indicator 2.1.e[NR]

Level of Support for Adopting Tobacco-Free Policies in Childcare Settings, Schools, or School Districts

Indicator	2.1.e[NR]
KOI 2005	2.3.10[NR]
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Proportion of adults who support adopting tobacco-free policies in childcare settings, schools, or school districts
Why this indicator is useful	Tobacco-free policies in youth-oriented settings, such as childcare centers and schools, play an important role in shaping tobacco-free norms and reducing secondhand smoke exposure among youth.[1-3] Strong tobacco-free school policies require support from parents, school officials, and the general public for adoption and enforcement.[1,2] Tobacco-free policies restrict the use of combustible, noncombustible, and electronic tobacco products.
Example data source(s)	**Adult Tobacco Survey Questions (ATS), Core Survey, 2012** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm. **Social Climate of Tobacco Control Survey (SCS-TC), 2008** Information available at: http://www.socialclimate.org/.
Population group(s)	Adults aged 18 or older
Example survey question(s)	**From ATS** Should tobacco use be completely banned on school grounds, including fields and parking lots, and at all school events, even for teachers and other adults? • Yes • No • Don't know/Not sure • Refused **From SCS-TC** In the following places, do you think that smoking should be allowed in all areas, some areas, or not allowed at all? In daycare centers • All areas • Some areas • Not at all • Don't know • Refused

Comments	Evaluators may want to analyze the level of support for creating tobacco-free policies in childcare settings and schools/school districts, based on the smoking status of the respondent. This indicator corresponds to the Healthy People 2020 objective TU-15: "Increase tobacco-free environments in schools, including all school facilities, property, vehicles, and school events (i.e., for junior high, middle school, high school, Head Start)."[4]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
⊘	⊘	⊘	⊘	⊘	⊘
			← ○ ◒ ◓ ● → better		

References

1. U.S. Department of Health and Human Services. *Preventing tobacco use among youth and young adults: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Centers for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.
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Indicator 2.1.f[NR]

Level of Support for Adopting Tobacco-Free Policies on College Campuses

Indicator	2.1.f
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Proportion of adults who support adopting tobacco-free policies on college campuses
Why this indicator is useful	Institutional policies are needed to protect students, faculty, staff, and visitors from secondhand smoke on college campuses.[1] Campus smokefree policies are associated with reduced student smoking rates and fewer students reporting exposure to secondhand smoke on campus.[2-3] Student, faculty, and staff support for tobacco-free campus policies may increase the likelihood that policies are adopted on campus.[4-5]
Example data source(s)	**Adult Tobacco Survey Questions (ATS), 2012** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm. **Harvard School of Public Health College Alcohol Study (CAS)**[6] Information available at: http://tobaccocontrol.bmj.com/content/12/3/251.full.
Population group(s)	Adults aged 18 or older
Example survey question(s)	**From ATS** Please tell me if you think smoking should be allowed or not allowed in each of the following places… • On-campus student housing at public colleges or universities **From CAS** To what extent do you support or oppose the following possible school policies about smoking? Prohibit smoking in all campus buildings • Strongly support • Oppose • Strongly oppose
Comments	Tobacco-free policies restrict the use of combustible, noncombustible, and electronic tobacco products on campus grounds. Evaluators may want to analyze the level of support for adopting tobacco-free policies on college campuses based on the smoking status of the respondent.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
⊘	⊘	⊘	⊘	⊘	⊘
			← ○ ◒ ◓ ● → better		

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Indicator 2.1.g

Level of Support for Adopting Smokefree Rules for Homes or Vehicles

Indicator	2.1.g
KOI 2005	2.3.8
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 1	Increased knowledge of the dangers of secondhand smoke and support for policies to reduce secondhand smoke
What to measure	Proportion of the population that supports smokefree rules that restrict the use of tobacco products in homes and vehicles
Why this indicator is useful	Public support is necessary for advancing home and vehicle smokefree rules to protect nonsmokers from exposure to secondhand smoke. Public support data can also help document shifts in social norms before and after a policy is implemented.[1] Studies show that the majority of adults support smokefree home and vehicle rules, particularly when children are present.[2-5]
Example data source(s)	**Golden Valley, MN, survey**[6] **National Youth Tobacco Survey Questionnaire (NYTS), 2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/. **New York Adult Tobacco Survey (NY ATS), 2009** Information available at:https://health.data.ny.gov/Health/Adult-Tobacco-Survey-Beginning-2003/ckfz-a669/data **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/. **Tobacco Use Supplement to the Current Population Survey (TUS-CPS), 2010–2011** Information available at: http://appliedresearch.cancer.gov/tus-cps/.
Population group(s)	General population
Example survey question(s)	**Example item from Golden Valley, MN, survey**[6] What is your preference for a smoking policy in your apartment building? • Strongly prefer a policy making it a smoke-free building • Somewhat prefer a policy making it a smoke-free building • No preference • Somewhat prefer having no rules about smoking in the building • Strongly prefer having no rules about smoking in the building **From NYTS** In your opinion, inside your home, smoking tobacco products should: • Always be allowed • Be allowed only at some times or in some places • Never be allowed In your opinion, in their vehicles, people should: • Always allow smoking • Sometimes allow smoking • Never allow smoking

From NY ATS

- What is your opinion about policies that ban smoking in apartment buildings, condominiums, and other multiunit complexes, including indoor areas, private balconies and patios? Are you:
- Strongly in favor
- Somewhat in favor
- Neither in favor nor against
- Somewhat against
- Strongly against

From SCS-TC

In your opinion, should smoking be allowed in residents' apartments/condos?

- Yes
- No

In your opinion, should smoking be allowed in indoor common hallways/stairways of apartment/condo buildings?

- Yes
- No

In your opinion, should smoking be allowed in outdoor common areas (benches, doorways, parking lots) of apartment buildings?

- Yes
- No

In your opinion, should smoking be allowed on private apartments' balconies/patios?

- Yes
- No

In your opinion, should tenants in apartment buildings, duplexes, and attached condos be informed on the lease agreement whether smoking is allowed in any unit or common areas inside the building?

- Strongly agree
- Agree
- Disagree
- Strongly disagree

From TUS-CPS

Inside a car, when there are other people present, do you THINK that smoking SHOULD:

- Always be allowed
- Be allowed under some conditions, or
- Never be allowed?

Comments

Evaluators may want to analyze the level of support for creating smokefree policies in homes and vehicles based on the smoking status of the respondent.

This indicator can be used to measure support for voluntary rules and more formal policies. The questions asked should match the specific area addressed by the policy. For example, if the policy would make residential units, balconies, and common areas smokefree, the items should measure support for smokefree policies in these areas.

Rating	Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
		$	●	●	●	●
			← ○ ◒ ◒ ● → better			

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Outcome 2

Implementation and Enforcement of Smokefree Policies

Creating smokefree policies in indoor public places, including worksites, restaurants, and bars, protects youth and nonsmoking adults from involuntary exposure to secondhand tobacco smoke, reduces the prevalence of tobacco use, increases tobacco cessation, and reduces youth initiation of tobacco use.[1-3] These smokefree policies also have immediate benefits of reducing tobacco-related morbidity and mortality, such as those due to acute cardiovascular events and asthma.[1-3] A preponderance of studies indicate no negative economic effects from smokefree policies governing hospitality venues.[2,4] Smokefree home and vehicle rules protect children from the health hazards of secondhand smoke exposure and reinforce anti-tobacco social norms that prevent tobacco use in the future.[2,4]

Smokefree policies may be implemented by governments (through legislation or regulation), individual employers or businesses, or private citizens (e.g., no-smoking rules in homes and vehicles). In addition, comprehensive smokefree laws can also occur at the local level. Preemptive state laws, however, can restrict the authority of local governments to adopt policies or otherwise act on an issue, which can halt tobacco control progress in a state.[5] Although some states have successfully repealed smokefree indoor air preemption, preemption has stalled secondhand smoke protections for workers and the public.[6,7] Where state law preempts stronger local laws, the private sector can adopt voluntary smokefree policies in workplaces, employer campuses, and multiunit housing.

The number of smokefree policies covering public and private indoor venues has increased considerably over the past two decades.[8] However, smokefree policies vary by region, disproportionately impact racial and ethnic minorities, and can contribute to disparities in health outcomes.[9,10] No southern state has comprehensive, statewide smokefree laws prohibiting smoking in all indoor areas of worksites, restaurants, and bars.[11,12] More than one in five adults still report secondhand smoke exposure at work, especially racial and ethnic minorities and those of low socioeconomic status.[9] Smokefree policies in multiunit housing, which are especially important to protect children and the elderly, and those with chronic health conditions, have broad popular support and are increasing in number with encouragement from the U.S. Department of Housing and Urban Development.[13-15] However, low-income housing may be less likely to have written policies that can be enforced,[16] and voluntary policies may be less common among rural residents, veterans, low-income populations, or residents of states without comprehensive laws covering public places.[16-22] Additional vulnerable populations include those with mental health or substance use disorders; smokefree policies in prisons and treatment facilities have positive health effects but are not yet uniformly implemented.[2,23]

Enforcement of smoke-free policies is critical for their benefits to be realized.[4] It is important to dedicate adequate resources to ensuring clear enforcement powers and following up on violations.[1,25-26] Tracking violations of existing policy can help monitor compliance trends, determine where additional education or enforcement is warranted, and evaluate a policy's success.[28] In addition, tracking public complaints regarding smoking exposure in certain settings or for certain products not covered under existing laws may help inform future policy implementation.

Smokefree policies have been scientifically shown to be effective in reducing secondhand smoke exposure, cost-effective, feasible, and broadly supported by the public.[1,2,4] The dangers of secondhand smoke are well-researched and well-known, and the growth and increased knowledge has helped to reduce the level of acceptability of smoking in public places and workplaces.[29,30]

The following indicators are associated with this outcome:

- **2.2.a** Proportion of jurisdictions with comprehensive smokefree policies for indoor public places
- **2.2.b** Proportion of jurisdictions with smokefree policies for outdoor public places
- **2.2.c** Proportion of the employed population covered by a workplace smokefree policy
- **2.2.d** Proportion of the population that lives in a jurisdiction with comprehensive smokefree policies
- **2.2.e** Proportion of childcare settings, schools, school districts, or college campuses with 100% tobacco-free policies
- **2.2.f** Proportion of the population reporting 100% smokefree rules for homes or vehicles
- **2.2.g** Proportion of jurisdictions that have enacted laws prohibiting smoking in multiunit housing
- **2.2.h** Proportion of public housing authorities that have adopted smokefree policies in all of their buildings
- **2.2.i** Proportion of multiunit housing operators that have adopted a smokefree policy in their buildings
- **2.2.j** Proportion of multiunit housing residents living in smokefree buildings
- **2.2.k** Number and type of enforcement actions issued regarding smokefree policies
- **2.2.l** Proportion of states with tobacco control laws that preempt local smokefree air laws

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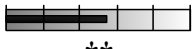
Outcome 2

Implementation and Enforcement of Smokefree Policies

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.2.a	Proportion of jurisdictions with comprehensive smokefree policies for indoor public places		$$	●	●	●	●
2.2.b (New)	Proportion of jurisdictions with smokefree policies for outdoor public places		$$	◒	◒	●	●
2.2.c[NR]	Proportion of the employed population covered by a workplace smokefree policy	⊘	⊘	⊘	⊘	⊘	⊘
2.2.d	Proportion of the population that lives in a jurisdiction with comprehensive smokefree policies		$$	●	●	●	●
2.2.e	Proportion of childcare settings, schools, school districts, or college campuses with 100% tobacco-free policies		$$$	◒	●	●	●
2.2.f	Proportion of the population reporting 100% smokefree rules for homes or vehicles		$	●	●	●	●
2.2.g (New)	Proportion of jurisdictions that have enacted laws prohibiting smoking in multiunit housing		$$	●	●	●	●
2.2.h (New)	Proportion of public housing authorities that have adopted smokefree policies in all of their buildings		$	●	●	●	●
2.2.i (New)	Proportion of multiunit housing operators that have adopted a smokefree policy in their buildings		$$$	◒	◒	◒	◒
2.2.j (New)	Proportion of multiunit housing residents living in smokefree buildings		$$$	●	●	●	●

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.2.k	Number and type of enforcement actions issued regarding smokefree policies	 ††	$$	◒	◒	◒	◓
2.2.l	Proportion of states with tobacco control laws that preempt local smokefree air policies	 ††	$	●	●	●	●

$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but are instead a relative measure of expert reviewers' ratings regarding resources required to collect and analyze data to measure the indicator.

†† Denotes low agreement among reviewers, defined as less than 75% of valid ratings within ±2 point of the median for this indicator-specific criterion.

⦸ Denotes no data.

NR Denotes an indicator that is not rated (see Appendix C for an explanation).

Indicator 2.2.a

Proportion of Jurisdictions with Comprehensive Smokefree Policies for Indoor Public Places

Indicator	2.2.a
KOI 2005	2.4.1
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of local jurisdictions that have policies requiring smokefree workplaces, including restaurants and bars
Why this indicator is useful	Evidence shows that comprehensive policies and laws making indoor workplaces and public areas smokefree are highly effective in reducing exposure to secondhand smoke.[1-4] Eliminating smoking in indoor spaces is the only way to fully protect nonsmokers from exposure to secondhand smoke.[2] However, smokefree policy coverage varies across states and localities, leaving some U.S. populations less protected.[5]
Example data source(s)	**American Nonsmokers' Rights Foundation. Municipalities with local 100% smokefree laws currently in effect (updated quarterly)** Information available at: http://www.no-smoke.org/pdf/100ordlisttabs.pdf. **State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at: http://www.cdc.gov/statesystem/.
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, and regulations.
Example survey question(s)	Not applicable.
Comments	A comprehensive smokefree policy is defined by the Office on Smoking and Health (OSH) as a policy that does not allow smoking in any indoor areas of workplaces, restaurants, and bars, with no exceptions.[6] Evaluators may wish to expand the OSH definition of "comprehensive" to include, for example, casinos and other settings as appropriate. The term "jurisdiction" refers to sub-state geographic regions with defined legal authority, including municipalities, counties, and other incorporated areas. For states or jurisdictions that have already adopted comprehensive smokefree policies or for states or jurisdictions attempting to adopt comprehensive policies to include e-cigarettes, E-Cigarette 2.2 may serve as a "replacement" for Indicator 2.2.a. This indicator can be used to measure progress toward achieving Objective TU-13 of Healthy People 2020: "Establish laws in States, District of Columbia, Territories, and Tribes on smokefree indoor air that prohibit smoking in public places and worksites."[7]

Rating

Overall quality (low ⟷ high)	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	●	●	●
		← ○ ◒ ◓ ● → better			

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Indicator 2.2.b

Proportion of Jurisdictions with Smokefree Policies for Outdoor Public Places

Indicator	2.2.b
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of jurisdictions with policies prohibiting smoking in outdoor public places, such as beaches, parks, dining and bar patios, and in front of buildings
Why this indicator is useful	Although eliminating indoor secondhand smoke exposure is of paramount importance, outdoor exposure can also exceed safe limits, especially in hospitality settings, such as restaurant and bar outdoor eating areas, where smokers may be in close proximity to others.[1] Additionally, smokefree policies in outdoor places reinforce tobacco-free social norms.
Example data source(s)	**Americans for Nonsmokers' Rights (ANR), Smokefree Lists, Maps, and Data, Outdoor Areas** Information available at: http://www.no-smoke.org/goingsmokefree.php?id=519%20-%20outdoor#outdoor.
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, and regulations.
Example survey question(s)	Not applicable.
Comments	Outdoor smokefree policies help protect people from exposure to secondhand smoke in these environments and could help to denormalize smoking. This indicator focuses on more general outdoor spaces that would be affected by jurisdictional policy, such as at public parks, zoos, public transit waiting areas, playgrounds, beaches, within specific distances from public building entrances, and outdoor dining or patio areas of restaurants and bars. It is important to calculate the proportion of the population covered by such policies, so as not to underestimate the public health value of a small number of policies adopted in densely populated jurisdictions.[2] Note: Indicator 2.2.b measures jurisdictions with smokefree policies, whereas Indicator 2.2.e measures smokefree policies in school environments.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	◒	◒	●	●

← ○ ◒ ◒ ● → better

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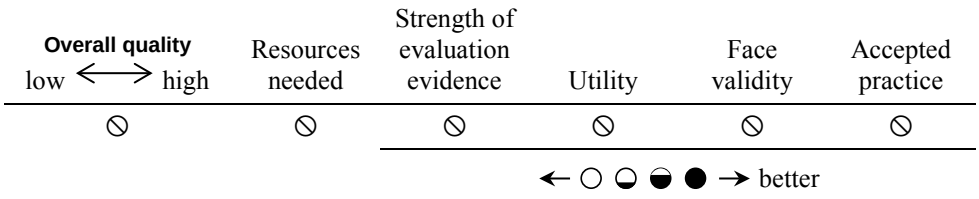
Indicator 2.2.c[NR]

Proportion of the Employed Population Covered by a Workplace Smokefree Policy

Indicator	2.2.c[NR]
KOI 2005	2.4.2
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of the employed population protected by smokefree policies
Why this indicator is useful	In addition to protecting nonsmokers from secondhand smoke, there is strong evidence that smokefree workplaces result in increased successful cessation among workers and help reduce tobacco initiation among youth.[1-4] This indicator is especially relevant for evaluation in states that exempt some workplaces from state smokefree air laws (e.g., casinos, hotels/motels). In some cases, individual employers may voluntarily institute smokefree policies on their premises.
Example data source(s)	**National Adult Tobacco Survey (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **National Youth Tobacco Survey (NYTS), 2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/.
Population group(s)	General population
Example survey question(s)	**From NATS** Are you currently working for pay or are you self-employed, either part-time or full-time? • Yes • No Now I'm going to ask you about smoke you might have breathed at work because someone else was smoking, either indoors or outdoors. During the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did you breathe the smoke at your workplace from someone other than you who was smoking tobacco? • _Number of Days • None • Don't know/Not sure At your workplace, is smoking….? • Allowed in both indoor and outdoor areas • Allowed in outdoor areas, but never allowed in any indoor areas • Allowed in indoor areas, but never allowed in any outdoor areas • Never allowed in any indoor or outdoor area • Don't know **From NYTS** During the past 7 days, on how many days did you breathe the smoke from someone who was smoking tobacco products in the place where you work? • I do not have a job • I did not work during the past 7 days • 0 days

	• 1 day • 2 days • 3 days • 4 days • 5 days • 6 days • 7 days
Comments	To measure this indicator, evaluators first need to establish the employment status of the respondent to be able to determine the denominator needed: the employed population. Then, evaluators should inquire about a smokefree policy at the respondent's workplace. Evaluators can tailor this indicator for certain settings, such as health care, behavioral health, and substance abuse facilities, that might choose voluntary smokefree policies where state-level comprehensive smokefree policies are not in place. Although the example items are from individual-level population surveys, these items can also be asked of employer representatives as part of a worksite survey.
Rating	

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2. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.
3. Guide to Community Preventive Services. *Reducing tobacco use and secondhand smoke exposure: smoke-free policies*. Available at: http://www.thecommunityguide.org/tobacco/smokefreepolicies.html. Last updated: September 22, 2014.
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Indicator 2.2.d

Proportion of the Population that Lives in a Jurisdiction with Comprehensive Smokefree Policies

Indicator	2.2.d
KOI 2005	2.4.3
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of people who live in a jurisdiction with a comprehensive smokefree policy (i.e., a policy that covers indoor worksites, restaurants, and bars)
Why this indicator is useful	Measuring this indicator helps clarify the reach of smokefree laws and policies and highlights differing levels of protection among population subgroups. For example, service and hospitality workers experience some of the greatest disparities in protection from secondhand smoke.[1]
Example data source(s)	**American Nonsmokers' Rights Foundation, Percent of U.S. State Populations Covered by 100% Smokefree Air Laws**, updated quarterly Information available at: http://www.no-smoke.org/pdf/percentstatepops.pdf. Evaluators can also estimate reach of smokefree policies by obtaining demographic data from the latest available U.S. census for a given jurisdiction.
Population group(s)	General population
Example survey question(s)	Not applicable
Comments	A comprehensive smokefree policy is defined by the Office on Smoking and Health (OSH) as a policy that does not allow smoking in any indoor areas of workplaces, restaurants, and bars, with no exceptions.[2] Evaluators may wish to expand the OSH definition of "comprehensive" to include, for example, casinos and other settings as appropriate. The term "jurisdiction" refers to sub-state geographic regions with defined legal authority, including municipalities, counties, and other incorporated areas. Evaluators may choose to gather data on the size and demographics of the population affected by the relevant laws or ordinances. Evaluators may also want to assess the proportion of the population that lives in a jurisdiction with a smokefree law that also prohibits the use of e-cigarettes in all smokefree environments. Hundreds of communities and several states now have these laws in place for their whole population, with additional municipalities and states considering such legislation. See the addendum indicator E-Cigarette 2.2 for more information.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	●	●	●
		← ○ ◒ ◒ ● → better			

