Preventing Initiation of Tobacco Use:

Outcome Indicators for Comprehensive Tobacco Control Programs–2014

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 book was developed as the first 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 control programs. We would like to extend special thanks to the Expert Panel Members and Outcome Indicator Workgroup (Please see members listed in Appendix B) for their assistance in preparing and reviewing this publication.

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Preface

Purpose

Preventing the initiation of tobacco use is a national public health priority.[1] Tobacco use is the single most preventable cause of disease, disability, and death in the United States, and nearly all tobacco use begins during youth and young adulthood.[1-3] Furthermore, cigarette smoking by young people has immediate adverse health consequences, including addiction, and accelerates the development of chronic diseases across the life course. Several studies have concluded that comprehensive state tobacco control programs are effective at reducing tobacco use by youth and young adults and have resulted in overall reductions in smoking prevalence, as well as concomitant decreases in state spending on tobacco-related health care.[4-10]

To sustain comprehensive tobacco control programs, it is important to demonstrate that these efforts continue to have the intended public health impact. To produce such evidence, state tobacco control programs must continue to evaluate their programs. Selecting appropriate outcome indicators is a key step in designing a rigorous evaluation. That is where this guide will help.

This publication is the first in a series of updates to the guide previously released by the Office on Smoking and Health (OSH), *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs*,[11] hereafter referred to as KOI 2005. As a companion to the 2001 publication, *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*,[12] 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 1 of the National Tobacco Control Program, which addresses preventing initiation of tobacco use. Although the focus of this update is on the prevention of tobacco use, comprehensive tobacco control programs that simultaneously address initiation, the elimination of secondhand smoke, and cessation are more effective than programs that address these issues in isolation. Therefore, until additional updates are available, this resource should be used in combination with outcome indicators from KOI 2005 that address eliminating nonsmokers' exposure to secondhand smoke and promoting quitting among adults and young people. Additionally, as with KOI 2005, this update supports application of the Centers for Disease Control and Prevention's (CDC's) *Framework for Program Evaluation in Public Health Practice*,[13] 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 that evaluation findings are used and share lessons learned.

This publication provides new and updated indicators and supporting information relevant to recent changes in the landscape of comprehensive tobacco control efforts to prevent initiation. The passage of the Family Smoking Prevention and Tobacco Control Act in 2009 expanded federal, state, and local governments' opportunities to regulate tobacco through the application of prevention education and policy efforts. Specifically, the law allowed for increased limitations on tobacco marketing, pricing, and promotions. Given these changes in the policy environment, OSH recognized the need to revisit and update the outcome indicators, beginning with Goal Area 1.

Tobacco 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 will inform the selection of indicators and enable linkage of indicators to outcomes. The guide also assists 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 control program efforts by providing a summary of scientific evidence, example questions, and data sources for each indicator.

To help users make informed choices about which indicators are most suitable for each program and context, a panel of tobacco control science and practice experts rated each indicator on relevant criteria, including overall quality, resources needed, strength of evaluation evidence, utility, face validity to policy makers, and accepted practice. The ratings will help the reader decide, for example, which indicators can be measured within budget or which indicators are likely to carry the most weight with policy makers. In essence, this publication is a consumer's guide to tobacco control outcome indicators for program managers and evaluators.

A primary purpose of this publication is to help advance state-specific and national evaluation and surveillance efforts by encouraging managers and evaluators to focus on evidence-based outcome indicators and to measure and report these using protocols and operational definitions drawn from widely available state or national data collection systems. In this publication, we provide examples of data sources, survey questions, and protocols that evaluators can use

to measure each outcome indicator. Special care was taken to choose example data sources and survey questions; most are drawn from common state and national surveys and surveillance systems, and using them may allow managers and evaluators to compare their findings to data collected across states and nationally.

Employing optimally rigorous evaluation designs and methods to the ongoing surveillance and evaluation of program impacts on outcome indicators will enable state tobacco control program staff to assess progress toward expected outcomes and refine program activities as needed. To the extent that state programs use comparable indicators, measures, and methods (such as those described in this guide), all who are engaged in tobacco control planning and evaluation will be better able to assess the state-specific and national impact of these efforts.