References

1. Centers for Disease Control and Prevention. *Best practices user guide: health equity*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Available at: http://www.cdc.gov/tobacco/stateandcommunity/best-practices-health-equity/pdfs/bp-health-equity.pdf.
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Indicator 2.2.e

Proportion of Childcare Settings, Schools, School Districts, or College Campuses with 100% Tobacco-Free Policies

Indicator	2.2.e
KOI 2005	2.4.5
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of childcare facilities, schools, school districts, or college campuses (public/private) that report having a policy that prohibits anyone from using tobacco products, including combustible, noncombustible, and electronic products, at all times on facility grounds, at all school-sponsored functions, and in school vehicles
Why this indicator is useful	Children exposed to secondhand smoke are at increased risk for several adverse health conditions, including middle ear disease, respiratory symptoms, impaired lung function, lower respiratory illness, and sudden infant death syndrome.[1,2] Approximately half of 3- to 18-year-olds are exposed to secondhand smoke regularly.[1]
Example data source(s)	**Americans for Nonsmokers' Rights (ANR): Colleges and Universities with 100% Smokefree Policies, (Entire Campus, Indoors and Outdoors), 100% Tobacco-Free Policies, and E-cigarette-Free Policies**. Information available at: http://no-smoke.org/goingsmokefree.php?id=447. **Early Childhood Environment Rating Scale (ECERS), Health Practice Subscale** Information available at: http://ers.fpg.unc.edu/early-childhood-environment-rating-scale-ecers-r. **School Health Profiles (Profiles), 2014, Principal Questionnaire** Information available at: http://www.cdc.gov/healthyyouth/profiles/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/. **State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at: http://www.cdc.gov/statesystem/. **Tobacco-Free College Assessment Survey for Staff, Faculty, and Students (TFCAS), Wake Forest Baptist Health** Information available at: http://www.wakehealth.edu/uploadedFiles/User_Content/Research/Departments/Public_Health_Sciences/Tobacco_Free_Colleges/Tobacco-Free%20Manual_Appendix%207.pdf.
Population group(s)	School principals, superintendents, childcare facilities managers, and college/university health representatives
Example survey question(s)	**From ECERS** Smoking is allowed in child care areas, either indoors or outdoors. • Yes • No **From Profiles** Has your school adopted a policy prohibiting tobacco use? • Yes • No

Does the tobacco-use prevention policy specifically prohibit tobacco use in each of the following locations for each of the following groups? (Mark yes or no for each location for each group.)
Students, Faculty/Staff, Visitors

- In school buildings
- Outside on school grounds, including parking lots and playing fields
- On school buses or other vehicles used to transport students
- At off-campus, school-sponsored events

Does the tobacco-use prevention policy specifically prohibit use of each type of tobacco for each of the following groups during any school-related activity? (Mark yes or no for each type of tobacco for each group.)
Students, Faculty/Staff, Visitors

- Cigarettes
- Smokeless tobacco (i.e., chewing tobacco, snuff, or dip)
- Cigars
- Pipes

From SCS-TC

Which of the following best describes your school's official smoking policy for indoor areas…?

- Smoking is not allowed in any area.
- It is allowed in some areas.
- It is allowed in all areas.
- There is no official policy.

From TFCAS

What is the current written policy on tobacco use at this college?

- Prohibits only smoking inside buildings
- Prohibits only smoking outdoors
- Prohibits all tobacco use
- No written tobacco-use policy
- I do not know

Comments

An alternative to survey data for this indicator is the collection and scoring of actual written policies from schools, school districts, universities, or childcare settings. Evaluators can maintain their own database with the written policies to assess their comprehensiveness. ANR tracks colleges and universities with 100% tobacco-free policies.

To calculate the proportion of childcare settings, schools, school districts, or college campuses with 100% tobacco-free policies, evaluators will have to determine the denominator. For example, the number of school districts may need to be obtained from the U.S. Department of Education. This indicator can be used to measure progress toward achieving Objective TU-15 of Healthy People 2020: "Increase tobacco-free environments in schools, including all school facilities, property, vehicles, and school events (i.e., for junior high, middle school, high school, Head Start)."[3]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$$	◒	●	●	●
		← ○ ◒ ◒ ● → better			

References

1. U.S. Department of Health and Human Services. *The health consequences of smoking—50 years of progress. A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Available at: http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf.
2. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.
3. Healthy People 2020. *Tobacco use objectives*. Available at: http://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use/objectives.

Indicator 2.2.f

Proportion of the Population Reporting 100% Smokefree Rules for Homes or Vehicles

Indicator	2.2.f
KOI 2005	2.4.4
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of adults who report 100% smokefree rules in their homes or vehicles, whether voluntary or because of a public policy
Why this indicator is useful	An estimated 15 million U.S. children were exposed to secondhand smoke during 2011–2012.[1] Smokefree home policies reduce children's exposure to secondhand smoke, reduce adult smoking, and decrease youth experimentation with cigarettes.[2-4]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS), 2011 Secondhand Smoke Module** Information available at: http://www.cdc.gov/brfss/. **National Adult Tobacco Survey Questionnaire (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/. **Tobacco Use Supplement to the Current Population Survey (TUS-CPS), 2010–2011** Information available at: http://appliedresearch.cancer.gov/tus-cps/
Population group(s)	General population
Example survey question(s)	**From BRFSS** Not counting motorcycles, in the vehicles that you or family members who live with you own or lease, is smoking…? • Always allowed in all vehicles • Sometimes allowed in at least one vehicle • Never allowed in any vehicle Not counting decks, porches, or garages, inside your home, is smoking…? • Always allowed • Allowed only at some times or in some places • Never allowed **From NATS** Not counting decks, porches, or garages, inside your home, is smoking …? • Always allowed • Allowed only at some times or in some places • Never allowed • Don't know/Not sure • Refused Not counting motorcycles, in the vehicles that you or family members who live with you own or lease, is smoking…? • Always allowed • Sometimes allowed in at least one vehicle

- Never allowed in any vehicle
- Respondent's family does not own or lease a vehicle
- Don't know/Not sure
- Refused

From SCS-TC

Which statement best describes the rules about smoking in your home…?

- No one is allowed to smoke anywhere
- Smoking is permitted in some places or at some times
- Smoking is permitted anywhere

From TUS-CPS

Which statement best describes the rules about smoking inside your home?

- No one is allowed to smoke anywhere inside your home
- Smoking is allowed in some places or at some times inside your home
- Smoking is permitted anywhere inside your home

Comments

A 100% smokefree home rule is defined as a household rule where smoking is never allowed in any area of the home at any time.

This indicator can be used to measure progress toward achieving Objective TU-14 of Healthy People 2020: "Increase the proportion of smokefree homes."[5]

Population-level indicator data can be examined by housing type (single vs. multiunit) and ownership (rent v. own) to parse out multiunit housing residents who may be under the jurisdiction of a smokefree policy from those who have voluntary rules where no such policy exists.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

References

1. Homa DM, Neff LJ, King BA, et al. Vital signs: disparities in nonsmokers' exposure to secondhand smoke—United States, 1999–2012. *Morbidity and Mortality Weekly Report*. 2015 Feb 6;64(4):103–8.
2. U.S. Department of Health and Human Services. *Preventing tobacco use among youth and young adults: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.
3. International Agency for Research on Cancer (IARC). *IARC Handbooks of Cancer Prevention, Tobacco Control, Vol. 13: Evaluating the effectiveness of smoke-free policies*. Lyon, France: IARC; 2009.
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5. Healthy People 2020. *Tobacco use objectives*. Available at: http://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use/objectives.

Indicator 2.2.g

Proportion of Jurisdictions that Have Enacted Laws Prohibiting Smoking in Multiunit Housing

Indicator	2.2.g
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of local jurisdictions that have laws prohibiting smoking in multiunit housing
Why this indicator is useful	An estimated 80 million U.S. residents live in multiunit housing.[1] Many of them are at risk for secondhand smoke exposure because smoke can travel through walls, air ducts, windows, and ventilation systems.[2] Youth who live in multiunit housing are particularly susceptible to involuntary secondhand smoke exposure in the home.[3] A growing number of municipalities have implemented smokefree building policies prohibiting smoking in indoor areas, including living units of multiunit housing, to reduce exposure to secondhand smoke in multiunit housing.[4]
Example data source(s)	**Americans for Nonsmokers' Rights Foundation**. U.S. laws and policies restricting or prohibiting smoking in private units of multiunit housing. Updated quarterly. Available at: http://www.no-smoke.org/pdf/smokefreemuh.pdf. **State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at: http://www.cdc.gov/statesystem/.
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, and regulations.
Example survey question(s)	Not applicable.
Comments	Evaluators can count municipal laws, policies covering subsidized or public housing authority (PHA) properties, and/or policies covering market-rate multiunit housing properties that prohibit smoking in 100% of private units and all indoor public areas of all buildings. Alternatively, evaluators may want to distinguish between publicly and privately owned housing. For PHA buildings, the Office on Smoking and Health (OSH) defines smokefree policy as a policy that "prohibits smoking in all indoor areas of all residential buildings under the jurisdiction of the PHA, including individual living units, hallways, and balconies." A broader law covering public and market-rate multiunit housing would prohibit smoking in all indoor areas of all residential buildings under the jurisdiction's purview (e.g., the municipality or county). Evaluators may also want to track aspects of policy implementation, such as the provision of required funding and other resources, efforts to educate the target population about the policy, and education and training related to enforcement and compliance monitoring.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	●	●	●
		← ○ ◒ ◒ ● → better			

References

1. King BA, Peck RM, Babb SD. National and state cost savings associated with prohibiting smoking in subsidized and public housing in the United States. *Preventing Chronic Disease*. 2014 Oct;11(E171):140222. doi: http://dx.doi.org/10.5888/pcd11.140222
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3. U.S. Department of Health and Human Services. *Preventing tobacco use among youth and young adults: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.
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Indicator 2.2.h

Proportion of Public Housing Authorities that Have Adopted Smokefree Policies in All of Their Buildings

Indicator	2.2.h
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of public housing authorities (PHAs) that have smokefree policies in all of their buildings
Why this indicator is useful	Of the approximately 7 million Americans living in government subsidized multiunit housing, approximately 2 million reside in public housing owned or operated by a PHA.[1] Because secondhand smoke can travel through walls, air ducts, windows, and ventilation systems,[2] it poses a substantial health risk to public housing residents, the majority of which are especially vulnerable to secondhand smoke, including children, the elderly, and the disabled.[3] If data can be obtained on the total number of PHA units in the jurisdiction, this indicator will allow evaluators to determine the proportion of public housing units with residents who are protected from secondhand smoke incursions in their homes.
Example data source(s)	**State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at: http://www.cdc.gov/statesystem/.
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, and regulations.
Example survey question(s)	Not applicable
Comments	Subsidized housing is affordable rental housing for eligible low-income families, elderly persons, and persons with disabilities. Subsidized housing includes public housing, which is operated by PHAs. The type of housing varies (e.g., single family homes, high-rise apartments).[4] The U.S. Department of Housing and Urban Development (HUD) oversees the public housing program and provides federal funding to local PHAs responsible for managing the housing. OSH tracks government multiunit housing legislation by type of restriction: (1) lobby and common area and (2) living areas. Evaluators could look at this indicator within a state, county, or other jurisdiction. A "smokefree building policy" prohibits smoking in all indoor areas of all residential buildings under the jurisdiction of the PHA, including individual living units, hallways, and balconies. Evaluators may wish to examine the proportion of PHAs that prohibit smoking in only some areas of the building. Additionally, if the number of residents in PHAs can be obtained, evaluators can estimate the proportion of residents who are susceptible to secondhand smoke because they are not covered under a smokefree building policy. On December 5, 2016, HUD published a rule requiring all PHAs to adopt policies prohibiting combustible tobacco products in living units, indoor common areas, administrative offices, and within 25 feet of the housing and administrative buildings.[5] Evaluators can use this indicator to establish a pre-policy baseline, and once the final rule is implemented (18 months after the effective date), this indicator can be used for local outcome evaluation efforts.

Note: Data from this indicator plus data on the number of residents can be used to estimate the proportion of residents susceptible to secondhand smoke exposure, Indicator 2.2.j.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◓ ● → better			

References

1. U.S. Department of Housing and Urban Development. Resident Characteristic Report System. Washington, DC: U.S. Department of Housing and Urban Development; 2014.
2. Bohac DL, Hewett MJ, Hammond SK, Grimsrud DT. Secondhand smoke transfer and reductions by air sealing and ventilation in multiunit buildings: PFT and nicotine verification. *Indoor Air*. 2011;21(1):36–44. doi: 10.1111/j.1600-0668.2010.00680.x
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5. U.S. Department of Housing and Urban Development. *Instituting Smoke-Free public Housing. A Rule by the Housing and Urban Development on 12/05/2016.* Available at: https://www.federalregister.gov/documents/2016/12/05/2016-28986/instituting-smoke-free-public-housing

Indicator 2.2.i

Proportion of Multiunit Housing Operators that Have Adopted a Smokefree Policy in Their Buildings

Indicator	2.2.i
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of multiunit housing operators in a jurisdiction that have adopted voluntary smokefree policies in their buildings
Why this indicator is useful	An estimated 80 million U.S. residents live in multiunit housing, which can include private market rates housing or government subsidized housing such as public housing.[1] Approximately one-third of U.S. multiunit housing residents with voluntary smokefree home rules still experience secondhand smoke infiltration into their homes from nearby units and shared areas.[1,2] Because the proposed HUD rule will not cover private housing or all forms of public housing, this indicator is important to understand what proportion of the population is protected from secondhand smoke incursions by smokefree multiunit housing policies. Implementing smokefree policies in multiunit housing can reduce secondhand smoke exposure in this environment.[3-4]
Example data source(s)	**Los Angeles County Department of Public Health (LAC DPH), Tobacco Control & Prevention Program, Healthy Housing Solutions, Inc., Westat, & CDC, Smoke-Free Multi-Unit Housing Policy Study: Operator Survey (ICR Reference No: 201309-0920-011)** Information available at: http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201309-0920-011. **UC Davis, Center for Evaluation and Research, Tobacco Control Evaluation Center, Multiple Housing Unit Owner/Manager Survey (MHUOS)** Information available at: http://tobaccoeval.ucdavis.edu/index.html.
Population group(s)	Multiunit housing operators
Example survey question(s)	**From LAC DPH** Now I'd like to ask about this apartment complex's current policies about smoking on the property. By "policy," I mean any of the rules, guidelines, or procedures that tenants must follow about where they can or cannot smoke. 1. [Do you/Does your company] currently have any policies in place prohibiting smoking in any areas of this apartment complex, including individual apartments and indoor or outdoor shared areas? • Yes • No 2. The next questions are about smoke-free policies in different areas of this apartment complex. Please tell me whether [you/your company] have a policy prohibiting smoking in any of the following areas.

AREA OF BUILDING	POLICY PROHIBITING SMOKING YES	NO	NOT APPLICABLE	RE	DK	IF YES, What year was it adopted?
a) No smoking allowed anywhere on the property, including inside the apartments?	1	2	3	-7	-8	|__|__|__|__|
If a = 2, GO TO 6						
[No smoking allowed in…]						
b) Entrance ways to buildings?	1	2	3	-7	-8	|__|__|__|__|
c) Indoor hallways?	1	2	3	-7	-8	|__|__|__|__|
d) Indoor stairwells?	1	2	3	-7	-8	|__|__|__|__|
e) Laundry rooms?	1	2	3	-7	-8	|__|__|__|__|
f) Outdoor common areas (e.g., parking lots, stairwells, hallways, and pool area)?	1	2	3	-7	-8	|__|__|__|__|
g) Balconies, patios, and backyards of units?	1	2	3	-7	-8	|__|__|__|__|
h) Individual apartment units?	1	2	3	-7	-8	|__|__|__|__|
i) Other area? (SPECIFY)_____	1	2	3	-7	-8	|__|__|__|__|

IF 2h = 1, CONTINUE. OTHERWISE, GO TO 4

3. In what percent of units is smoking prohibited?
   PERCENT OF UNITS.....|___|___|___| %
4. Under the current policy, has smoking been completely prohibited in one or more of the buildings in this apartment complex? This includes the apartments and the indoor hallways of the building.
   - Yes
   - No
5. Under the current policy, in how many buildings with rental units has smoking been completely prohibited?
   NUMBER OF BUILDINGS.....|___|___|___|
6. Did you implement a "grandfather clause" which would gradually phase out smoking in the complex by allowing current tenants to smoke in their units but would not allow new tenants to do so?
   - Yes
   - No

Comments

Evaluators may wish to measure this indicator separately for market rate, subsidized, and public housing.

Multiunit housing operators can include owners, managers, or landlords of multiunit housing.[5]

Evaluators can measure multiple elements of multiunit housing smokefree policies, such as

- disclosure policies, where operators have to disclose their smoking policy to potential tenants;
- smoking bans in common areas, whether indoor, outdoor, or both;
- smoking bans in common areas and individual units.

Evaluators can also measure whether the policy is applicable to residents and visitors; whether it is applicable 24 hours per day, 7 days per week; and whether multiunit housing operators have provided cessation resources/information along with implementing a smokefree policy.

From MHUOS

Do you currently have a smoke-free policy for your rental property?

- Yes, the property is entirely smoke-free
- Yes, certain areas are designated as smoke-free
- No, there is no smoke-free policy

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$$	◒	◒	◒	◒
			← ○ ◒ ◓ ● → better		

References

1. King BA, Peck RM, Babb SD. National and state cost savings associated with prohibiting smoking in subsidized and public housing in the United States. *Preventing Chronic Disease*. 2014 Oct;11(E171):140222. doi: http://dx.doi.org/10.5888/pcd11.140222
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Indicator 2.2.j

Proportion of Multiunit Housing Residents Living in Smokefree Buildings

Indicator	2.2.j
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Proportion of multiunit housing residents living in buildings where smoking is prohibited, with no exceptions
Why this indicator is useful	An estimated 80 million U.S. residents live in multiunit housing.[1] Because smoke can travel through walls, air ducts, windows, and ventilation systems,[2] About a third of multiunit housing residents with personal smokefree home rules still experience secondhand smoke infiltration into their homes.[1,3]Implementing smokefree policies in multiunit housing can reduce secondhand smoke exposure.[4-5]
Example data source(s)	**Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/. **Oregon Public Health Division Tobacco Prevention and Education Program (TPEP) Guardian Management study**[6] **Smoke-Free Policies in Multiunit Housing: Smoking Behavior and Reactions to Messaging Strategies in Support or in Opposition**[7]
Population group(s)	Multiunit housing residents
Example survey question(s)	**From SCS-TC** Which of the following best describes where you live? Would you say…? • a mobile home • a one-family house detached from any other house • a one-family house attached to one or more houses • an apartment or condominium building • other Does your property manager allow smoking in your apartment/condo units? • Yes • No Does your property manager allow smoking on the property? • Yes • No **Adapted from the Oregon TPEP Guardian Management Study** Tell us if you think these things are allowed or not allowed: • Smoking inside your apartment • Smoking in indoor shared areas, like hallways and entryways • Smoking outdoors on porches, patios, or balconies • Smoking in other outdoor areas of the property like the parking lot **From the Smoke-Free Policies in Multiunit Housing Study** Which statement best describes the landlord's or property manager's rules about smoking? Would you say the landlord or property manager… • Has no rules about smoking

	• Allows smoking only in designated areas • Doesn't allow smoking anywhere
Comments	This indicator can be measured using self-report or biochemical validation. Evaluators may wish to differentiate between exposures within private units, in common areas, and in outdoor areas, such as building entrances and balconies. Note: Data from Indicator 2.2.h will provide information on the proportion of public housing authorities that have smokefree policies in all of their buildings.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$$	●	●	●	●
		← ○ ◒ ◓ ● → better			

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Indicator 2.2.k

Number and Type of Enforcement Actions Issued Regarding Smokefree Policies

Indicator	2.2.k
KOI 2005	2.5.1, 2.5.2, and 2.5.3
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Number and type of enforcement-related actions (e.g., warnings, civil penalties, criminal penalties) taken to support smokefree policies
Why this indicator is useful	Compliance with smokefree public policies improves when noncompliance has repercussions.[1] Ensuring clear enforcement powers, defined responsibilities, and adequate resources is important to address noncompliance.[2-4] Tracking enforcement actions is important to help explain compliance trends.
Example data source(s)	**California Tobacco Control Program (CTCP): Secondhand Smoke Law Enforcement Survey, 2007** Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/Resources/Publications/Enforcement%20Report%202007%20-%20Final%20Submitted.pdf.
Population group(s)	Agency representatives responsible for enforcement
Example survey question(s)	**Adapted from the CTCP Secondhand Smoke Law Enforcement Survey** In the last year, please estimate how many citations specifically related to the smoking ban in bars were issued and prosecuted for the following types of establishments: • Number of citations issued to restaurant/ bars in your jurisdiction: ___ • Number of citations issued to restaurant/ bars in your jurisdiction that were prosecuted: ___ • Number of citations issued to stand-alone bars in your jurisdiction: ___ • Number of citations issued to stand-alone bars in your jurisdiction that were prosecuted: ___ In the last year, please estimate how many citations specifically related to the smoking ban in worksites were issued and prosecuted. • Number of citations issued in your jurisdiction: ___ • Number of citations issued in your jurisdiction that were prosecuted: ___ In the last year, please estimate how many citations specifically related to the smoking ban in schools were issued and prosecuted. • Number of citations issued in your jurisdiction:___ • Number of citations issued in your jurisdiction that were prosecuted: ___
Comments	Enforcement-related information must be interpreted in context. For example, a low number of citations may indicate either high compliance or low levels of enforcement. Evaluators can assess enforcement capacity to aid in interpretation of indicator data.[5] Example penalties include citations, graduated fines, and suspension or revocation of business licenses. There are two types of enforcement: (1) active enforcement by health inspectors, and (2) passive enforcement (i.e., complaints from the public to the health department or enforcing agency reporting violations).

Another way to measure enforcement actions is to measure the proportion of complaints received that are acted upon.

Evaluators may wish to assess the number of enforcement actions by venue type or geographic area to identify "hot spots" of noncompliance.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
 ††	$$	◒	◒	◒	◒
		← ○ ◒ ◒ ● → better			

†† Denotes low agreement among reviewers, defined as less than 75% of valid ratings within ±2 point of the median for this indicator-specific criterion.

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Indicator 2.2.I

Proportion of States with Tobacco Control Laws that Preempt Local Smokefree Air Policies

Indicator	2.2.I
KOI 2005	2.4.6
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 2	Implementation and enforcement of smokefree policies
What to measure	Any legislation that prevents local jurisdictions from enacting restrictions that are more stringent than the state's restrictions on smokefree indoor air laws
Why this indicator is useful	Many strong and innovative tobacco control policies have originated at the local level; however, states with preemptive statutes or judicial opinions that prevent local jurisdictions from passing policies that are more stringent or vary from state-level policy have impeded local action to protect residents from exposure to secondhand smoke.[1-3].
Example data source(s)	**Americans for Nonsmokers' Rights (ANR), Smokefree Lists, Maps, and Data, States with Preemption of Smokefree Air Laws** Information available at: http://www.no-smoke.org/pdf/preemptionmap.pdf. **State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at: http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring state tobacco control laws.
Example survey question(s)	Not applicable.
Comments	States should monitor preemption by venue to understand where preemption applies.[3] This indicator can be used to measure progress toward achieving Objective TU-16.1 of Healthy People 2020: "Eliminate state laws that preempt stronger local tobacco control laws on smokefree indoor air."[4]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
††	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

†† Denotes low agreement among reviewers, defined as less than 75% of valid ratings within ±2 point of the median for this indicator-specific criterion.

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Outcome 3

Compliance with Smokefree Policies

Legislated and voluntary policies covering public places and workplaces have been shown to become largely self-enforcing over time due to publicity of the policy's health benefits leading up to its passage and increasing social support after policy implementation.[1] Even as legislated policies have expanded to cover bars and restaurants, where levels of support may have been lower among patrons, owners, and staff, research has shown increasing levels of policy compliance as social norms evolve.[2]

Compliance with smokefree policies may be attenuated when the policies are voluntary, have no enforcement provisions, or have attributes that make them inherently challenging to enforce. For example, peers' negative opinions of smoking on campus may be enough to motivate some smokers to comply with smokefree campus policies; however, other smokers on campus may only respond to citations.[3,4] One study of outdoor smokefree policies found consistently high levels of support for these policies among agency directors responsible for policy enforcement, but one in four directors still reported compliance issues.[5]

Concerns about dealing with noncompliance can also be a barrier to implementing smokefree multiunit housing policies; however, research has shown that operators implementing these policies rarely report enforcement issues.[6,7] For smokefree policies for any setting, addressing noncompliance will be more straightforward if the policy is simple and applied consistently with no exemptions.[1] Compliance tracking or studies can be helpful to identify opportunities for additional education, enforcement, or ways to improve the policy.[8]

The following indicators are associated with this outcome:

- **2.3.a** Compliance with smokefree policies in public places and workplaces
- **2.3.b** Compliance with tobacco-free policies in childcare settings, schools or school districts, and college campuses
- **2.3.c** Compliance with smokefree policies in multiunit housing
- **2.3.d** Compliance with 100% smokefree home rules
- **2.3.e** Compliance with smokefree rules for vehicles

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For Further Reading

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Outcome 3

Compliance with Smokefree Policies

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.3.a	Compliance with smokefree policies in public places and workplaces	†††	$$	◒*	●	◒	●
2.3.b	Compliance with tobacco-free policies in childcare settings, schools or school districts, and college campuses		$$$	◒	◒	◒	◒
2.3.c (New)NR	Compliance with smokefree policies in multiunit housing	⊘	⊘	⊘	⊘	⊘	⊘
2.3.d	Compliance with 100% smokefree rules for homes		$$	●	◒	●	●
2.3.e	Compliance with smokefree rules for vehicles		$	◒	◒	◒	◒

$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but are instead a relative measure of expert reviewers' ratings regarding resources required to collect and analyze data to measure the indicator.

†† Denotes low agreement among reviewers, defined as less than 75% of valid ratings within ±2 point of the median for this indicator-specific criterion.

⊘ Denotes no data.

NR Denotes an indicator that is not rated (see Appendix C for an explanation).

* Denotes low reviewer response, defined as fewer than 75% of valid ratings on a criterion for an indicator.

Indicator 2.3.a

Compliance with Smokefree Policies in Public Places and Workplaces

Indicator	2.3.a
KOI 2005	2.6.1 and 2.6.2
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 3	Compliance with smokefree policies
What to measure	Proportion of the population that complies with smokefree policies in public places (e.g., bars, restaurants, sporting arenas) Proportion of the population employed outside the home that complies with smokefree policies in their workplaces
Why this indicator is useful	If smokefree policies are not followed, they are unlikely to protect the public from the harmful effects of secondhand smoke or change social norms.[1-3]
Example data source(s)	**Adult Tobacco Survey Questions (ATS), Supplemental Survey, 2014** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm.
Population group(s)	General population
Example survey question(s)	**From ATS** Not counting times while you were at work, to your knowledge, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], has anyone, including yourself, used tobacco in an indoor or outdoor public place when he or she was not supposed to? • Yes • No • Don't know/Not sure • Refused At your workplace, is smoking ….? • Allowed in both indoor and outdoor areas • Allowed in outdoor areas, but never allowed in any indoor areas • Allowed in indoor areas, but never allowed in any outdoor areas • Never allowed in any indoor or outdoor area • Don't know To your knowledge, during the past 30 days, that is, since [DATE FILL], has anyone, including yourself, used tobacco at your work when he or she was not supposed to? • Yes • No • Don't know/Not sure • Refused
Comments	The most cost-effective method to assess compliance is to draw on existing population surveys that include relevant questions on reported compliance. While this method may lack precision, it can still provide a useful barometer of relative compliance levels. In addition to gathering data on reported compliance, evaluators can measure compliance through observation[4] and/or measure the secondhand smoke in public places and workplaces by monitoring indoor air quality. Evaluators also can use established protocols for collecting cigarette butts.[5] It is important for evaluators to take into account the use of e-cigarettes. When reporting compliance, the general public may not be able to distinguish between combustible

tobacco products and e-cigarettes. Inclusion or exclusion of e-cigarettes in smokefree policies may also pose measurement challenges. For smokefree policies that include e-cigarette products, E-Cigarette 2.3 may serve as a "replacement" for Indicator 2.3.a to assess compliance with policies that include e-cigarettes.

Compliance data for workplaces can be analyzed by workplace size or type. Another way to assess compliance with smokefree policy is to ask tobacco users in specific settings to disclose how many days in the past month they have used tobacco on worksite property.

In addition to gathering data on reported compliance, evaluators can measure compliance through observation[4] and/or measure the secondhand smoke in public places and workplaces by monitoring indoor air quality. Evaluators also can use established protocols for collecting cigarette butts.[5]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
 ††	$$	◒ *	●	◒	●
		← ○ ◒ ◒ ● → better			

†† Denotes low agreement among reviewers, defined as less than 75% of valid ratings within ±2 point of the median for this indicator-specific criterion.

* Denotes low reviewer response, defined as fewer than 75% of valid ratings on a criterion for an indicator.

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Indicator 2.3.b

Compliance with Tobacco-Free Policies in Childcare Settings, Schools or School Districts, and College Campuses

Indicator	2.3.b
KOI 2005	2.6.5
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 3	Compliance with smokefree policies
What to measure	Proportion of students, teachers, or caregivers in compliance with the facility or campus' tobacco-free policies
Why this indicator is useful	Compliance with tobacco-free school policies reduces students' exposure to secondhand smoke and reinforces anti-tobacco social norms.[1] Young people's attitudes toward the acceptability of tobacco use are influenced by the actions of their peers and educators at school.[1-2] Reported and perceived compliance with tobacco-free policies is one measure of actual compliance with these policies.[3-4]
Example data source(s)	**School Health Policies and Practices Study (SHPPS), 2014** Information available at: http://www.cdc.gov/healthyyouth/shpps/index.htm
Population group(s)	Students, teachers, caregivers
Example survey question(s)	**From SHPPS** During the 2012–2013 school year, were there four or more times that students at your school were caught smoking cigarettes? • Yes • No During the 2012–2013 school year, were there four or more times that students at your school were caught using smokeless tobacco? • Yes • No
Comments	Compliance data can be analyzed by grade level and type of school (e.g., elementary, middle, high school, private, parochial, public). Passive air monitoring may be the best form of measurement for childcare settings.[5] Questions about tobacco use on university or college campuses could be asked of faculty, staff, students, and visitors. Direct observation (e.g., of violators or cigarette butts) is another way to measure adherence to tobacco-free policies at schools and college campuses.[6]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$$	◒	◒	◒	◒
		← ○ ◒ ◒ ● → better			

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Indicator 2.3.c

Compliance with Smokefree Policies in Multiunit Housing

Indicator	2.3.c[NR]
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 3	Compliance with smokefree policies
What to measure	Proportion of multiunit housing residents, visitors, and employees in compliance with smokefree policies
Why this indicator is useful	Because secondhand smoke can travel through walls, air ducts, windows, and ventilation systems,[1] it poses a substantial health risk to multiunit housing residents.[2] If smokefree policies are not followed, they are unlikely to protect nonsmokers from the harmful effects of secondhand smoke.[2-3] Smokefree environments in multiunit housing can reduce secondhand smoke exposure and cigarette consumption and can support smoking cessation.[4]
Example data source(s)	**National Adult Tobacco Survey Questionnaire (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	Employees and residents of multiunit housing complexes with smokefree policies
Example survey question(s)	**Establish whether person is covered by smokefree multiunit housing policy (Indicator 2.2.j)** ***From SCS-TC*** Which of the following best describes where you live? Would you say…? • A mobile home • A one-family house detached from any other house • A one-family house attached to one or more houses • An apartment or condominium building • Other Does your property manager allow smoking in your apartment/condo units? • Yes • No Does your property manager allow smoking on the property? • Yes • No The next series of questions are about where you live. In the past 30 days, have you smelled cigarette smoke…? • In outdoor areas o Yes o No • On your balcony o Yes o No o Not applicable

- In indoor staircases
  - o Yes
  - o No
  - o Not applicable
- In elevators
  - o Yes
  - o No
  - o Not applicable
- Some other place
  - o Yes
  - o No

Do you smell it in your unit?

- Yes
- No

Over the past 3 months, has anyone smoked anywhere in your home?

- Yes
- No

Comments

It is important for evaluators to take into account the use of e-cigarettes. When reporting compliance, the general public may not be able to distinguish between combustible tobacco products and e-cigarettes. Inclusion or exclusion of e-cigarettes in smokefree policies may also pose measurement challenges. See E-Cigarette Addendum indicator 2.2.

This indicator differs from 2.4.f, which measures exposure to secondhand smoke in private homes, in that it measures policy compliance in the context of whether the individual is protected by a public, property, or building-level policy prohibiting smoking in private units. Evaluators first establish whether a person is covered by a smokefree policy and then assess self-reported exposure to understand compliance.

This indicator can also be measured by observation (e.g., direct observation of residents and employees in common areas), complaints received regarding policy violations, and review of documentation of written warnings issued to violators. See Fallin et al.[5] for an example observation tool.

In addition to observing smoking-related behavior in multiunit housing buildings, evaluators can measure the secondhand smoke in common areas or residences by monitoring indoor air quality.[6]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
⦸	⦸	⦸	⦸	⦸	⦸
			← ○ ◒ ◓ ● → better		

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Indicator 2.3.d

Compliance with 100% Smokefree Rules for Homes

Indicator	2.3.d
KOI 2005	2.6.4
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 3	Compliance with smokefree policies
What to measure	Proportion of the population that reports compliance with 100% smokefree home rules
Why this indicator is useful	Compliance with home smokefree rules is especially important for protecting the health of children, for supporting anti-tobacco social norms, and for decreasing tobacco initiation among youth.[1-3]
Example data source(s)	**Adult Tobacco Survey Questions (ATS), Core and Supplemental Survey, 2014** Information available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm. **Oregon Department of Human Services Survey, 1997**[4]
Population group(s)	General population
Example survey question(s)	**From ATS** Not counting decks, porches, or garages, inside your home, is smoking …? • Always allowed • Allowed only at some times or in some places • Never allowed • Don't know/Not sure Not counting decks, porches, or garages, to your knowledge, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], has anyone, including yourself, smoked tobacco inside your home when he or she was not supposed to? • Yes • No • Don't know/Not sure • Refused **From Oregon Department of Human Services Survey:** Which of the following statements best describes the rules about smoking inside your home? • No one is allowed to smoke anywhere inside your home. • Smoking is allowed in some places or at some times. • Smoking is permitted anywhere inside your home. On how many of the past 30 days has someone, including yourself, smoked cigarettes, cigars, or pipes anywhere inside your home?" • No days • 1 or more days
Comments	To capture compliance, the following need to be measured: presence of a smokefree rule in the home and smoking behavior in the home. This indicator differs from 2.4.g, which measures exposure to secondhand smoke in private homes, in that it measures policy compliance in the context of whether the individual has a personal home smokefree rule. Evaluators first establish whether a person has a home rule and then assess exposure to understand compliance.

A 100% smokefree home rule is defined as a household rule where smoking is never allowed in any area of the home at any time.

Evaluators may also want to measure whether people's smokefree home rules include e-cigarettes and whether anyone has used these products in their homes.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	◒	●	●
		← ○ ◒ ◒ ● → better			

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Indicator 2.3.e

Compliance with Smokefree Rules for Vehicles

Indicator	2.3.e
KOI 2005	2.6.4
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 3	Compliance with smokefree policies
What to measure	Proportion of the population that reports compliance with smokefree policies in their vehicles
Why this indicator is useful	Compliance with smokefree vehicle rules is especially important for protecting the health of children, for supporting anti-tobacco social norms, and for decreasing tobacco initiation among youth.[1-2]
Example data source(s)	**National Adult Tobacco Survey (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	General population
Example survey question(s)	**From NATS** Not counting motorcycles, in the vehicles that you or family members who live with you own or lease, is smoking • Always allowed • Sometimes allowed in at least one vehicle • Never allowed in any vehicle • Respondent's family does not own or lease a vehicle • Don't know/Not sure • Refused **Created item to follow up on NATS item:** Over the past 30 days, has anyone, including yourself, smoked tobacco inside the vehicle that you or family members who live with you own or lease when he or she was not supposed to? • Yes • No • Don't know/Not sure • I don't have a car **From SCS-TC** Please tell me which best describes how cigarette smoking is handled in your car or the car you regularly travel in. • No one is allowed to smoke in the car. • Only special guests are allowed to smoke in the car. • People are allowed to smoke in the car only if the windows are open. • People are allowed to smoke in the car at any time.

	In the past 3 months, has anyone smoked in your car? • Yes • No • I don't have a car
Comments	To capture compliance, the following need to be measured: presence of a smokefree rule in vehicles and smoking behavior in vehicles. A 100% smokefree vehicle rule is defined as a rule where smoking is never allowed in any area of the owner's vehicle at any time. Evaluators may also consider measuring whether people's smokefree vehicle rules include e-cigarettes and whether anyone has used these products in their vehicle.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	◒	◒	◒	◒
		← ○ ◒ ◒ ● → better			

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Outcome 4

Reduced Exposure to Secondhand Smoke

Substantial evidence demonstrates the harm caused by exposure to secondhand tobacco smoke. Secondhand smoke can lead to lung cancer, heart disease, and stroke in adults and to many serious health problems in children, including lower respiratory infections, more frequent and severe asthma, sudden infant death syndrome, and ear infections.[1,2] Evidence also indicates that tobacco smoke is especially harmful to pregnant women and to fetal development.[3,4] Reducing nonsmokers' exposure to secondhand smoke prevents disease and saves lives.[1,5,6]

The overall prevalence of secondhand smoke exposure in the United States has declined in the past two decades, as measured by self-reported exposure and biometric screenings for continine.[2,7,8] Awareness of the harms of secondhand smoke has contributed to a rapid, nationwide expansion in the number and comprehensiveness of smokefree laws and regulations.[9] Evaluations of comprehensive smokefree policies consistently show reductions in secondhand smoke exposure of 80% to 90% in covered venues, and immediate improvements in short-term population health outcomes, such as heart disease.[5,6]

Much progress has been made to reduce secondhand smoke exposure in indoor workplaces and public places; however, as of late 2017, nearly 60% of the U.S. population is currently protected by a comprehensive state or local smokefree air policy, and half of nonsmoking U.S. students in grades 6 through 12 report secondhand smoke exposure in the past week.[10,11] Certain populations, including young children, individuals living in poverty, residents of rental housing, non-Hispanic blacks, and lesbian and bisexual women, are at greater risk of exposure.[7,8,12]

Compared with indoor venues, outdoor venues are less likely to be covered by smokefree policies, even though they can still pose health risks. For example, high concentrations of fine particulate matter have been detected in outdoor areas near where smokers congregate on a college campus, and students report lower rates of secondhand smoke exposure on tobacco-free college campuses.[13,14]

The home has emerged as a major source for secondhand smoke exposure, especially for children.[2] Those living in multiunit housing, such as apartment buildings and condominiums, are particularly at risk of exposure in the home, where secondhand smoke can transfer between neighboring living units.[2,15] An estimated 27.6 to 28.9 million nonsmoking U.S. multiunit housing residents with smoke-free home policies are exposed to secondhand smoke infiltrating their home from elsewhere in the building, and multiunit dwellings are home to high percentages of children, racial and ethnic minorities, and individuals of low socioeconomic status.[15,16] Smokefree vehicle rules are less prevalent than smokefree home rules, and in 2009, more than 20% of U.S. youth reported secondhand smoke exposure in the car in the past week.[17,18]

Although secondhand smoke exposure in indoor workplaces has become less common, workplace exposure among adults who do not smoke persists: about one in five nonsmoking U.S. workers still report being exposed to secondhand smoke in the workplace.[19] Nonsmoking workers who are racial and ethnic minorities, young adults, males, those with less income and education, and those who live in the western United States are more likely to be exposed to

secondhand smoke in the workplace.[19] Gaps in coverage may reflect policy exemptions, which are common for hospitality venues; casinos; tobacco-oriented businesses, such as smoke shops; and outdoor workplaces.[5] Support for smokefree outdoor worksites is also significantly lower than that for indoor workplaces, which may result in higher exposure in outdoor worksites that are not covered by state or employer policy.[19]

The following indicators are associated with this outcome:

- **2.4.a** Proportion of nonsmokers exposed to secondhand smoke
- **2.4.b** Proportion of the employed population exposed to secondhand smoke in the workplace
- **2.4.c** Proportion of the population exposed to secondhand smoke in indoor public places
- **2.4.d** Proportion of the population exposed to secondhand smoke in outdoor public places
- **2.4.e** Proportion of children, youth, and young adults exposed to secondhand smoke in childcare settings and schools
- **2.4.f** Proportion of students, faculty, and staff exposed to secondhand smoke on college campuses
- **2.4.g** Proportion of multiunit housing residents exposed to secondhand smoke in their homes from nearby units or shared areas
- **2.4.h** Proportion of the population exposed to secondhand smoke originating in their homes
- **2.4.i** Proportion of the population exposed to secondhand smoke in vehicles

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For Further Reading

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Outcome 4

Reduced Exposure to Secondhand Smoke

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.4.a	Proportion of nonsmokers exposed to secondhand smoke		$	●	●	●	●
2.4.b (New)	Proportion of the employed population exposed to secondhand smoke in the workplace		$	●	●	●	●
2.4.c	Proportion of the population exposed to secondhand smoke in indoor public places		$	●	●	●	●
2.4.d (New)	Proportion of the population exposed to secondhand smoke in outdoor public places		$	◒	◒	◒	◒
2.4.e[NR]	Proportion of children, youth, and young adults exposed to secondhand smoke in childcare or school settings	⊘	⊘	⊘	⊘	⊘	⊘
2.4.f[NR] (New)	Proportion of students, faculty, and staff exposed to secondhand smoke on college campuses	⊘	⊘	⊘	⊘	⊘	⊘
2.4.g (New)	Proportion of multiunit housing residents exposed to secondhand smoke in their homes from nearby units or shared areas		$	●	●	◒	●
2.4.h	Proportion of the population exposed to secondhand smoke originating in their homes		$	●	●	●	●
2.4.i (New)	Proportion of the population exposed to secondhand smoke in vehicles		$	●	●	●	●

$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but are instead a relative measure of expert reviewers' ratings regarding resources required to collect and analyze data to measure the indicator.