Technical Assistance

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

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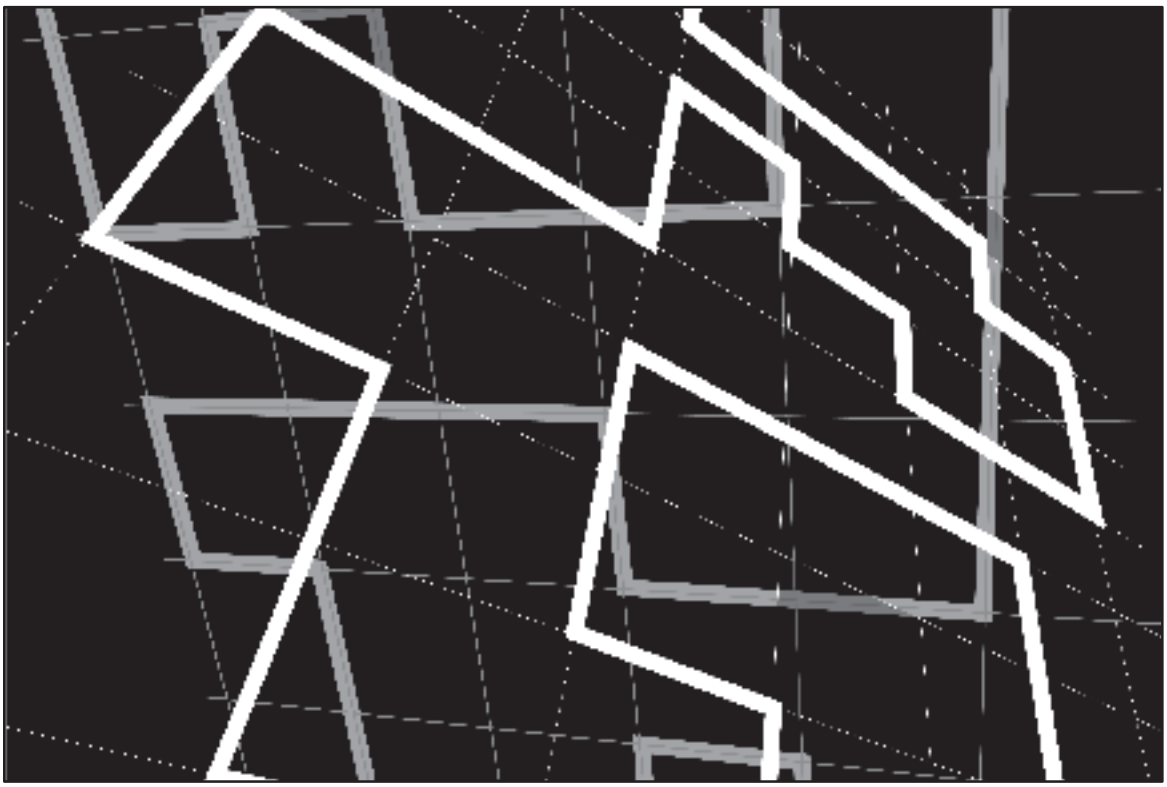
CHAPTER 1

Introduction



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CHAPTER 1

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 control programs. This publication provides an updated logic model linking activities to outcomes for Goal Area 1—Preventing Initiation of Tobacco Use—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 to use indicators to integrate program and evaluation planning. This guide may be used in coordination with CDC's recently released workbook, *Developing an Effective Evaluation Plan: Setting the Course for Effective Program Evaluation*,[1] as well as 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 tobacco 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 goal areas:

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

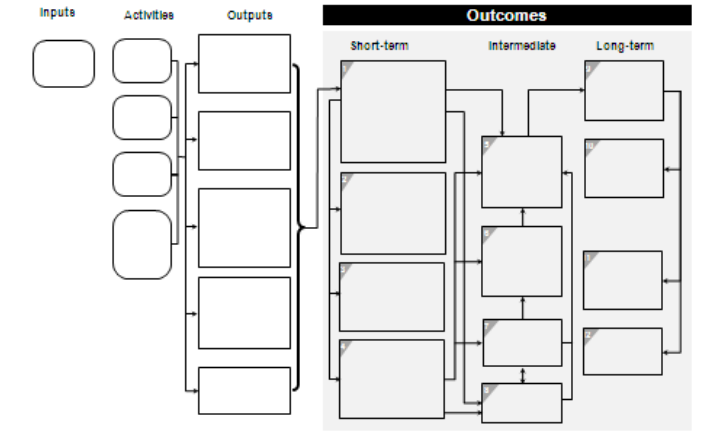
For more information on the NTCP, see Appendix A.

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] An example of a basic logic model is provided in Figure 1.

Figure 1: Example of Logic Model



To help tobacco 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.