⊘ Denotes no data.

NR Denotes an indicator that is not rated (see Appendix C for an explanation).

Indicator 2.4.a

Proportion of Nonsmokers Exposed to Secondhand Smoke

Indicator	2.4.a
KOI 2005	2.7.5
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Nonsmokers' exposure to secondhand smoke. Exposure can occur in workplaces, public places, homes, and vehicles.
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease in children and adults who do not smoke.[1-3] Secondhand smoke contains more than 7,000 chemicals; hundreds are toxic, and nearly 70 can cause cancer.[3] Each year, approximately 34,000 heart disease deaths and 7,300 lung cancer deaths among nonsmoking adults in the United States are attributable to secondhand smoke exposure.[3] There is no risk-free level of exposure to secondhand smoke.[1] About 1 in 4 people in the U.S remain exposed to secondhand smoke.[4]
Example data source(s)	**California Adult Tobacco Survey (CATS), 2008** Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPCaliforniaAdultTobaccoSurvey2008.pdf. **National Health and Nutrition Examination Survey (NHANES), 2013–2014** Information available at: http://www.cdc.gov/nchs/nhanes/about_nhanes.htm. **National Youth Tobacco Survey (NYTS), 2016** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	General population
Example survey question(s)	**From CATS** In the past week, about how many minutes or hours were you exposed to other people's tobacco smoke in all environments? • ____Enter response • None at all • Don't know/Not sure • Refused **From NHANES (biochemical marker)** Measured serum cotinine level greater than or equal to 0.05 ng/mL and less than or equal to 10 ng/ml among self-reported non-tobacco users and those not using nicotine replacement therapy. **From NYTS** During the past 30 days, on how many days did you breathe the vapor from someone who was using an e-cigarette in an indoor or outdoor public place? Examples of indoor public places are school buildings, stores, restaurants, and sports arenas. Examples of outdoor public places are school grounds, parking lots, stadiums, and parks. • 0 days • 1 or 2 days

- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

From SCS-TC

During the past seven days, in which of the following places have you smelled secondhand smoke?

- In your home
- In your car
- In someone else's car
- At work
- On a public sidewalk
- Outside the doorway of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments

Exposure to secondhand smoke can be measured in many ways, including by using self-reported data, biochemical markers, or environmental measures of air quality.[5-7] Self-reported smokers and those currently using nicotine replacement therapy should be excluded when measuring smoke exposure via biochemical markers.

It is important for evaluators to carefully consider evaluation needs, available resources, and population of interest when selecting a data collection approach. For instance, self-report is not feasible for measuring exposure among very young children. For more information on measuring secondhand smoke exposure, please refer to the *Evaluation Toolkit for Smoke-free Policies.*[10]

This indicator may be used in conjunction with E-Cigarette 2.4, which measures exposure to secondhand e-cigarette aerosol.

This indicator can be used to measure progress toward achieving Objective TU-11 of Healthy People 2020: "Reduce the proportion of nonsmokers exposed to secondhand smoke."[8]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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Indicator 2.4.b

Proportion of the Employed Population Exposed to Secondhand Smoke in the Workplace

Indicator	2.4.b
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of the general population employed outside the home that report exposure to secondhand smoke in the workplace
Why this indicator is useful	The workplace is a primary source of involuntary exposure to tobacco smoke for adults.[1] Secondhand smoke exposure in the workplace has been linked to an increased risk of adverse health outcomes.[1,2] Blue collar and service employees are more likely to be exposed to secondhand smoke in the workplace and are less likely to be covered by smokefree policies.[1,3,4] Studies have shown significantly higher levels of tobacco smoke exposure in restaurants, bars, and casinos not covered by smokefree policies compared with other worksites and public spaces.[1,3-8] About one-fifth of employed U.S. adult nonsmokers report secondhand smoke exposure in the workplace.[9]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS), 2011, Module 16** Information available at: http://www.cdc.gov/brfss/questionnaires.htm#archive. **National Adult Tobacco Survey (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **National Youth Tobacco Survey (NYTS), 2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	Employed population
Example survey question(s)	**From BRFSS** Now I'm going to ask you about smoke you might have breathed at work because someone else was smoking indoors. During the past 7 days, that is, since last [TODAY"S DAY OF THE WEEK], on how many days did you breathe the smoke at your workplace from someone other than you who was smoking tobacco? • Number of days [01-07] • None • Don't know/Not sure • Refused **From NATS** Now I'm going to ask you about smoke you might have breathed at work because someone else was smoking, either indoors or outdoors. During the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did you breathe the smoke at your workplace from someone other than you who was smoking tobacco? • Number of days • None • Don't know/Not sure • Refused

From NYTS

During the past 7 days, on how many days did you breathe the smoke from someone who was smoking tobacco products in the place where you work?

- I do not have a job
- I did not work during the past 7 days
- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

From SCS-TC

During the past SEVEN DAYS, in which of the following places have you smelled secondhand smoke?

- In your home
- In your car
- In someone else's car
- At work
- On a public sidewalk
- Outside the door way of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments

Evaluators may want to consider capturing information regarding exposure to different types of tobacco products. Other tobacco products of interest may include cigarettes, cigars, little cigars, regular pipes, hookah (water pipe), and e-cigarettes.

Evaluators may also choose to gather data on the size and demographics of the population exposed to secondhand smoke by product type.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
			← ○ ◒ ◓ ● → better		

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Indicator 2.4.c

Proportion of the Population Exposed to Secondhand Smoke in Indoor Public Places

Indicator	2.4.c
KOI 2005	2.7.2
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of the general population that reports exposure to secondhand smoke in indoor public places, including bars, restaurants, casinos, indoor sporting arenas, and concert venues
Why this indicator is useful	Indoor secondhand smoke is a major air pollutant and the main source of exposure to tobacco smoke among nonsmokers.[1] Studies have shown that implementation of indoor smokefree policies reduces secondhand smoke exposure substantially, with decreases as high as 90% in some studies.[1-4]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS), 2011, Module 16** Information available at: http://www.cdc.gov/brfss/questionnaires.htm#archive. **California Adult Tobacco Survey (CATS), 2008** Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPCaliforniaAdultTobaccoSurvey2008.pdf. **National Adult Tobacco Survey (NATS), 2010** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/. **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/.
Population group(s)	General population
Example survey question(s)	**From BRFSS** Not counting times while you were at work, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did you breathe the smoke from someone else who was smoking in an indoor public place? • Number of days [01–07] • None • Don't know/Not sure • Refused **From CATS** In the past two weeks, have you been exposed to other people's tobacco smoke on campus indoors? • Yes • No • Don't know • Refused • Don't know/Not sure

Modified from NATS

[Not counting times while you were at work,] during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did you breathe the smoke from someone else who was smoking in an indoor public place?

- __Number of days
- None
- Don't know/Not sure
- Refused

From SCS-TC

During the past SEVEN DAYS, in which of the following places have you smelled secondhand smoke?

- In your home
- In your car
- In someone else's car
- At work
- On a public sidewalk
- Outside the door way of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments

In addition to self-report, air quality monitoring can be used to measure secondhand smoke exposure. For more information, refer to the *Evaluation Toolkit for Smoke-free Policies*.[5]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

References

1. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.
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Indicator 2.4.d

Proportion of the Population Exposed to Secondhand Smoke in Outdoor Public Places

Indicator	2.4.d
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of the general population that reports exposure to secondhand smoke in outdoor public places, including bar and restaurant patios, parks, beaches, outdoor sporting arenas, and concert venues.
Why this indicator is useful	Eliminating secondhand smoke exposure in outdoor public spaces can protect children, youth, and nonsmoking adults from the health effects of secondhand smoke in these environments, and can help reinforce tobacco-free social norms.[1]
Example data source(s)	**California Adult Tobacco Survey (CATS), 2008** Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPCaliforniaAdultTobaccoSurvey2008.pdf **National Adult Tobacco Survey (NATS), 2010** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/
Population group(s)	General Population
Example survey question(s)	**From CATS** In the past two weeks, have you been exposed to other people's tobacco smoke on campus outdoors? • Yes • No • Don't know • Refused • Don't know/Not sure **Modified from NATS** [Not counting times while you were at work,] during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did you breathe the smoke from someone else who was smoking in an outdoor public place? • __Number of days • None • Don't know/Not sure • Refused **From SCS-TC** During the past SEVEN DAYS, in which of the following places have you smelled secondhand smoke? • In your home • In your car

- In someone else's car
- At work
- On a public sidewalk
- Outside the door way of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments

It is particularly useful for programs in areas with limited smokefree polices to ask about location of exposure (as the SCS-TC does).

In addition to self-report, air quality monitoring can be used to monitor secondhand smoke exposure. For more information, refer to the *Evaluation Toolkit for Smoke-free Policies*.[2]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	◒	◒	◒	◒
			← ○ ◒ ◒ ● → better		

References

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Indicator 2.4.e^{NR}

Proportion of Children, Youth, and Young Adults Exposed to Secondhand Smoke in Childcare or School Settings

Indicator	2.4.e^{NR}
KOI 2005	2.7.4
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of children and youth exposed to secondhand tobacco smoke while in childcare settings, on school grounds, at school-sponsored functions, or in school vehicles
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease among children and adults who do not smoke.[1-3] Young people spend many of their waking hours in childcare or school settings, where they might be exposed to secondhand smoke or other tobacco products.[4-5]
Example data source(s)	**Early Childhood Environment Rating Scale (ECERS), Health Practice Subscale** Information available at: http://ers.fpg.unc.edu/early-childhood-environment-rating-scale-ecers-r **National Youth Tobacco Survey (NYTS), 2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Students, parents, staff
Example survey question(s)	**From ECERS** Smoking does not take place in child care areas. • Yes • No **From NYTS** During the past 7 days, on how many days did you breathe the smoke from someone who was smoking a tobacco product at your school, including school buildings, school grounds, and school parking lots? • 0 days • 1 day • 2 days • 3 days • 4 days • 5 days • 6 days • 7 days
Comments	As with other indicators in Outcome 4, exposure to secondhand smoke can be measured in a variety of ways. Using mixed methods to evaluate exposure to secondhand smoke is important to consider for very young children to improve validity and reliability of self-reported data. In these cases, the use of biomarkers, air quality monitoring, and observation methods may be warranted.

Rating	Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	⊘	⊘	⊘	⊘	⊘	⊘
				← ○ ◒ ◓ ● → better		

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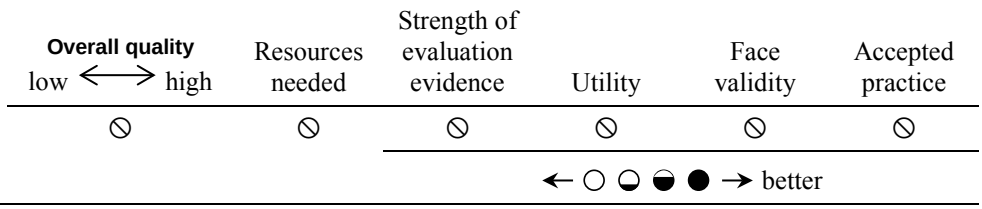
Indicator 2.4.f

Proportion of Students, Faculty, and Staff Exposed to Secondhand Smoke on College Campuses

Indicator	2.4.f[NR]
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of students, faculty, and staff exposed to secondhand tobacco smoke while on college campuses.
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease in children and adults who do not smoke.[1-3] Comprehensive tobacco-free policies at college campuses are effective in reducing exposure to secondhand smoke among students and has been linked to lower smoking rates.[4,5]
Example data source(s)	**Tobacco Free College Assessment Survey for Staff, Faculty, and Students (TFCAS), Wake Forest Baptist Health**[6] Information available at: http://www.wakehealth.edu/uploadedFiles/User_Content/Research/Departments/Public_Health_Sciences/Tobacco_Free_Colleges/Tobacco-Free%20Manual_Appendix%207.pdf **University of California San Francisco (UCSF) California campus survey, 2014**[4] Information available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4431121/
Population group(s)	Students, faculty, and staff at a given university
Example survey question(s)	**From TFCAS** When I walk through campus, I am [exposed] to secondhand smoke: • Never • Rarely • Sometimes • Often • Always **From UCSF California campus survey**: "In the past 7 days, I have been exposed to other people's tobacco smoke on campus (yes/no)."
Comments	In addition to self-report, exposure to secondhand smoke on a tobacco-free campus could be measured through observation of smokers, discarded cigarette butt data, and air quality monitoring, if resources are available.[7-8]
Rating	

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Indicator 2.4.g

Proportion of Multiunit Housing Residents Exposed to Secondhand Smoke Incursions into Their Homes from Nearby Units or Shared Areas

Indicator	2.4.g
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of multiunit housing residents reporting exposure to secondhand smoke from nearby housing units or shared areas
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease in children and adults who do not smoke.[1-3] Because smoke can travel through walls, air ducts, windows, and ventilation systems,[4] about a third of multiunit housing residents with l smokefree home rules still experience secondhand smoke infiltration into their homes.[5] Each year, an estimated 27.6 to 28.9 million U.S. multiunit housing residents with smokefree home rules experience secondhand smoke incursions in their unit from elsewhere in their building.[6]
Example data source(s)	**National Adult Tobacco Survey (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **Social Climate Survey of Tobacco Control (SCS-TC), 2015** Information available at: http://www.socialclimate.org/
Population group(s)	Multiunit housing residents
Example survey question(s)	**From NATS** In what type of living space do you currently reside? • A one-family house detached from any other house • A one-family house attached to one or more houses • A building with 2 apartments or living units • A building with 3 to 9 apartments or living units • A building with 10 to 49 apartments or living units • A building with 50 or more apartments or living units • A mobile home, boat, RV, or van • Some other type of living space • DON'T KNOW • REFUSED How often does tobacco smoke enter your living space from somewhere else in or around the building? • Every day • A few times a week • A few times a month • Once a month or less • Never • DON'T KNOW • REFUSED

Modified from SCS-TC

Which of the following best describes the building in which you live? Would you say:

- A mobile home
- A one-family house detached from any other house
- A one-family house attached to one ore more houses
- An apartment or condominium building
- Other

The next series of questions are about where you live. In the past 30 days, have you smelled tobacco smoke…?

- In outdoor areas
  - o Yes
  - o No
- On your balcony
  - o Yes
  - o No
  - o Not applicable
- In indoor staircases
  - o Yes
  - o No
  - o Not applicable
- In elevators
  - o Yes
  - o No
  - o Not applicable
- Some other place
  - o Yes
  - o No

Comments

Evaluators can compare responses to measures of this indicator among those with and without smokefree home rules.

As with other indicators in Outcome 4, exposure to secondhand smoke can be measured in a variety of ways. Using mixed methods to evaluate exposure to secondhand smoke is important to consider for very young children to improve validity and reliability of self-reported data. In these cases, the use of biomarkers, air quality monitoring, and observation methods may be warranted.

Resident surveys of secondhand smoke exposure in the home from external sources have been measured in a variety of ways, from secondhand smoke drifting into the apartment from outside, to asking whether or how often respondents have *smelled, breathed, or noticed* tobacco smoke in their living spaces, or whether tobacco smoke has *entered* or *come into* their unit.[7] When relying on self-report, items that measure frequency of exposure to *any* combustible tobacco product provide the best measure of exposure.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	◒	●
		← ○ ◒ ◒ ● → better			

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Indicator 2.4.h

Proportion of the Population Exposed to Secondhand Smoke Originating in Their Homes

Indicator	2.4.h
KOI 2005	2.7.3
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of the population reporting exposure to secondhand smoke originating in their homes
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease in children and adults who do not smoke.[1-3] In the United States, the home is a major location for secondhand smoke exposure among adults and the primary source of exposure for youth.[1] Although exposure among U.S. nonsmokers declined overall among all population groups during the past 20 years, an estimated one quarter of U.S. nonsmokers were still exposed to secondhand smoke, including 15 million children aged 3-11 years, highlighting the importance of voluntary smokefree home and vehicle rules.[4]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS), 2011, Module 16** Information available at: http://www.cdc.gov/brfss/questionnaires.htm#archive **National Adult Tobacco Survey (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Health and Nutrition Examination Survey (NHANES), 2013–2014** Information available at: http://wwwn.cdc.gov/nchs/nhanes/search/nhanes13_14.aspx **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/
Population group(s)	General population
Example survey question(s)	**From BRFSS** Not counting decks, porches, or garages, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did someone other than you smoke tobacco inside your home while you were at home? • Number of days [01–07] • None • Don't know/Not sure • Refused **From NATS** Not counting decks, porches, or garages, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], on how many days did someone other than you smoke tobacco inside your home while you were at home? • __Number of days • None • Don't know/Not sure • Refused

From NHANES

(Not counting decks, porches, or detached garages) During the past 7 days, that is since last [TODAY'S DAY OF WEEK], on how many days did {anyone who lives here/you}, smoke tobacco inside this home?

- __Number of days 0 to 7
- Don't know
- Refused

From SCS-TC

During the past SEVEN DAYS, in which of the following places have you smelled secondhand smoke?

- In your home
- In your car
- In someone else's car
- At work
- On a public sidewalk
- Outside the door way of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments

Evaluators could consider adding a question about children living in the home to estimate exposure among children.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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Indicator 2.4.i

Proportion of the Population Exposed to Secondhand Smoke in Vehicles

Indicator	2.4.i
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 4	Reduced exposure to secondhand smoke
What to measure	Proportion of the population reporting exposure to secondhand smoke in vehicles
Why this indicator is useful	Exposure to secondhand smoke is a major cause of premature death and disease in children and adults who do not smoke.[1-3] Although exposure among U.S. nonsmokers declined overall among all population groups in the U.S. during the past 20 years, an estimated one quarter of U.S. nonsmokers were still exposed to secondhand smoke, including 15 million children aged 3–11 years, highlighting the importance of voluntary smokefree home and vehicle rules.[4] Because of the confined space within them, vehicles are an important environment for secondhand smoke exposure, posing health risks for passengers.[5-6]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS), 2011, Module 16** Information available at: http://www.cdc.gov/brfss/questionnaires.htm#archive **National Adult Tobacco Survey (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Youth Tobacco Survey (NYTS), 2015** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ **Social Climate Survey of Tobacco Control (SCS-TC), 2014** Information available at: http://www.socialclimate.org/
Population group(s)	General Population
Example survey question(s)	**From BRFSS** During the past 7 days, that is, since last [TODAY‟S DAY OF WEEK], on how many days did you ride in a vehicle where someone other than you was smoking tobacco? • Number of days [01-07] • None • Don’t know / Not sure • Refused **From NATS** During the past 7 days, that is, since last [TODAY’S DAY OF WEEK], on how many days did you ride in a vehicle where someone other than you was smoking tobacco? • __Number of days • None • Don’t know/Not sure • Refused **From NYTS** During the past 7 days, on how many days did you ride in a vehicle where someone was smoking a tobacco product? • 0 days • 1 day • 2 days

- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

From SCS-TC

During the past SEVEN DAYS, in which of the following places have you smelled secondhand smoke?

- In your home
- In your car
- In someone else's car
- At work
- On a public sidewalk
- Outside the door way of a building
- In an indoor public place, such as a restaurant or salon
- On other public transport
- In some other indoor place, such as a friend's home

Comments None noted

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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Outcome 5

Reduced Tobacco Consumption

In addition to protecting nonsmokers from exposure to secondhand smoke, smokefree policies can reduce tobacco use prevalence, increase tobacco use cessation, reduce cigarette use by continuing users, and decrease initiation among youth and young adults.[1] Smoking rates are significantly lower among young people in communities with comprehensive smokefree policies.[1] Research has found that comprehensive smokefree policies are more effective than partial policies at reducing tobacco consumption.[2] In addition, the connection between smokefree policies and tobacco use reduction is enhanced if smokefree policies are part of well-planned and well-funded tobacco control efforts.[3-5]

Comprehensive smokefree policies may affect tobacco consumption through a number of pathways. Smokefree policies mean that smokers have fewer opportunities to smoke, which results in reduced consumption.[6] For smokers trying to reduce their consumption or quit altogether, smokefree policies can reduce environmental cues, such as seeing others smoking and being exposed to secondhand smoke, which can result in relapse.[7] For youth and young adults, smokefree laws also decrease the social acceptability of smoking by establishing a smokefree norm and limiting exposure to role models using tobacco.[6,8] Messages of social disapproval may be especially effective with youth and young adults.

Policies that reduce secondhand smoke exposure are a priority to reduce tobacco-related disparities.[9] Smokefree policies result in equivalent reductions in smoking in higher and lower education and income groups. However, compared to high socioeconomic status (SES) groups, a higher proportion of lower SES groups continue to use tobacco and are less likely to have smokefree policies in the home.[6] Smokefree home rules can be especially important for reducing tobacco use disparities. Low-income current smokers with smokefree home rules have tobacco consumption and quit rates similar to those of high-income smokers.[10] Research among youth also suggests that smokefree home rules could have a positive impact on youth perceptions of the social acceptability of smoking and smoking initiation independent of parental smoking status.[8,11,12]

The following indicators are associated with this outcome:

- **2.5.a** Per capita consumption of tobacco products
- **2.5.b** Average number of each tobacco product used per day by tobacco users
- **2.5.c** Tobacco use prevalence
- **2.5.d** Proportion of young people who have never tried a tobacco product
- **2.5.e** Proportion of tobacco users who have sustained abstinence from tobacco use

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For Further Reading

Orzechowski and Walker. *Tax burden on tobacco, historical compilation, Vol 49*. Arlington, VA: Orzechowski and Walker; 2014. Available at: http://www.taxadmin.org/assets/docs/Tobacco/papers/tax_burden_2014.pdf.

Outcome 5

Reduced Tobacco Consumption

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
2.5.a	Per capita consumption of tobacco products		$$	●	●	●	●
2.5.b	Average number of each combustible or heated tobacco product used per day by tobacco users		$	●	●	●	●
2.5.c	Tobacco use prevalence		$	●	●	●	●
2.5.d	Proportion of young people who have never tried a tobacco product		$	●	●	●	●
2.5.e	Proportion of tobacco users who have sustained abstinence from tobacco use		$	●	●	●	●

$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but are instead a relative measure of expert reviewers' ratings regarding resources required to collect and analyze data to measure the indicator.

⦸ Denotes no data.

NR Denotes an indicator that is not rated (see Appendix C for an explanation).

Indicator 2.5.a

Per Capita Consumption of Tobacco Products

Indicator	2.5.a
KOI 2005	2.8.1
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 5	Reduced tobacco consumption
What to measure	Number of tobacco products sold per adult aged 18 or older in the state, by type
Why this indicator is useful	Smokefree policies can decrease consumption of tobacco products and nonsmokers' exposure to secondhand smoke.[1-3] Moreover, per capita consumption of tobacco products provides estimates of tobacco use[4] and can indirectly indicate potential exposure to secondhand smoke.
Example data source(s)	**Excise tax data from the U.S. Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau** **State departments of revenue** **The Tax Burden on Tobacco**[5] Available at: http://www.taxadmin.org/assets/docs/Tobacco/papers/tax_burden_2014.pdf.
Population group(s)	Not applicable. This indicator is best measured by examining tax records to assess state tobacco sales.
Example survey question(s)	Not applicable
Comments	The three standard approaches for measuring consumption are (1) analyzing tobacco excise tax data; (2) analyzing retail sales scanner data compiled by commercial vendors, such as the Nielsen Company; and (3) surveying a representative sample of the public and asking questions about personal consumption levels. The U.S. Department of Agriculture, which previously provided estimates based on tax data, stopped reporting on tobacco consumption in 2007. The Centers for Disease Control and Prevention (CDC) now uses excise tax data from the U.S. Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau to estimate consumption (see https://ttb.gov/tobacco/index.shtml). Evaluators need to measure statewide consumption of cigarettes, smokeless tobacco, and other tobacco products separately, including e-cigarettes.

Rating

Overall quality: low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$$	●	●	●	●

← ○ ◒ ◓ ● → better

References

1. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.

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Indicator 2.5.b

Average Number of Each Combustible or Heated Tobacco Product Consumed per Day by Tobacco Users

Indicator	2.5.b
KOI 2005	2.8.2
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 5	Reduced tobacco consumption
What to measure	The average number of each combustible or heated aerosol tobacco products consumed per day by tobacco users. Combustible tobacco products include cigarettes, cigars, little cigars, cigarillos, regular pipes, and hookah (water pipe). Heated products include a variety of e-cigarette products, including vape pens, and e-hookahs.
Why this indicator is useful	Monitoring the number of combustible product units consumed is important for planning and evaluation of tobacco control efforts and reduction of secondhand smoke exposure.[1-3]
Example data source(s)	**National Adult Tobacco Survey (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Health Interview Survey (NHIS), 2014** Information available at: http://www.cdc.gov/nchs/nhis.htm **National Youth Tobacco Survey (NYTS), 2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ **Population Assessment of Tobacco and Health (PATH) Study, 2015** Information available at: http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201506-0925-002&icID=212557 **Tobacco Use Supplement to the Current Population Survey (TUS-CPS), 2010–2011** Information available at: http://riskfactor.cancer.gov/studies/tus-cps/ **Youth Risk Behavior Surveillance System (YRBSS), 2015** Information available at: http://www.cdc.gov/healthyyouth/yrbs/index.htm
Population group(s)	Tobacco users
Example survey question(s)	**From NATS** On average, about how many cigarettes do you now smoke each day? • ___Number of cigarettes • Less than one cigarette a day • None • Don't know/Not sure • Refused Someday smokers: "On the day that you smoked, how many cigarettes did you smoke?," "On the average, on those days, how many cigarettes did you usually smoke each day?"] • ___Number of cigarettes • Less than one cigarette a day • None • Don't know/Not sure • Refused

From NHIS

On the average, how many cigarettes do you now smoke a day?

- ___Number of cigarettes
- Enter "1" if less than 1 cigarette.
- Enter "95" if 95 or more cigarettes.
- Refused
- Don't know

Someday smokers: On the average, when you smoked during the PAST 30 DAYS, about how many cigarettes did you smoke a day?

- ___Number of cigarettes
- Enter "1" if less than 1 cigarette.
- Enter "95" if 95 or more cigarettes.
- Refused
- Don't know

From NYTS

During the past 30 days, on the days you smoked, about how many cigarettes did you smoke per day?

- I did not smoke cigarettes during the past 30 days
- Less than one cigarette per day
- 1 cigarette per day
- 2 to 5 cigarettes per day
- 6 to 10 cigarettes per day
- 11 to 20 cigarettes per day
- More than 20 cigarettes per day

From PATH

When did you last smoke a pipe filled with tobacco?

- In the past hour
- Sometime today
- Yesterday
- Day before yesterday
- Three or more days ago
- Don't know
- Refused

How many bowls filled with pipe tobacco have you smoked/did you smoke since [insert time based on previous question]?

When did you last smoke hookah?

- In the past hour
- Sometime today
- Day before yesterday
- Three or more days ago
- Don't know
- Refused

How many puffs from a hookah have you taken/did you take since [insert time based on previous question]?

When did you last use an e-cigarette?

- In the past hour
- Sometime today
- Yesterday
- Day before yesterday
- Three or more days ago
- Don't know
- Refused

How many puffs from an e-cigarette have you taken/did you take since [insert time based on previous question]?

From TUS-CPS

On the average, about how many cigarettes do you now smoke each day?

__ Enter number of cigarettes per day (1–99)

Would you say that, on average, you now smoke more or less than 20 cigarettes each day?

- More
- Less
- About 20 (one pack)

I have recorded that on the average, you now smoke [fill entry B1] cigarettes a day. Is that correct?

- Yes
- No

From YRBSS

During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

- I did not smoke cigarettes during the past 30 days
- Less than one cigarette per day
- 1 cigarette per day
- 2 to 5 cigarettes per day
- 6 to 10 cigarettes per day
- 11 to 20 cigarettes per day
- More than 20 cigarettes per day

Comments

Calculating the average number of cigarettes smoked per day by adults requires combining data for everyday smokers and someday smokers. Evaluators could stratify estimates by daily versus non-daily users.

For poly users (people who use more than one tobacco product), it is important to measure the number of *each* product used.

Evaluators should be advised that measures and methods to monitor e-cigarette consumption are under development. Existing questions on ever and current use of e-cigarette limit the ability to distinguish between trial or experimental users and more frequent and routine users of various types of e-cigarettes.

Rating	Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
		$	●	●	●	●
			← ○ ◒ ◒ ● → better			

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Indicator 2.5.c

Tobacco Use Prevalence

Indicator	2.5.c
KOI 2005	2.8.3
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 5	Reduced tobacco consumption
What to measure	The proportion of the population using tobacco products that contribute to secondhand smoke exposure, including the following: • For cigarettes: proportion of adults aged 18 years or older who have smoked at least 100 cigarettes in their lifetime and who now report smoking cigarettes every day or some days and proportion of youth who report smoking on at least 1 day of the past 30 days. • For cigars/cigarillos/little cigars: proportion of adults aged 18 years or older who report smoking cigars/cigarillos/little cigars every day or some days and proportion of youth who report smoking cigars/cigarillos/little cigars n at least 1 day of the past 30 days. • For regular pipes/water pipes/hookah: proportion of adults aged 18 years or older who report using smoked regular pipes/water pipes/hookah every day or some days and proportion of youth who have used regular pipes/water pipes/hookah on at least 1 day of the past 30 days. • E-Cigarettes: proportion of adults aged 18 years or older who report using e-cigarettes every day or some days and proportion of youth who have used e-cigarettes at least 1 day of the past 30.
Why this indicator is useful	Reducing the prevalence of combustible tobacco use is necessary to improve air quality and reduce exposure to secondhand smoke from tobacco products.[1-2] Research has shown that smokefree policies reduce the prevalence of tobacco use.[3]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS): Core Module, 2011 and 2013** Information available at: http://www.cdc.gov/brfss/ **National Adult Tobacco Survey (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Health Interview Survey (NHIS), 2014** Information available at: http://www.cdc.gov/nchs/nhis.htm **National Youth Tobacco Survey (NYTS), 2011** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ **Population Assessment of Tobacco and Health (PATH), 2015** Information available at: http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201506-0925-002&icID=212557 **Youth Risk Behavior Surveillance System (YRBSS), 2015** Information available at: http://www.cdc.gov/healthyyouth/yrbs/index.htm
Population group(s)	All tobacco users
Example survey question(s)	**From BRFSS and NATS:** Have you smoked at least 100 cigarettes in your entire life? • Yes

- No
- Don't know/Not sure
- Refused

Do you now smoke cigarettes every day, some days, or not at all?

- Every day
- Some days
- Rarely
- Not at all
- Don't know/Not sure
- Refused

From NATS:

Do you now smoke cigars, cigarillos, or little filtered cigars every day, some days, rarely, or not at all?

- Every day
- Some days
- Rarely
- Not at all
- Don't know/Not sure
- Refused

Do you now smoke a regular pipe filled with tobacco every day, some days, rarely, or not at all?

- Every day
- Some days
- Rarely
- Not at all
- Don't know/Not sure
- Refused

Do you now use electronic cigarettes everyday, some days, rarely, or not at all?

- Every day
- Some days
- Rarely
- Not at all
- Don't know/Not sure
- Refused

From NHIS

Do you NOW smoke cigarettes every day, some days, or not at all?

- Every day
- Some days
- Not at all
- Refused
- Don't know

Do you NOW smoke tobacco products other than cigarettes every day, some days, rarely, or not at all?

- Every day
- Some days
- Rarely

- Not at all
- Refused
- Don't know

Do you now use e-cigarettes every day, some days, or not at all?

- Every day
- Some days
- Not at all
- Refused
- Don't know

From NYTS

During the past 30 days, on how many days did you smoke cigarettes?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

During the past 30 days, on how many days did you smoke tobacco in a pipe?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

During the past 30 days, on how many days did you smoke cigarettes?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

During the past 30 days, which of the following products have you used at least one day?

- Roll-your-own cigarettes
- Bidis (small brown cigarettes wrapped in a leaf)
- Clove cigarettes (kreteks)
- Smoking tobacco from hookah or a waterpipe
- Electronic cigarettes or E-cigarettes, such as Ruyan or NJOY
- Some other new tobacco product not listed here
- I have not used any of the products listed above or any new tobacco product during the past 30 days

From PATH

In the past 30 days, have you used an electronic nicotine product, even one or two times? (Electronic nicotine products include e-cigarettes, vape pens, hookah pens, personal vaporizers and mods, e-cigars, epipes, and e-hookahs.)

- Yes
- No

From YRBSS

Have you ever tried cigarette smoking, even one or two puffs?

- Yes
- No

During the past 30 days, on how many days did you smoke cigarettes?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

During the past 30 days, on how many days did you use an electronic vapor product?

- 0 days
- 1 or 2 days
- 3 to 5 days
- 6 to 9 days
- 10 to 19 days
- 20 to 29 days
- All 30 days

Comments

Prevalence of total tobacco use will include smokeless tobacco and other noncombustible tobacco products, but because this goal area focuses on secondhand smoke, only measures for tobacco products that emit smoke or aerosol are presented.

To maintain consistency with some previously published studies, the use of lifetime thresholds for non-cigarette tobacco products could also be considered in the calculation of current use of these products (e.g., used at least once in their lifetime and now report use on at least 1 day of the past 30 days)

	In addition to capturing tobacco prevalence, evaluators may also want to assess average number of tobacco products used per day to estimate tobacco use intensity (Indicator 2.5.b). This information can be useful in considering population-attributable risk. This indicator can be used to measure progress toward achieving Objective TU-1 of Healthy People 2020 Objective: "Reduce tobacco use by adults and TU-2 Reduce tobacco use by adolescents."[4]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◓ ● → better			

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1. U.S. Department of Health and Human Services. *The health consequences of smoking: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004.
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Indicator 2.5.d

Proportion of Young People Who Have Never Tried a Tobacco Product

Indicator	2.5.d
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 5	Reduced tobacco consumption
What to measure	As a measure of social norm change related to smokefree interventions, the proportion of youth and young adults who have never tried smoking or using any other tobacco products
Why this indicator is useful	Smoking initiation primarily occurs during adolescence.[1-2] Reducing the number of youth who experiment with tobacco products reduces tobacco use prevalence and can be indicative of social norm changes related to smokefree interventions.[2-3]
Example data source(s)	**National Adult Tobacco Survey (NATS), 2012–2013** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ **Youth Risk Behavior Surveillance System (YRBSS), 2015** Information available at: http://www.cdc.gov/healthyyouth/yrbs/index.htm
Population group(s)	Youth younger than age 18 and young adults aged 18 to 25
Example survey question(s)	**From NATS** Have you ever tried cigarette smoking, even one or two puffs? • Yes • No Have you ever tried smoking cigars, cigarillos, or very small cigars that look like cigarettes in your entire life, even one or two puffs? • Yes • No • Don't know/Not sure • Refused Have you ever tried smoking tobacco in a water pipe in your entire life, even one or two puffs? • Yes • No • Don't know/Not sure • Refused Have you ever smoked tobacco in a pipe other than a water pipe in your entire life, even one or two puffs? • Yes • No • Don't know/Not sure • Refused

From NYTS

Have you ever tried cigarette smoking, even one or two puffs?

- Yes
- No

Have you ever tried smoking cigars, cigarillos, or little cigars, such as Black and Mild, Swisher Sweets, Dutch Masters, White Owl, or Phillies Blunts, even one or two puffs?

- Yes
- No

Which of the following tobacco products have you ever tried, even just one time?

- Smoking tobacco from a hookah or a waterpipe
- Pipe filled with tobacco (not waterpipe)
- Snus, such as Camel or Marlboro Snus
- Bidis (small brown cigarettes wrapped in a leaf)
- I have never tried any of the products listed above

From YRBSS

Have you ever tried cigarette smoking, even one or two puffs?

- Yes
- No

Comments

Given the application of this outcome indicator for reducing exposure to secondhand smoke, evaluators could consider capturing information on the reach and dose of related smokefree policies/interventions as well as more proximal measures of knowledge and attitude change among the population of focus.

Example survey items in this profile cover combustible tobacco products only, But evaluators can also include measures of noncombustible tobacco products.

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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Indicator 2.5.e

Proportion of Tobacco Users Who Have Sustained Abstinence from Tobacco Use

Indicator	2.5.e
KOI 2005	New
Goal Area 2	Eliminating exposure to secondhand smoke
Outcome 5	Reduced tobacco consumption
What to measure	As a measure of social norm change and direct effects related to smokefree interventions, the proportion of former tobacco users who have sustained abstinence from tobacco use for 6 months or longer
Why this indicator is useful	Abstinence from tobacco use reduces tobacco use prevalence and exposure to secondhand smoke. Studies have found that smokefree policies support and increase tobacco use cessation.[1-2]
Example data source(s)	**Behavioral Risk Factor Surveillance System (BRFSS): Tobacco Use Module, 2011** Information available at: http://www.cdc.gov/brfss/ **National Adult Tobacco Survey (NATS), 2013–2014** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nats/ **National Health Interview Survey (NHIS): Adult Survey, 2014** Information available at: http://www.cdc.gov/nchs/nhis.htm **National Youth Tobacco Survey (NYTS), 2011** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Former tobacco users
Example survey question(s)	**From BRFSS** How long has it been since you last smoked a cigarette, even one or two puffs? • Within the past month (less than 1 month ago) • Within the past 3 months (1 month but less than 3 months ago) • Within the past 6 months (3 months but less than 6 months ago) • Within the past year (6 months but less than 1 year ago) • Within the past 5 years (1 year but less than 5 years ago) • Within the past 10 years (5 years but less than 10 years ago) • 10 years or more • Don't know/Not sure • Refused **From NATS** How long has it been since you completely stopped smoking cigarettes? • Day(s) • Week(s) • Month(s) • Year(s) • Date • Today • Don't know/Not sure • Refused

Have you completely quit using all types of tobacco products, including cigarettes, smokeless tobacco, e-cigarettes, cigars, and pipes?

- Yes
- No
- Don't know
- Refused

From NHIS

Have you smoked at least 100 cigarettes in your ENTIRE LIFE?

- Yes
- No
- Refused
- Don't know

Do you NOW smoke cigarettes every day, some days, or not at all?

- Every day
- Some days
- Not at all
- Refused
- Don't know

How long has it been since you quit smoking cigarettes? _____

From NYTS

When was the last time you smoked a cigarette, even one or two puffs? (PLEASE CHOOSE THE FIRST ANSWER THAT FITS)

- I have never smoked even one or two puffs
- Earlier today
- Not today but sometime during the past 7 days
- Not during the past 7 days but sometime during the past 30 days
- Not during the past 30 days but sometime during the past 6 months
- Not during the past 6 months but sometime during the past year
- 1 to 4 years ago
- 5 or more years ago

When you last tried to quit for good, how long did you stay off cigarettes? (PLEASE CHOOSE THE FIRST ANSWER THAT FITS)

- I have never smoked cigarettes
- I have never tried to quit
- Less than a day
- 1 to 7 days
- More than 7 days but less than 30 days
- More than 30 days but less than 6 months
- More than 6 months but less than 1 year
- 1 year or more

Comments

Evaluators can modify the example questions to measure sustained abstinence from all tobacco products and ask current smokers about their last quit attempt or longest quit attempt, since an increase in the duration of a quit attempt (even if the smoker begins smoking again) could indicate progress toward cessation.