In this update, we have expanded the age range of the target population for preventing initiation to include youth younger than age 18 years as well as young adults aged 18 to 25 years. This change was made in response to recent evidence suggesting that initiation of regular tobacco use is increasing among young adults.[3-5] This change in scope has substantive implications for the Goal Area 1 logic model. For example, the earlier short-term outcome titled "Increased restriction and enforcement of restrictions on tobacco sales to minors" has been revised to "Increased restriction and enforcement of tobacco product sales, availability, and use" of tobacco products for youth and young adults through age 25 years.

Outcome Components

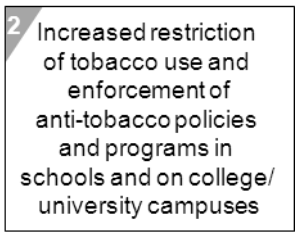
The outcome components in the NTCP logic models are categorized as short-term, intermediate, or long-term to indicate a presumed causal sequence.

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 5 as a primary intermediate outcome. Program activities designed to achieve changes in short-term Outcomes 1 through 4 (linked vertically on the logic model) should lead to changes in Outcome 5 (linked vertically with Outcomes 6, 7, and 8 on the logic model). Indeed, not only will changes to Outcomes 1 through 4 affect

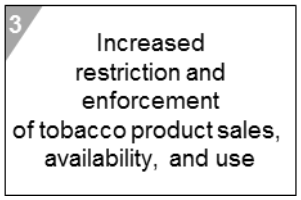
Outcome 5, but they will also affect intermediate Outcomes 6 through 8, as well as long-term Outcomes 9, 10, 11, and 12.

The revised Goal Area 1 logic model includes the following changes to outcomes from the 2005 *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs* (KOI 2005 hereafter).

- Changed the outcome "Increased anti-tobacco policies and programs in schools" to "Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses" (Outcome 2). This modification was intended to recognize the importance of comprehensive policies across a broader age range to achieve subsequent intermediate outcomes.

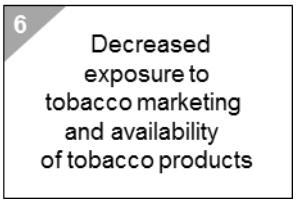


- Changed the outcome "Increased restriction and enforcement of restrictions on tobacco sales to minors" to "Increased restriction and enforcement of tobacco product sales, availability, and use" (Outcome 3). This modification was intended to broaden the scope of the outcome beyond a limited focus on sales to minors.



- Moved "Reduced tobacco industry influence" (Outcome 7) from a short-term to an intermediate outcome and included an additional short-term outcome that explicitly addresses "Increased policy and enforcement efforts to reduce tobacco industry influence" (Outcome 4). This modification was intended to better clarify the implied logic and order of effects.

- Included an additional intermediate outcome, "Decreased exposure to tobacco marketing and availability of tobacco products" (Outcome 6). This modification was intended to highlight the importance of the outcome in achieving reduced susceptibility to experimentation with tobacco products.



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 restrictions and enforcement of tobacco product sales, availability, and use" (Outcome 3) and you measured the "Proportion of jurisdictions with policies that control the type, location, number, and/or density of tobacco retail outlets" (Indicator 1.3.c), the result would indicate the extent of your progress toward creating restricted availability policies in all jurisdictions.

Tobacco Products Other than Cigarettes

Some of the indicators we discuss in this publication are particularly useful for measuring progress toward reducing *cigarette* use. In addition, given ongoing evidence that tobacco products *other than cigarettes* are being heavily marketed and new and alternative tobacco products are being developed by the tobacco industry,[3] we have explicitly attempted to update indicators so that they address a wide breadth of tobacco products. We encourage programs to consider the tobacco use patterns of their community when making decisions regarding surveillance and evaluation activities in terms of measuring different forms of tobacco use.

Identifying and Eliminating Disparities

We also encourage 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 populations experiencing tobacco-related disparities, ensuring culturally meaningful outputs, and collecting and analyzing data in a manner that allows for both the identification of populations experiencing tobacco-related disparities and the monitoring of outcomes in these populations. In considering what outcomes to monitor, it is important to remember that no single factor determines patterns of tobacco use and the impact of tobacco use in a particular population but rather that tobacco use involves a complex interaction of multiple factors.[7] As with types of tobacco products, we encourage programs to consider their local context when making decisions regarding their need to capture information by population characteristics, such as race/ethnicity, 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. Programs should 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 the distal outcomes is well established. Therefore, tobacco control programs