To date, research is limited on the effectiveness of e-cigarettes as a cessation aid. There is currently no conclusive scientific evidence that e-cigarettes promote long-term cessation. Nevertheless, some people who use e-cigarettes are using it to quit. Evaluators can calculate cessation rates by including continuing e-cigarettes users as quit or by classifying people as quit only if they are not using any tobacco products, including e-cigarettes.

"Former smokers" can be derived by combining the variable of lifetime smoking (≥ 100 cigarettes) and current cigarette smoking (smoked zero cigarettes during the past 30 days).

This indicator can be used to measure progress toward achieving Objective TU-5.1 of Healthy People 2020 Objective: "Increase recent smoking cessation success by adult smokers."[3]

Rating

Overall quality low ⟷ high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
	$	●	●	●	●
		← ○ ◒ ◒ ● → better			

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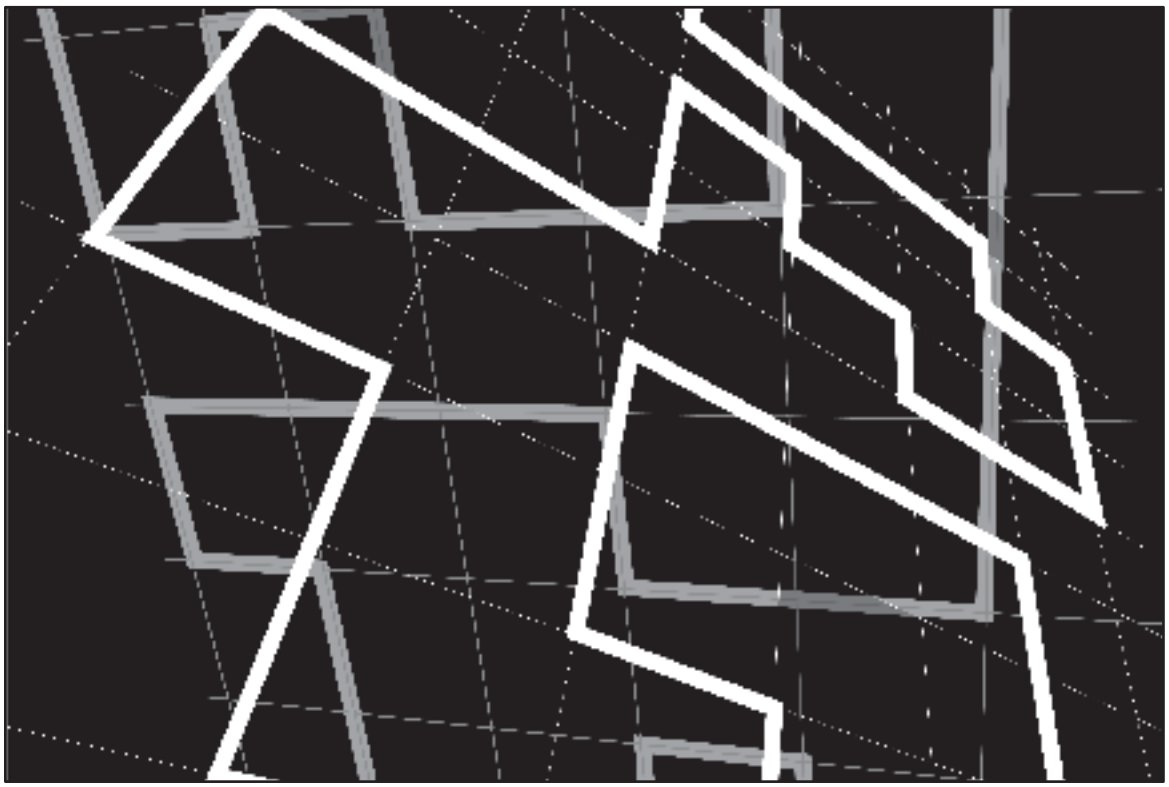
Electronic Cigarettes (E-Cigarettes)



Addendum: Electronic Cigarettes

The indicators presented in this guide are particularly useful for measuring progress toward reducing cigarette smoking and exposure to smoke from burning tobacco products, such as cigarettes, cigars, and pipes. Although exposure to secondhand smoke from combustible tobacco products remains the primary health hazard for nonsmokers exposed to the harmful chemicals emitted in the air from tobacco products,[1] the diversification of the tobacco product landscape presents new challenges to public health policy and practice. Emerging tobacco products are being heavily developed and marketed.[2,3] While cigarette smoking has declined over the past several decades, the use of electronic cigarette (e-cigarettes) products has become prominent, particularly among youth.[3-8] Furthermore, the product characteristics and marketing landscape for e-cigarette products continues to evolve. Significant questions remain about the long-term health effects of e-cigarette use and its impact on patterns of conventional tobacco use, including understanding how e-cigarette may influence tobacco use, cessation, and tobacco-related polices and social norms.

E-cigarettes include a diverse group of devices designed to deliver aerosolized nicotine and additives to users. These devices are referred to, by companies, the media, and by consumers by a variety of terms, including "e-cigarettes," "e-cigs," "cigalikes," "e-hookahs," "mods," "vape pens," "vapes," and "tank systems." In this guide, the term "e-cigarette" is used to represent all the various products in this continually evolving product category. Since their introduction to the United States in 2007, marketing and sales of e-cigarettes has expanded rapidly.[3,5-6] While cigarette smoking among youth and adults has decreased considerably over the past several decades, reported use of e-cigarettes has markedly increased.[5-9] The use of e-cigarettes among U.S. high school students increased 900% during 2011-2015, before declining for the first time in 2016. E-cigarettes have been the most commonly used tobacco product among youth since 2014.[5,6] In 2016, 11.3% of U.S. high school students and 4.3% of middle school students had used e-cigarettes within the past 30 days.[10] Among adults, current e-cigarette use nearly tripled from 2010 (1.3%) to 2014 (3.8%), with use being primarily among current and former cigarette smokers.[8]

The U.S. Surgeon General has concluded that e-cigarette aerosol is not harmless; it can contain harmful and potentially harmful constituents, including nicotine, carbonyl compounds, and volatile organic compounds.[3,11-13] Nicotine exposure poses dangers to youth, pregnant women, and fetuses.[1,3] Air free of secondhand combusted tobacco smoke and e-cigarette aerosol remains the standard to protect health.[3] States and local jurisdictions play a critical role in protecting the public from secondhand smoke and secondhand e-cigarette aerosol exposure. Clean indoor air or smokefree policies prohibits the use of conventional tobacco products in indoor places, including worksites, restaurants, and bars. However, many of these policies do not extend to e-cigarette use. In 2016, the U.S. Surgeon General recommended including e-cigarettes in smokefree indoor air policies to protect the public from both secondhand smoke and secondhand aerosol exposure.[3] These policies help maintain current standards for clean indoor air, prevent involuntary exposure

to nicotine and other potentially harmful emissions from e-cigarettes, and help sustain tobacco-free norms.[3]

Studies have found lower levels of public support for prohibiting e-cigarette use indoors compared with public support for prohibiting the use of combustible tobacco indoors.[3,14-15] This lower level of public support may be due to perceptions that e-cigarettes have minimal health risks.[14-15] Furthermore, enforcement of existing smoke-free laws may also become complicated if the public is confused about which product is being used if they observe either e-cigarettes or combustible tobacco use indoors. Accordingly, efforts to educate the public about the harmful and potentially harmful effects of secondhand e-cigarette aerosol exposure are warranted.[3]

Tobacco control programs should consider all tobacco product use within their community, including e-cigarettes, when making decisions regarding surveillance and evaluation activities. When the revised Goal 2 indicators were developed and reviewed by the expert panel, scientific literature for e-cigarettes was still emerging. Since then, growing evidence on the potential health effects of e-cigarette use and its impact on patterns of tobacco use prompted the need to create a set of developmental indicators to actively monitor and assess e-cigarette perceptions, exposure, and policy-related activities within the context of tobacco prevention and control efforts. These indicators were not reviewed by the expert panel, and thus, the indicator profiles do not include criteria ratings. These indicators are presented to stimulate advancement of e-cigarette-related surveillance and evaluation efforts in tobacco control programs.

Listed below are the e-cigarette developmental indicators addressed in the addendum, limited to secondhand e-cigarette aerosol exposure outcomes relevant to this Goal 2 indicator guide. E-Cigarette 2.1 and E-Cigarette 2.4 focus on perceived harm and exposure for e-cigarette only, so they should be used in conjunction with indicators 2.1.a and 2.4.a. In contrast, E-Cigarette 2.2 and E-Cigarette 2.3 focus on broader smokefree policies, so they may serve as "replacement" indicators for 2.2.a and 2.3.a, respectively.

- E-Cigarette 2.1 Proportion of the population that thinks secondhand e-cigarette aerosol is harmful
- E-Cigarette 2.2 Proportion of jurisdictions with comprehensive smoke-free policies, including e-cigarettes, for indoor public places
- E-Cigarette 2.3 Compliance with smoke-free policies, including e-cigarettes, in public places and workplaces
- E-Cigarette 2.4 Proportion of non-users exposed to secondhand e-cigarette aerosol

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For Further Reading

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Eliminating Exposure to Secondhand E-Cigarette Aerosol: Outcome Indicators for Comprehensive Tobacco Control Programs—2016

E-Cigarette 2.1

Proportion of the Population that Thinks Secondhand Aerosol from E-Cigarettes Is Harmful

Indicator	E-Cigarette 2.1
What to measure	Proportion of the population that thinks exposure to secondhand aerosol from e-cigarettes is harmful to health
Why this indicator is useful	Research on combustible tobacco products has shown that perceptions and beliefs regarding the harmfulness of exposure to secondhand smoke influences public attitudes toward smoke-free restrictions.[1-4] This evidence suggests that perceptions of harm related to e-cigarette aerosol may affect public attitudes toward smokefree policies that include e-cigarettes. Although knowledge of the harms of secondhand smoke from combustible tobacco products is widespread,[5] little is known about public perceptions of the harm associated with secondhand e-cigarette aerosol.
Example data source(s)	No commonly used data sources were found.
Population group(s)	General population
Example survey question(s)	**Modified from the National Adult Tobacco Survey** to address secondhand e-cigarette aerosol exposure, not just exposure to secondhand smoke from combustible tobacco products (as in Tan et al.[6] and Mello et al.[7]). Do you think that breathing vapor from other people's electronic cigarettes is… • Very harmful to my health • Somewhat harmful to my health • Not at all harmful to my health • Don't know/Not sure • Refused How concerned would you be about the impact on your health of breathing vapor from other people's electronic cigarettes if you were regularly exposed to secondhand vapor? Would you be… • Not at all concerned • A little concerned • Very concerned • Don't know/Not sure • Refused **Modified from the National Youth Tobacco Survey** to address secondhand e-cigarette aerosol exposure, not just exposure to secondhand smoke from combustible tobacco products. Do you think that breathing vapor from other people's electronic cigarettes causes… • No harm • Little harm • Some harm

	• A lot of harm
Comments	This indicator should be used in conjunction with Indicator 2.1.a, which measures perceived harm from combusted secondhand tobacco smoke. Evaluators might ask specifically about perceived harm of ENDS aerosol exposure to children, pregnant women, and other populations particularly vulnerable to the harms of exposure to nicotine and secondhand tobacco smoke.[8]

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E-Cigarette 2.2

Proportion of Jurisdictions with Comprehensive Smokefree Policies Including E-Cigarettes for Indoor Public Places

Indicator	E-Cigarette 2.2
What to measure	Proportion of local jurisdictions that have policies prohibiting smoking and e-cigarette use in all indoor areas of worksites, restaurants, and bars
Why this indicator is useful	Modernizing smokefree policies to include e-cigarettes protects people from the harms of both secondhand smoke and secondhand aerosol in these environments.[1] An increasing number of states and municipalities have comprehensive smokefree laws that also prohibit the use of e-cigarettes.[2] State and local laws vary regarding the definition of e-cigarette and venue exemptions.[3-4]
Example data source(s)	**American Nonsmokers' Rights Foundation**. States and Municipalities with Laws Regulating Use of Electronic Cigarettes (updated quarterly). Information available at: http://no-smoke.org/pdf/ecigslaws.pdf **State Tobacco Activities Tracking and Evaluation (STATE) System** Information available at http://www.cdc.gov/statesystem/
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, and regulations.
Example survey question(s)	Not applicable.
Comments	A comprehensive smokefree policy is defined by the Office on Smoking and Health (OSH) as a policy that does not allow smoking in any indoor areas of workplaces, restaurants, and bars, with no exceptions.[5] Evaluators may wish to include additional worksites, such as casinos. Tracking the proportion of jurisdictions with smokefree policies in the evaluation of tobacco control programs should primarily focus on the adoption of comprehensive smokefree policies as defined by OSH; however, evaluators are encouraged to assess the inclusion of e-cigarettes in comprehensive smokefree policies where appropriate. For states or jurisdictions that have already adopted comprehensive smokefree policies or for states or jurisdictions attempting to adopt comprehensive policies to include e-cigarettes, this indicator may serve as a "replacement" for Indicator 2.2.a.

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E-Cigarette 2.3

Compliance with Smokefree Policies Including E-Cigarettes in Public Places and Workplaces

Indicator	E-Cigarette 2.3
What to measure	Proportion of the population that reports compliance with smokefree policies, including e-cigarettes, in public places (e.g., bars, restaurants, and sporting arenas) Proportion of the population employed outside the home that reports compliance with smokefree policies including e-cigarettes in their workplaces
Why this indicator is useful	To reduce exposure to e-cigarette aerosol in public places and workplaces, users must comply with e-cigarette restrictions in these settings. A majority of the general public supports at least some restrictions on e-cigarette use in public places.[1] Support for these restrictions is lower among current cigarette smokers and among those who believe that secondhand aerosol is less harmful than secondhand smoke from combusted tobacco products.[1-3]
Example data source(s)	No commonly used data sources were found.
Population group(s)	General population
Example survey question(s)	**Modified from the National Adult Tobacco Survey** to address secondhand e-cigarette aerosol use in covered venues, not just exposure to secondhand smoke from combustible tobacco products. Not counting times while you were at work, to your knowledge, during the past 7 days, that is, since last [TODAY'S DAY OF WEEK], has anyone, including yourself, used e-cigarettes in an indoor or outdoor public place when he or she was not supposed to? • Yes • No • Don't know/Not sure • Refused At your workplace, is e-cigarette use ….? • Allowed in both indoor and outdoor areas • Allowed in outdoor areas, but never allowed in any indoor areas • Allowed in indoor areas, but never allowed in any outdoor areas • Never allowed in any indoor or outdoor area • Don't know To your knowledge, during the past 30 days, that is, since [DATE FILL], has anyone, including yourself, used e-cigarettes at your work when he or she was not supposed to? • Yes • No • Don't know/Not sure • Refused
Comments	For smokefree policies that include e-cigarette products, this indicator may serve as a "replacement" for Indicator 2.3.a to assess compliance with policies that include e-cigarettes. When reporting compliance, the general public may not be able to distinguish between combustible tobacco products and e-cigarettes, because some e-cigarettes are designed to mimic conventional cigarette smoking. This poses a challenge for evaluators. In

	addition, the public may not be aware of where e-cigarette use is permitted given the rapidly evolving regulatory environment for these products. Compliance data for workplaces can be analyzed by workplace size or type. In addition to gathering data on reported compliance, evaluators can measure compliance through observation.[4]

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E-Cigarette 2.4

Proportion of Non-Users Exposed to Secondhand E-Cigarette Aerosol

Indicator	E-Cigarette 2.4
What to measure	Exposure to secondhand e-cigarette aerosol in workplaces, public places, homes, and vehicles
Why this indicator is useful	Exposure to e-cigarette aerosol has the potential to involuntarily expose bystanders, including vulnerable populations, such as children and pregnant women, to aerosolized nicotine and other harmful and potentially harmful substances.[1] Social norms concerning secondhand tobacco smoke have shifted significantly in the past several decades,[2] and tracking e-cigarette aerosol exposure will allow for similar assessments of e-cigarette use in locations that could place non-users at risk.
Example data source(s)	**National Youth Tobacco Survey (NYTS), 2016** Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	General Population
Example survey question(s)	**From NYTS** During the past 30 days, on how many days did you breathe the vapor from someone who was using an e-cigarette in an indoor or outdoor public place? Examples of indoor public places are school buildings, stores, restaurants, and sports arenas. Examples of outdoor public places are school grounds, parking lots, stadiums, and parks? • 0 days • 1 or 2 days • 3 to 5 days • 6 to 9 days • 10 to 19 days • 20 to 29 days • All 30 days **Modified from the California Adult Tobacco Survey (CATS), 2008,** to address secondhand e-cigarette aerosol exposure, not just exposure to secondhand smoke from combustible tobacco products. In the past week, about how many minutes or hours were you exposed to other people's e-cigarette vapor in all environments? • ____Enter response • None at all • Don't know / Not sure • Refused **Modified from the U.S. Social Climate Survey of Tobacco Control (SCS-TC), 2014,** to address secondhand e-cigarette aerosol exposure, not just exposure to secondhand smoke from combustible tobacco products. During the past seven days, in which of the following places have you smelled vapor from other people's electronic cigarettes? • In your home • In your car • In someone else's car • At work • On a public sidewalk

	• Outside the doorway of a building • In an indoor public place, such as a restaurant or salon • On other public transport • In some other indoor place, such as a friend's home
Comments	This indicator can be used in conjunction with Indicator 2.4.a, which measures exposure to combusted secondhand tobacco smoke. Evaluators should carefully consider evaluation objectives, available resources, and population of interest when selecting a data collection approach.

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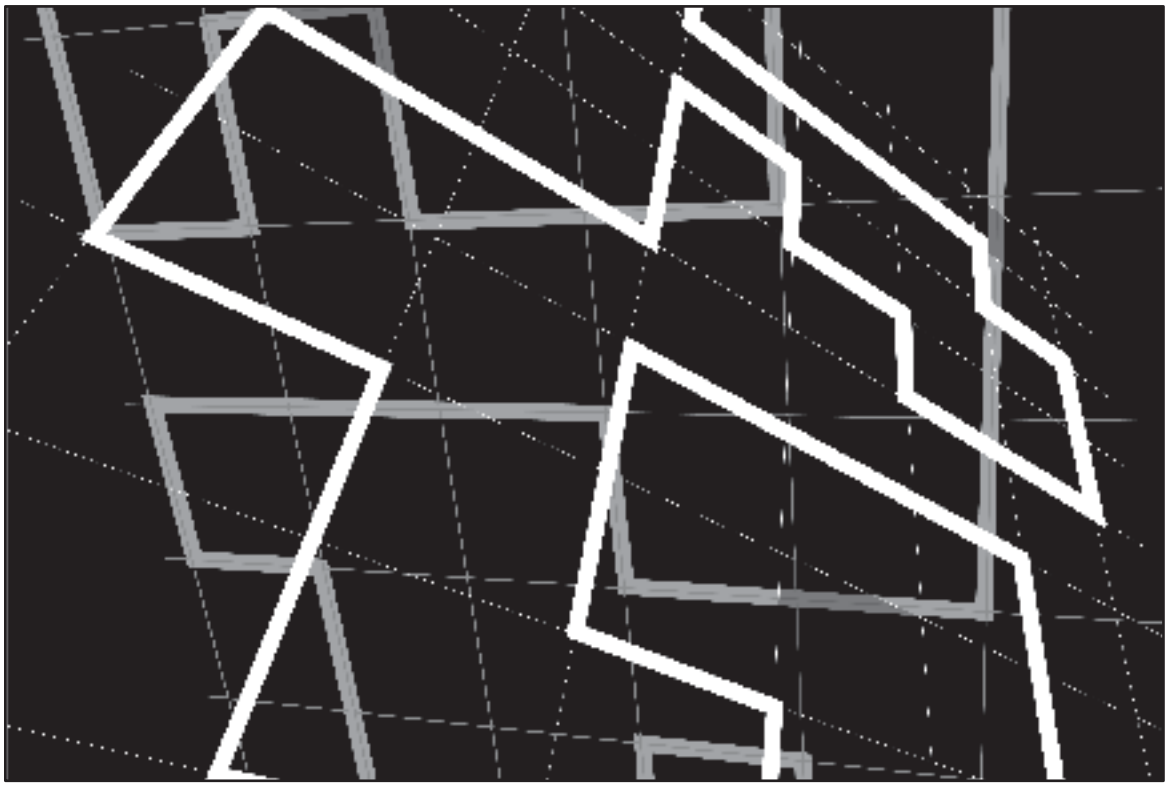
2. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006. Available at: http://www.surgeongeneral.gov/library/reports/secondhandsmoke/fullreport.pdf.

Appendices and Glossary



National Tobacco Control Program

An Overview

The Centers for Disease Control and Prevention's (CDC's) Office on Smoking and Health (OSH) created the National Tobacco Control Program (NTCP) in 1999 to encourage coordinated, national efforts to reduce tobacco-related diseases and deaths. The program provides funding and technical support to state and territorial health departments.

NTCP funds

- all 50 states,
- the District of Columbia,
- eight U.S. territories/jurisdictions,
- six national networks, and
- eight tribal support centers.

NTCP-funded programs are working to achieve the objectives outlined in OSH's *Best Practices for Comprehensive Tobacco Control Programs*.[1]

The four goals of NTCP are to

- prevent initiation of tobacco use,
- eliminate exposure to secondhand smoke,
- promote quitting among adults and youth, and
- identify and eliminate disparities among population groups,

The four components of NTCP are

- population-based community interventions,
- countermarketing,
- program policy/regulation, and
- surveillance and evaluation.

For more information on the NTCP, go to: http://www.cdc.gov/tobacco. Several resources for effective tobacco control programs are also available on the Web site, including the following:

- *Best Practices for Comprehensive Tobacco Control Programs*[1]
- *Best Practices User Guide: Youth Engagement—State and Community Interventions*[2]
- *Designing and Implementing an Effective Tobacco Counter-Marketing Campaign*[3]

- Surgeon General Reports related to tobacco prevention and control[4-9]
- The Guide to Community Preventive Services: Tobacco Use Prevention and Control[10]

References

1. Centers for Disease Control and Prevention. *Best practices for comprehensive tobacco control programs—2014.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Available at: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm.
2. Centers for Disease Control and Prevention. *Best practices user guide: youth engagement—state and community interventions*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2010.
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5. U.S. Department of Health and Human Services. *The health consequences of smoking: a report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004.
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Expert Panel Members

We thank the following panel of expert members who rated the indicators. Without their generosity in sharing their expertise and donating their time, this publication would not be possible.

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Outcome Indicator Workgroup

We thank the following individuals for their assistance in preparing and reviewing this publication.

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Selecting and Rating the Indicators

The Centers for Disease Control and Prevention (CDC) began producing this publication by first reviewing the indicators included in Goal 2: Eliminating Exposure to Secondhand Smoke from the *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs* published in 2005 (KOI 2005). The 2005 guide was developed by updating previously published logic models for three of the four goal areas of the National Tobacco Control Program (NTCP):

- Preventing initiation of tobacco use among young people.
- Eliminating nonsmokers' exposure to secondhand smoke.
- Promoting quitting among adults and young people.

Initial Outcome Indicator Development

KOI 2005 used an extensive review of published and fugitive literature to select candidate indicators for the outcome components of each NTCP goal area's logic model. Once selected, the scientific evidence was then reviewed to determine whether an association existed between the candidate indicators and the outcome components in the NTCP logic models.

Candidate indicators that demonstrated an association were included in further development, including the selection of example data sources and survey questions for each indicator. The selection of example data sources was focused on choosing data sources that were readily available to state tobacco control programs.

Candidate indicators with example data sources and survey questions were then submitted to an external review panel for rating across several criteria. Reviewer responses were analyzed and augmented with information from an independent literature review conducted by the Battelle Centers for Public Health Research and Evaluation under contract to CDC. (See KOI 2005, Appendix B for a detailed description of the methods.)

Updating Goal 2 Outcome Indicators

Revising the Candidate List of Indicators

In 2014, an initial step taken to update the Goal 2 indicators was to review the relevant tobacco literature published since the release of KOI 2005. During this review, we sought to determine whether the scientific evidence continued to support associations between individual indicators and outcome components in the NTCP Goal 2 logic model and to determine whether the evolution of science and practice created gaps in the logic model requiring development of new outcome indicators. The process included careful examination of seminal tobacco control documents, including Surgeon General Reports, National Cancer Institute (NCI) Monographs, and Institute of Medicine reports published from 2005 to 2014. We also conducted targeted

literature searches via PubMed. The 2014 literature review identified the need for additional and more nuanced secondhand smoke indicators like indicators related to multiunit housing or tobacco products other than cigarettes.

Information from the literature review was used to modify the existing Goal 2 logic model and indicator list. Ultimately, 11 new candidate indicators were added to the Goal 2 list, and 5 indicators from KOI 2005 were removed. Revised materials included the revised Goal 2 logic model, a draft list of candidate indicators, and brief indicator profiles with example data sources and survey questions similar to those developed for KOI 2005.

Rating the Indicators

Replicating the original indicator development process, we assembled a panel of experts (listed in Appendix B) to rate the final set of candidate indicators for Goal Area 2. Of the 13 invited experts, all 13 completed the indicator review. The experts assessed the indicators against several criteria and advised us about which data sources are most useful for measuring these indicators.

Expert panelists were asked to rate each of the candidate indicators separately according to the following criteria (see expert panel review instructions and review form at the end of this appendix):

- **Strength of the evaluation evidence.** The extent to which the literature supports use of the indicator for the evaluation of comprehensive, statewide tobacco control programs, as characterized by the logic models. Reference citations on each indicator rating form were intended to help inform reviewer ratings.
- **Resources needed for data collection and analysis.** The amount of funds, time, and effort needed to collect reliable and precise data on the indicator and to analyze primary or secondary data. In making their judgments, reviewers were instructed to consider the availability of existing data (e.g., archival records or other secondary data) and the difficulties related to sampling and data collection methods. We reminded reviewers that many state health departments do not have extensive data collection systems for use in comprehensive evaluations of their tobacco control programs. However, all states have access to data on adults from the Behavioral Risk Factor Surveillance System, as well as periodic data on attitudes and policies through the Tobacco Use Supplements of the Current Population Survey. In addition, CDC synthesizes behavioral and policy data on the State Tobacco Activities Tracking and Evaluation (STATE) system. Fewer resources are needed for data collection and analysis when data are already available than when new data must be collected and analyzed.
- **Utility.** The extent to which the indicator would help to answer key evaluation questions for a comprehensive state tobacco control program. Although many indicators are also appropriate and useful for evaluating local tobacco control programs, reviewers were asked to consider the utility of each indicator for evaluating state tobacco control programs.
- **Face validity.** The extent to which judgments about and measurements of the indicator would appear valid and relevant to policy makers and other decision makers who use the results of an evaluation to justify their continued support.

- **Uniqueness.** Whether the indicator contributes distinctive information for the evaluation of tobacco control efforts. Reviewers who believed that an indicator was not unique were instructed to identify the redundant indicator.
- **Conformity with accepted practice.** The degree to which use of the indicator as a measure of a tobacco control program's progress is consistent with accepted, real-world tobacco control practice.
- **Overall quality.** A global rating that reflects the reviewer's opinion of the overall quality of the indicator.

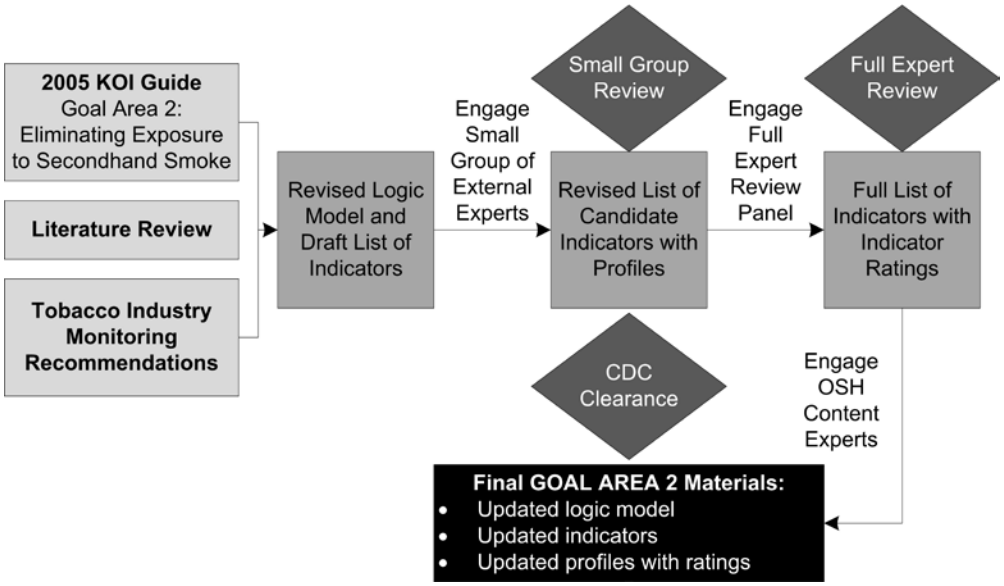
In addition, we asked the expert raters to

- comment on the data sources and survey questions that CDC had selected for each proposed indicator,
- suggest alternative data sources and questions,
- suggest additional or alternative supporting references, and
- suggest additional indicators that would be useful for evaluation of comprehensive state tobacco control programs.

Each expert used a separate rating form for each indicator (see end of this appendix for a reprint of the rating form and rater instructions).

Revising the Indicator Profiles

Considering Stakeholder Input: Updating Outcome Indicators



Concurrent with external review, OSH staff worked to develop complete profiles for each candidate indicator. This included systematically updating example data sources and survey questions, which involved searching current and past (1999–2014) national data sources, including federal sources, such as the National Adult Tobacco Survey (NATS), National Youth Tobacco Survey (NYTS), STATE System, Youth Risk Behavior

Survey (YRBS), School Health Profiles, and state tobacco prevention and control program evaluation reports.

Rationale statements and supporting references for each candidate indicator were updated using the 2014 literature review as well as topic-specific PubMed searches for more recent evidence published since 2014.

Analysis and Synthesis of Data from the Expert Reviews

After CDC received the completed rating forms from the experts, all criteria ratings and written comments were entered into an electronic file. We adjusted for multiple responses, skipped items, and coding errors. If, for example, a rater circled more than one adjacent response for a criterion, we averaged the responses unless the rater had noted a preference for one response over another. Skipped items and "don't know" responses were combined into a missing data category. All data were analyzed using IBM SPSS—Version 19.0.

For each type of rating, numerical data were analyzed in various ways. Frequency distributions of numerical data were analyzed to help us understand the raters' perceptions of the indicators. To limit the effect of outliers, we used the median scores for each indicator. "Uniqueness" ratings, which were dichotomous, were only used to determine redundant indicators. Narrative comments included on the raters' rating sheets were also reviewed to help us understand why raters gave an indicator a particularly high or low rating.

Throughout this document, indicators that had low reviewer response or low agreement among reviewers are flagged with footnotes as follows:

- An asterisk (*) indicates low reviewer response. If fewer than 75% of reviewers provided a valid rating on a criterion for an indicator, the criterion is flagged as having low reviewer response. For the purposes of this assessment, invalid responses included "don't know," missing data, and rating errors (e.g., selection of two non-adjacent ratings). A low response suggests a high degree of uncertainty among raters. An example of a rating for which there was low response is the resource score for Indicator 2.3.a: Compliance with smokefree policies in public places and workplaces.
- A dagger (†) indicates a low level of agreement among reviewers. For the resources needed, strength of evaluation evidence, utility, face validity, and accepted practice criteria, a rating was considered to have a low level of agreement if fewer than 75% of valid reviewer responses were within ±1 point of the median. For the overall quality criterion, a rating was considered to have a low level of agreement if fewer than 75% of valid reviewer responses were within ±2 points of the median (denoted by a double dagger ††). An example of a rating with a low level of agreement is the overall quality score for Indicator 2.2.k: Number and type of enforcement actions issued regarding smokefree policies. This low level of agreement represents a relatively high degree of variability in the raters' responses for the criterion.

Expert panel members rated and offered comments on 38 candidate indicators. After reviewing the expert panel ratings and comments carefully, two indicators were added and four were revised to address gaps identified by the expert reviewers and OSH staff. These new indicators

were not rated by the expert panel, noted by an "NR" suffix to the indicator number in this publication. However, some information about these "NR" indicators is provided in the indicator profiles. Expert panel ratings and comments noted that some indicators were considered to be "not essential," so we deleted two indicators. Thus, this publication contains information on a total of 38 Goal Area 2 indicators.

CDC reviewed the expert panelists' "resources needed" scores (their estimate of the intensity of resources required to collect and analyze data on each indicator). CDC modified scores for 27 indicators that were rated by the experts. Some indicators included multiple types of data sources, which added complexity to the rating process. Additionally, when data for a given indicator were found to be available from existing surveillance systems and/or archival sources, the resource rating was modified to a score of 1.

CDC/OSH Key Indicators Report: Instructions for Expert Panel Reviewers

CDC/OSH Key Outcome Indicator 2016 Update *Instructions for Expert Reviewers*

Background and Purpose

In 2005, the Centers for Disease Control and Prevention's (CDC's) Office on Smoking and Health (OSH) released the *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs* (KOI Guide) to assist state and territorial tobacco control program evaluation efforts under the National Tobacco Control Program (NTCP). The primary audiences for the publication included (1) planners, managers, and evaluators of state programs to prevent or control tobacco use and (2) CDC's national partners.

Since the release of the 2005 KOI Guide, there have been substantial changes and advances in tobacco control. Therefore, OSH decided to revisit the key outcome indicators related to secondhand smoke. As a first step, indicators in OSH Goal Area 2 (Eliminating Exposure to Secondhand Smoke) have been reviewed and revised internally by OSH staff. During this process, some existing key outcome indicators have been removed, others have been substantially revised, and several new indicators have been added. We will implement an external expert review process similar to what was used during the initial indicator development effort.

Similar to the original KOI Guide, the updated version will

- serve as a companion to CDC's Best Practices for Comprehensive Tobacco Control Programs and Introduction to Program Evaluation for Comprehensive Tobacco Control Programs;
- describe key outcome indicators for the evaluation of statewide, comprehensive tobacco control programs, and suggest appropriate data sources and measures for these indicators;
- encourage states to use consistent evaluation measures and comparable data sources; and
- guide the provision of surveillance and evaluation technical assistance to states.

Methods

The candidate indicators included in this document have been identified through an extensive review of the literature and input provided by key tobacco control experts. Each of the proposed indicators included in this document is linked to a component of the revised Goal Area 2 logic model (Figure 1).

As part of the update process, each of the original KOI Guide Goal Area 2 indicators and their respective profiles were reviewed. Indicator profiles were revised, as necessary, to reflect current state of the science. Example data sources and survey items were updated to reflect those that are readily available to staff involved in state tobacco control programs. If necessary, measures were drawn from other national and state-specific surveys and evaluation protocols that are not widely used yet but are accessible to state tobacco control programs.

Rating Process

The principal purpose of this expert review process is to provide CDC/OSH with expert opinion about the quality and utility of the candidate indicators. Indicators will be used in planning and evaluating comprehensive state tobacco control programs. The review also provides expert opinion on the data

sources and measures that would be most useful for tracking these indicators. As reviewers, you are specifically asked to do the following:

- Rate each indicator on a set of criteria similar to those used to produce the original KOI Guide.
- Comment on the data sources and measures that have been identified for each proposed indicator.
- Suggest alternative data sources and measures.
- Suggest additional cessation-related indicators that may be useful for state tobacco control program evaluation.

The final product will be similar to the original KOI Guide in that it will include tables displaying the indicators, ratings of the indicators along the review criteria, and detailed summary information on each indicator.

We would like you to rate the indicators based on your expertise and experience in this substantive area using the following criteria:

- Strength of evidence
- Costs (in money, time, and other resources) required to collect and analyze indicator data
- Utility
- Face validity
- Uniqueness
- Conformity with accepted practice
- Overall quality

Below you will find additional guidance regarding these rating criteria and the rating process.

Rating Form

Each indicator is presented on a separate rating form. The rating forms have three sections:

- Summary information on the proposed indicator, including what to measure, example data sources, population group, example survey question, other relevant information, and references regarding the evidence supporting use of the indicator, where available. Please note that the references provided are not intended to be a comprehensive bibliography.
- Rating criteria scales for reviewer response
- Space for open-ended reviewer comments on the proposed indicator and data sources/measures

In the summary information section on the rating forms, the example data sources/measures suggested are intended only to help operationalize the indicators and do not represent a comprehensive list of all possible measures for the indicators. Additionally, information included in the "Comments" section has been limited to what will help to provide clarity or address nuances of the specific indicator. The final, updated KOI Guide will include suggestions for other uses of the indicator, the indicator's limitations (if any) as a measure of a program's progress, or sources of other information on data collection methods.

IMPORTANT NOTE: Given our plan to provide information on current, relevant indicators for tobacco control, we ask that you not reference the original KOI Guide when rating these candidate indicators. Please rate the following indicators based on your expertise and knowledge of the current state of the science. This will help to identify indicators that are no longer pertinent or that have limited supporting evidence.

Rating Criteria

The following criteria are to be used to rate each indicator:

- **Strength of the evaluation evidence**—Extent to which you believe that the literature supports use of the indicator for the evaluation of comprehensive, statewide tobacco control programs, as characterized by the logic model. The references included on each indicator rating form are intended to provide guidance on your ratings of this criterion, but your knowledge of the literature should also be used. Please add your comments regarding conflicting evidence, additional citations, and/or concerns with methodology.
- **Resources required for collecting and analyzing indicator data**—Your rating of the resources (in funds, time, or effort) to collect reliable and precise measures and to analyze appropriately primary or secondary data on the indicator. In making your judgments, please consider availability of existing data (e.g., archival records or other secondary data) versus need for primary data collection, and methodological and sampling issues.
- **Utility**—Extent to which you believe that the indicator would help to answer important comprehensive tobacco control program evaluation questions. Although these indicators may also be appropriate and useful for community-level evaluation, the utility criterion refers primarily to statewide efforts.
- **Face validity**—Your estimation of how face valid the indicator would appear to be in the eyes of policy makers and decision makers who may be users of tobacco control program evaluation results.
- **Uniqueness**—Your opinion of whether the indicator contributes distinct information for the evaluation of tobacco control efforts. If you believe that the indicator is not unique, please note the redundant indicator in the space provided.
- **Conformity with accepted practice**—Your opinion of the degree to which use of the indicator is consistent with currently accepted, real-world tobacco control practice.
- **Overall quality**—A summary rating that reflects your opinion of the overall quality of the indicator.

Reviewer Comments

Please provide comments and suggestions regarding the proposed indicator, data sources, and measures in the Reviewer Comments section.

Completing the Indicator Review

We encourage you to use the electronic expert review packet to submit your indicator ratings and comments. Responses entered into the electronic expert review packet export directly to a database, eliminating the need for additional data entry and validation steps. If you are using the electronic version of the rating forms, please read the next section for more information on how to complete the packet and submit your ratings. Selected pages or the full expert review packet may be printed if you would like a hard copy to reference or record notes on, but we ask that you enter your final ratings and comments in the electronic expert review packet. If for some reason you are unable to submit ratings and comments electronically, please contact us to arrange for hard-copy submission.

Proposed Indicator: 2.1.a Level of awareness of media messages on the dangers of secondhand smoke

Please darken the circle that best reflects your rating.