could consider demonstrating an effect on behavioral outcomes, and they can then assume that these will lead to favorable health effects. Second, we determined that the greatest expressed needs of the 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; Roeseler & Burns)[8] have been able to show an effect on long-term outcomes, but most states have not had comprehensive programs in place and been well-funded long enough to show such effects.[9-11] We also do not intend to imply that measuring outcomes is sufficient for evaluating a tobacco control program. It is not. Equally important is process evaluation, which focuses on measuring 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 some new indicators as well as some existing and revised indicators from KOI 2005) and engaged a panel of 12 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 policy makers, conformity with accepted practice, uniqueness, and how essential the indicator is for evaluating state tobacco control programs. The experts also indicated the level of resources needed to collect and analyze data on the indicator. 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 only 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.

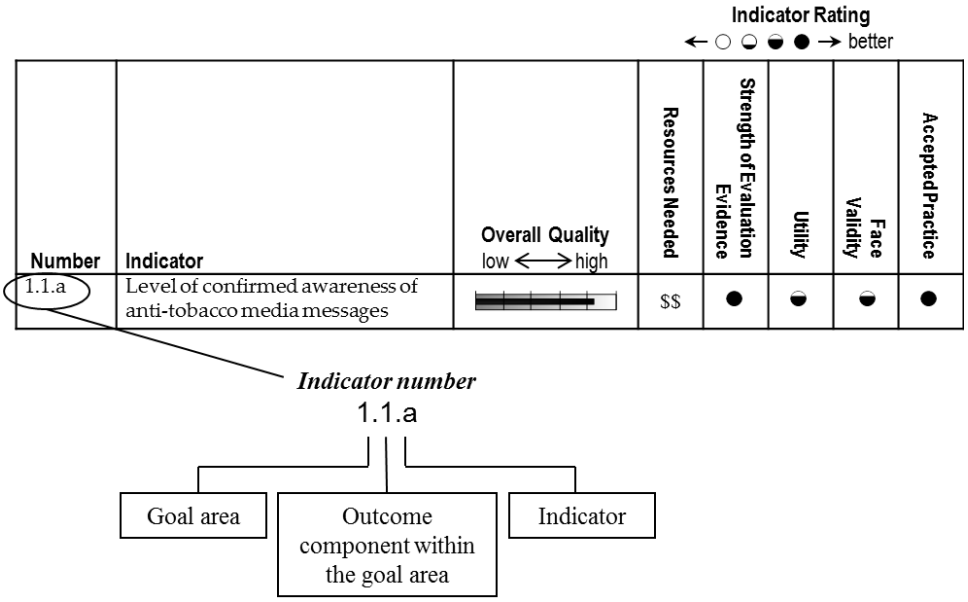
Indicator Rating Tables

For each outcome component of the logic model, we provide an indicator rating table. In each table is a list of all the indicators associated with the outcome component and the ratings for each indicator by criterion. Using this table makes it easy to compare all the indicators for one outcome. The number and name of each relevant indicator are provided in each table, as are graphic displays of the criteria scores for each indicator.

Figure 2: Example of Rating Table

Outcome 1

Increased Knowledge of the Dangers of Tobacco Use, Attitudes Against Tobacco Use, and Support for Policies to Reduce Tobacco Use Initiation



An example of an indicator rating and an explanation of how to read it are provided in Figure 2. The following are definitions of the criteria on which the ratings are based:

- **Overall quality.** A summary rating that reflects the overall quality of the indicator and the general worth of the indicator as it relates to evaluating state tobacco control programs.
- **Resources needed.** Intensity of resources needed to collect reliable and precise measures and to analyze appropriately 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 control programs and considers conflicting evidence as well as 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 policy and decision makers who may be users of tobacco control program evaluation results.
- **Accepted practice.** The degree to which use of the indicator is consistent with currently accepted, real-world tobacco control practice.

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 resources needed score for indicator 1.7.h: Extent of tobacco industry contributions to institutions and groups.
- 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 1.9.a: Average age at which young people first smoked a whole cigarette. 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 Preventing Initiation (Goal 1) logic model. The number of indicators for each logic model component

varies considerably; some have three to four indicators, whereas others have many.