1. Scientific literature supports use of the indicator:

- ○ Strong support
- ○ Moderate support
- ○ Minimal support
- ○ No support
- ○ Don't know

2. Cost (in money, time, other resources) required to collect and analyze indicator data:

- ○ Low cost
- ○ Moderate cost
- ○ High cost
- ○ Very high cost
- ○ Don't know

3. Utility of the indicator to answer key program effectiveness and impact:

- ○ Strong utility
- ○ Moderate utility
- ○ Minimal utility
- ○ No utility
- ○ Don't know

4. How face valid the indicator would be to policy- and decision-makers.

- ○ Highly valid
- ○ Moderately valid
- ○ Minimally valid
- ○ Not at all valid
- ○ Don't know

5. Contributes unique information:

- ○ Unique
- ○ Not unique

If NOT UNIQUE, write number of redundant indicator

6. How consistent the indicator is with accepted tobacco control practice:

- ○ Highly consistent
- ○ Moderately consistent
- ○ Minimally consistent
- ○ Not at all consistent
- ○ Don't know

7. Overall quality of the indicator:

- ○ 10(HIGH)
- ○ 9
- ○ 8
- ○ 7
- ○ 6
- ○ 5
- ○ 4
- ○ 3
- ○ 2
- ○ 1 (LOW)

Reviewer Comments (including recommendations on other data sources/ measures or alternative indicators):

Data Source Indicator Table

The following table cross-references example data sources and indicators in this publication. The example data sources do not represent all data sources available. When possible, Web addresses are provided. For additional information on tobacco-related data sources and data collection methods, refer to the *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*[1] or *Surveillance and Evaluation Data Resources for Comprehensive Tobacco Control Programs*.[2]

Data source	Indicator number	For more information
Adult Tobacco Survey Questions (ATS), Core Survey, 2014	2.1.c, 2.1.d, 2.3.d	► http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm
Adult Tobacco Survey Questions (ATS), Core Survey, 2012	2.1.e, 2.1.f	► http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm
Adult Tobacco Survey Questions (ATS), Supplemental Survey, 2014	2.3.a, 2.3.d	► http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5903a1.htm
Americans for Nonsmokers' Rights: Colleges and Universities with 100% Smokefree Policies, (Entire Campus, Indoors and Outdoors), 100% Tobacco-Free Policies, and E-cigarette-Free Policies.	2.2.e	► http://no-smoke.org/goingsmokefree.php?id=447
Americans for Nonsmokers' Rights Foundation, Municipalities with local 100% smokefree laws currently in effect (updated quarterly)	2.2.a	► http://www.no-smoke.org/pdf/100ordlisttabs.pdf
American Nonsmokers' Rights Foundation, Percent of U.S. State Populations Covered by 100% Smokefree Air Laws, updated quarterly	2.2.d	► http://www.no-smoke.org/pdf/percentstatepops.pdf
Americans for Nonsmokers' Rights (ANR), Smokefree Lists, Maps, and Data, Outdoor Areas	2.2.b	► http://www.no-smoke.org/goingsmokefree.php?id=519%20-%20outdoor#outdoor

Data source	Indicator number	For more information
Americans for Nonsmokers' Rights (ANR), Smokefree Lists, Maps, and Data, States with Preemption of Smokefree Air Laws	2.2.l	► http://www.no-smoke.org/pdf/preemptionmap.pdf
Americans for Nonsmokers' Rights Foundation. U.S. laws and policies restricting or prohibiting smoking in private units of multiunit housing. Updated quarterly.	2.2.g	► http://www.no-smoke.org/pdf/smokefreemuh.pdf
Behavioral Risk Factor Surveillance System (BRFSS): Core Module, 2011	2.5.c	► http://www.cdc.gov/brfss/
Behavioral Risk Factor Surveillance System (BRFSS): Core Module, 2013	2.5.c	► http://www.cdc.gov/brfss/
Behavioral Risk Factor Surveillance System (BRFSS): Tobacco Use Module, 2011	2.5.e	► http://www.cdc.gov/brfss/
Behavioral Risk Factor Surveillance System (BRFSS): Secondhand Smoke Module, 2011	2.1.d, 2.2.f	► http://www.cdc.gov/brfss/
Behavioral Risk Factor Surveillance System (BRFSS), 2011, Module 16	2.4.b, 2.4.c, 2.4.h, 2.4.i	► http://www.cdc.gov/brfss/
California Adult Tobacco Survey (CATS) Questions, 2008	2.1.d, 2.4.a, 2.4.c, 2.4.d	► https://www.cdph.ca.gov/data/surveys/Pages/CaliforniaTobaccoSurveys.aspx
California Adult Tobacco Survey (CATS) Questions, 2002	2.1.e	► https://www.cdph.ca.gov/data/surveys/Pages/CaliforniaTobaccoSurveys.aspx
California Tobacco Control Program (CTCP): Secondhand Smoke Law Enforcement Survey, 2007	2.2.k	► http://www.cdph.ca.gov/programs/tobacco/Documents/Resources/Publications/Enforcement%20Report%202007%20-%20Final%20Submitted.pdf
CDC State Tobacco Activities Tracking and Evaluation (STATE) system	2.2.a, 2.2.e, 2.2.g, 2.2.h, 2.2.l	► http://www.cdc.gov/statesystem/
CDC *Tips From Former Smokers* Campaign, Pilot Campaign Survey, 2014	2.1.a	► http://www.cdc.gov/tobacco/campaign/tips/
Early Childhood Environment Rating Scale (ECERS), Health Practice Subscale	2.2.e, 2.4.e	► http://ers.fpg.unc.edu/early-childhood-environment-rating-scale-ecers-r

Data source	Indicator number	For more information
Evaluation of the National Tobacco Prevention and Control Public Education Campaign, Wave 2 Smoker Follow-up Questionnaire, 2014 (NTP)	2.1.a, 2.1.b	▶ http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201411-0920-011&icID=210357
Excise tax data from the U.S. Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau	2.5.a	
Harvard School of Public Health College Alcohol Study	2.1.f	▶ http://tobaccocontrol.bmj.com/content/12/3/251.full
Los Angeles County Department of Public Health (LAC DPH), Tobacco Control & Prevention Program, Healthy Housing Solutions, Inc., Westat, & CDC, Smoke-Free Multi-Unit Housing Policy Study: Operator Survey	2.2.i	▶ http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201309-0920-011
Maine Center for Public Health "Wherever You Live and Breathe, Go Smoke-free" Media Campaign Evaluation Survey, 2010	2.1.a	
National Adult Tobacco Survey (NATS), 2010	2.4.c, 2.4.d	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nats/
National Adult Tobacco Survey (NATS), 2012–2013	2.4.h, 2.4.i, 2.5.d	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nats/
National Adult Tobacco Survey (NATS), 2013–2014	2.2.f, 2.3.c, 2.3.d, 2.3.e, 2.4.b, 2.4.g, 2.5.b, 2.5.c, 2.5.e	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nats/
National Health and Nutrition Examination Survey (NHANES), 2013–2014	2.4.a, 2.4.h	▶ http://www.cdc.gov/nchs/nhanes/about_nhanes.htm
National Health Interview Survey (NHIS), 2014	2.5.b, 2.5.c, 2.5.e	▶ http://www.cdc.gov/nchs/nhis.htm
National Youth Tobacco Survey (NYTS), 2011	2.5.e	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2013	2.1.g	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2014	2.1.c, 2.5.c, 2.5.d	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/

Data source	Indicator number	For more information
National Youth Tobacco Survey (NYTS), 2016	2.4.a	► http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS), 2013	2.2.c, 2.4.b, 2.4.e, 2.5.b	► http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS), 2015	2.4.i	► http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Oregon Department of Human Services Survey, 1997	2.3.d	
Oregon Public Health Division Tobacco Prevention and Education Program (TPEP) Guardian Management study5	2.2.j	
Population Assessment of Tobacco and Health (PATH) Study, 2015	2.5.b, 2.5.c	► http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201506-0925-002&icID=212557
School Health Policies and Practices Study (SHPPS), 2014	2.3.b	► http://www.cdc.gov/healthyyouth/shpps/index.htm
School Health Profiles (Profiles), 2014, Principal Questionnaire	2.2.e	► http://www.cdc.gov/healthyyouth/profiles/
Smoke-Free Policies in Multiunit Housing: Smoking Behavior and Reactions to Messaging Strategies in Support or in Opposition.	2.2.j	
Social Climate Survey of Tobacco Control (SCS-TC), 2014	2.1.c, 2.1.g, 2.2.e, 2.2.f, 2.2.j, 2.3.c, 2.3.e, 2.4.a, 2.4.b, 2.4.c, 2.4.d, 2.4.g, 2.4.h, 2.4.i	► http://www.socialclimate.org/
Social Climate Survey of Tobacco Control (SCS-TC), 2008	2.1.e	► http://www.socialclimate.org/
State departments of revenue	2.5.a	
The Tax Burden on Tobacco	2.5.a	► http://www.taxadmin.org/fta/tobacco/papers/Tax_Burden_2011.pdf
Tobacco-Free College Assessment Survey for Staff, Faculty and Students	2.2.e, 2.4.f	► http://www.wakehealth.edu/uploadedFiles/User_Content/Research/Departments/Public_Health_Sciences/Tobacco_Free_Colleges/Tobacco-Free%20Manual_Appendix%207.pdf
Tobacco Use Supplement to the Current Population Survey (TUS-CPS), 2010–2011	2.1.g, 2.5.b	► http://appliedresearch.cancer.gov/tus-cps/

Data source	Indicator number	For more information
UC Davis, Center for Evaluation and Research, Tobacco Control Evaluation Center, Multiple Housing Unit Owner/Manager Survey (MHUOS)	2.2.i	▶ http://tobaccoeval.ucdavis.edu/index.html
University of California San Francisco (UCSF) California campus survey, 2014	2.4.f	
University of Cambridge Smoke-free Hospital Study, 2008	2.3.b	
Youth Risk Behavior Surveillance System (YRBSS), 2015	2.5.b, 2.5.c, 2.5.c, 2.5.d	▶ http://www.cdc.gov/healthyyouth/yrbs/index.htm
Youth Risk Behavior Surveillance System (YRBSS), 2013	2.3.b	▶ http://www.cdc.gov/healthyyouth/yrbs/index.htm

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1. MacDonald G, Starr G, Schooley M, Yee SL, Klimowski K, Turner K. *Introduction to program evaluation for comprehensive tobacco control programs*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2001.
2. Yee SL, Schooley M. *Surveillance and evaluation data resources for comprehensive tobacco control programs*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2001.

Glossary and Acronyms

Activities
The events or actions that are part of a tobacco control program.

Aerosol
Emissions of electronic nicotine delivery systems.

Allowances paid to retailers
Payments from manufacturers to retailers to promote increased sales volume or secure preferred placement of their brands, such as volume rebates, "slotting fees" and other payments for stocking, shelving, displaying and merchandising brands in a certain manner, and other incentive payments.[1]

Attitudes
Biases, inclinations, or tendencies that influence a person's response to situations, activities, other people, or program goals.

Awareness
The extent to which people in the target population know about an event, activity, or campaign.

Capacity
The resources (e.g., staff, data collection systems, funds) needed to conduct a tobacco control program or to evaluate such a program.

CDC
Centers for Disease Control and Prevention.

Consumption
The number of tax-paid cigarettes (pack of 20) purchased by consumers in a particular calendar year.

Data
Documented information or evidence.

Data sources
Surveys or surveillance systems used to gather data.

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[1] Tobacco Control Legal Consortium (TCLC). *Price-related promotions for tobacco products: an introduction to key terms and concepts*; 2011. Available at: http://publichealthlawcenter.org/sites/default/files/resources/tclc-fs-pricerelatedpromotions-2011_0.pdf

E-Cigarettes
: Battery-powered devices designed to deliver aerosolized nicotine and additives to users. These devices are referred to as "e-cigarettes," "e-cigs," "cigalikes," "e-hookahs," "mods," "vape pens," "vapes," and "tank systems."

ESW
: Evaluation stakeholder workgroup: engaged throughout the evaluation planning and implementation process to aid the program in determining and prioritizing key evaluation questions, facilitating data collection, implementing evaluation activities, increasing the credibility of analysis and interpretation of evaluation information, and ensuring that evaluation results are used.

Evaluation
: The process of determining whether programs—or certain aspects of programs—are appropriate, adequate, effective, or efficient and, if not, how to make them so.

Ever-smoker
: Youth: A person who answers yes to the question, "Have you tried cigarette smoking, even one or two puffs?"
Adults: A person who answers yes to the question, "Have you smoked at least 100 cigarettes in your entire life?"

Example data source
: Surveys or surveillance systems used to measure an indicator and the population on which the data are needed.

Face validity
: The degree to which data on an indicator appear reliable to stakeholders and policy makers.

Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act)
: Signed into law on June 22, 2009, it gives the Food and Drug Administration (FDA) the authority to regulate the manufacture, distribution, and marketing of tobacco products to protect public health.

FDA
: U.S. Food and Drug Administration.

Goal area
: One of the four components of the overall goal of CDC's National Tobacco Control Program.

Implementation
: Carrying out or putting into effect a plan or program.

Indicator
: An observable and measurable characteristic or change that shows the progress a program is making toward achieving a specified outcome.

Indicator profile
: The term used in this manual for a table with detailed information on one indicator listed in this publication (see page 28 for an example).

Indicator rating table
: The term used in this publication for the list of indicators associated with one outcome in one National Tobacco Control Program logic model. The experts' rating for each indicator is also included (see page 27 for an example).

Inputs
: Resources used to plan and set up a tobacco control program.

Intervention
: The method, device, or process used to prevent an undesirable outcome or create a desirable outcome.

Logic model
: A graphic depiction of the presumed causal pathways that connect program inputs, activities, outputs, and outcomes.

Media messages
: Anti-tobacco information provided to the public through various media (e.g., television, radio, billboards).

Minors
: Persons younger than 18 years of age.

Modified Survey Question
: Question adapted from another survey to serve as an example of a question that can be used to measure the outcome indicator.

Morbidity
: Disease or disease rate.

NCI
: National Cancer Institute.

Never-smoker
: Youth: A person who answers no to the question, "Have you tried cigarette smoking, even one or two puffs?"
Adults: A person who answers no to the question, "Have you smoked at least 100 cigarettes in your entire life?"

NIH
: National Institutes of Health.

NTCP
: National Tobacco Control Program.

Observation
: A method of collecting data that does not involve any communication with the subjects being studied. The investigators merely watch for particular behaviors and record what they see.

Outcome
: The results of an activity such as a countermarketing campaign or an effort to reduce nonsmokers' exposure to smoke. Outcomes can be short-term, intermediate, or long-term.

Outcome components
: The term used in this publication for the short-term, intermediate, and long-term results described in the National Tobacco Control Program logic models for the first three goal areas. These are the results expected if tobacco control programs provide the needed inputs and engage in the recommended activities also described in the logic models.

Outcome evaluation
: The systematic collection of information to assess the effect of a program or an activity within such a program to reduce the adverse health effects of tobacco use. Good evaluation allows evaluators to draw conclusions about the merit of a program and make recommendations about the program's direction.

Outcome overview
: The term used in this publication for the summary of the scientific evidence in support of the assumption that achieving an outcome on a National Tobacco Control Program logic model affects all concurrent and later activities and outcomes (see page 24 for an example).

Outputs
: The direct products of a program (e.g., the materials needed for a media campaign).

Population group
: Individuals from which data about a given indicator can most commonly be collected.

Preemption
: Federal or state legislation that prevents states or local jurisdictions from enacting tobacco control laws more stringent than or otherwise different from the federal or state law.

Prevalence
: The amount of a factor of interest (e.g., tobacco use, awareness of a media campaign) present in a specified population at a specified time.

Process evaluation
: Systematic collection of information to determine how well a program is implemented and operated.

Program evaluation
: Systematic collection of information about activities, characteristics, and outcomes of programs, used to make judgments about a program, improve its effectiveness, or inform decisions about future program activities.

Public housing
: Affordable rental housing managed by the U.S. Department of Housing and Urban Development (HUD) for eligible low-income families, elderly persons, and persons with disabilities. Type of housing varies from single family homes to high rise apartments.

Rate
: A measurement of how frequently an event occurs in a certain population at one point in time or during a particular period of time.

Reach
: The absolute number, proportion and representativeness of persons who are exposed to or participate in a given program or intervention. Representativeness refers to whether participants have characteristics that reflect the target population.

Recent successful quit attempts
: Proportion of former smokers who have quit in the previous 12 months.

Resources
: Assets available or expected to be available for program operations. Resources include people, equipment, facilities, and other items used to plan, implement, and evaluate public health programs whether or not they are paid for directly with public funds.

SMART
: Specific, measurable, achievable, relevant, and time-bound.

Some-day smoker
: A current smoker who answers "some days" when asked whether they smoke every day or some days.

Stakeholder
: The persons or organizations that have a vested interest in what will be learned from an evaluation and what will be done with the information.

Subsidized multiunit housing
: There are two forms of subsidized housing. In one form, landowners receive subsidies from the government to partially cover the cost of the mortgage and other expenses to make units available to individuals with low to moderate income. In the second form, eligible individuals receive vouchers from the government to put toward rent.

Surveillance
: The ongoing, systematic collection, analysis, and interpretation of data about a hazard, risk factor, exposure, or health event.

Survey
: A quantitative method of collecting information on a target population at one point in time. Surveys can be conducted by interview (in person or by telephone) or by questionnaire.

Susceptibility

The intention to smoke or the absence of a strong intention not to smoke.

Sustained abstinence

Complete cessation of tobacco use for 6 months or longer.

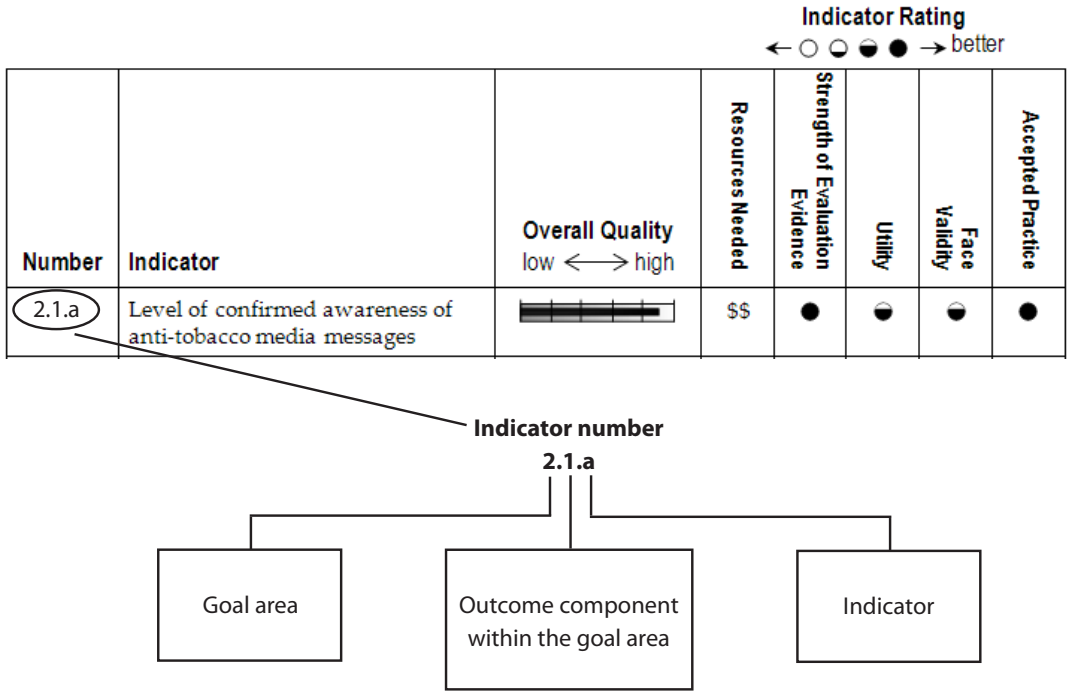
Utility

The extent to which evaluation produces reports that are disseminated to relevant audiences, that inform program decisions, and that have a beneficial effect.

Figure 2: How to Use the Rating Table

Outcome 1

Increased Knowledge of the Dangers of Secondhand Smoke and Support for Policies to Reduce Secondhand Smoke



Overall quality: A summary rating that reflects the overall quality and general worth of the indicator as it relates to evaluating state tobacco prevention and control programs.

Resources needed: Intensity of resources warranted to collect reliable and precise measures and to analyze primary or secondary data on the indicator. Considerations affecting cost include availability of existing data (e.g., archival records or other secondary data) versus need for primary data collection, and methodological and sampling issues. Dollar signs show the amount of resources (funds, time, and effort) needed to collect and analyze data on the indicator using the most commonly available data source: the more dollar signs (maximum four), the more resources needed. The dollar signs do not represent specific amounts because the actual cost of measuring and analyzing an indicator varies according to the existing capacity of a state health department or organization to evaluate its programs.

Strength of evaluation evidence: The degree to which scientific evidence supports the assumption that implementing interventions to effect change in a given indicator will lead to a measurable downstream outcome. This includes the extent to which reviewers believed that the scientific literature supports use of the indicator for the evaluation of comprehensive, statewide tobacco prevention and control programs, and considers conflicting evidence and concerns regarding the methodology of supporting studies. Indicators with the highest ratings have a strong demonstrated relationship between the indicator and a downstream logic model outcome. Indictors with moderate ratings demonstrate an association between the indicator and an outcome in the logic model. However, the extent of evidence and/or the study designs supporting this association may not be strong. Indicators with low ratings may have substantial conflicting literature and/or weak methodological designs.

Utility: The extent to which the indicator would help to answer important comprehensive tobacco control program evaluation questions.

Face validity: The degree to which data on the indicator would appear valid to tobacco program stakeholders, such as decision makers who may be users of tobacco prevention and control program evaluation results.

Accepted practice: The degree to which use of the indicator is consistent with currently accepted, real-world tobacco control practice.