We provide a profile for each indicator. These profiles provide detailed information about each indicator, as follows:

- **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 1.1.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 1.
- **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 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 non-standardized, 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 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 suggest instances where it may enhance the utility of the indicator to collect sociodemographic data (e.g., survey respondents' age, sex, race, ethnicity, city or county of residence, educational status, and income). For indicators

with survey items specific to cigarettes, we speak to the issue of capturing information about broader groups or different types of tobacco products. Please note that changes to existing survey items should be made with caution. Sufficient cognitive testing should be used 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] State representatives need accurate and timely evaluation data to engage stakeholders and decision makers. Evaluation is essential for state tobacco control program managers to demonstrate the effects of the program, account for funding, and improve programs. Effective tobacco control programs require careful planning, implementation, and evaluation. To develop a successful program and a useful evaluation, program staff and program evaluators must work collaboratively on program planning and evaluation planning. A strong evaluation will not salvage a weak program, and a strong program cannot be proven effective without a defensible 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 control program outlined in CDC's *Framework for Program Evaluation in Public Health Practice*[14] 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*.

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 entire 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 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 both 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 critical exercise, done in coordination with the ESW, will help to clarify the scope of the evaluation and provide basic information needed to complete step 2, describe the program.

Program staff and stakeholders must agree upon 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 needs 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., they are specific, measurable, achievable, relevant, and time-bound). An example of a SMART objective is increasing the proportion of young people who think that the tobacco companies try to get young people to use tobacco products (Indicator 1.1.e) from 50% in January 2013 to 75% in January 2014. 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 Control Program: A Hypothetical Example

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

In this example, assume that recent data from a state tobacco survey show an increase in tobacco use prevalence among young people, and state legislators are concerned about this increase. The legislators announced that new funds may become available if the state tobacco control program can show that it is effective in reducing tobacco use prevalence among young people.

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

Step 1: Engage stakeholders

The state tobacco 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, elected officials, and staff involved in running the tobacco prevention program. 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 legislature is providing funds specifically to prevent initiation. Therefore, the ESW chooses NTCP Goal Area 1: Preventing Initiation of Tobacco Use and reviews the logic model. The group then selects the long-term outcome of focus: Outcome 9 (reduced initiation of tobacco use). To learn more about Outcome 9, program staff review the outcome component overview (page 205), 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 read the logic model for NTCP Goal Area 1 backward (starting at the long-term outcome) to select intermediate and short-term outcomes that are linked to the long-term outcome. They select one intermediate outcome: Outcome 5. Reduced susceptibility to experimentation with tobacco products.

This intermediate outcome (Outcome 5) serves as a funnel between the long-term outcome and two short-term outcomes in the logic model of NTCP Goal Area 1:

Outcome 1. Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation

Outcome 4. Increased policy and enforcement efforts to reduce tobacco industry influence

The ESW understands that, based on the evidence, achieving one or more of 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 workgroup 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 legislature 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, 4, 5, and 9), beginning with Outcome 1. The staff examine the indicator rating table for Outcome 1 (page 32). 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 33-46).

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 feasibility of the evaluation plan is also an important factor the group applies to the decision-making process.

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 one indicator associated with outcome component 1 can be measured using the state Adult Tobacco Survey that they conduct regularly:

1.1.c Level of support for policies, and for enforcement of policies, to decrease availability of tobacco to young people

The ESW also understands that short-term changes in the level of support for policies, and for enforcement of policies, to decrease availability of tobacco contribute to increased policy and enforcement efforts to reduce tobacco industry influence (outcome component 4). The planners and evaluators use the same process to select indicators for each of the outcome components they have chosen to focus on (4, 5, and 9):

1.4.b Proportion of jurisdictions with strong policies that regulate the extent and type of consumer-focused tobacco promotions
1.5.f Proportion of young people who have never used tobacco but are susceptible to its use
1.9.c Proportion of young people who report never having tried a tobacco product

Step 5. Planning for conclusions

As part of their comprehensive tobacco control program, based on the goals and objectives of the initiative as well as the strength of the core components of the comprehensive program infrastructure, the program planners select and design evidence-based interventions, such as mobilizing community support and involvement at the grassroots level to promote policy changes that decrease availability of tobacco to young people.

The program staff implement the intervention activities and work with the ESW to continuously monitor (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 1.1.c (Level of support for policies, and for enforcement of policies, to decrease availability of tobacco to young people), they create the following objective: Increase the percentage of adults in the state who would support a

policy to ban tobacco sales in pharmacies or drug stores from 10% in July 2013 to at least 40% in June 2015.

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, program staff and the 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 needed 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 the ESW carefully consider how, when, and with 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 final briefing document to engage state decision makers. This document is intended to be succinct, graphic, and to highlight the program's impact on public health outcome indicators. The graphic Goal 1 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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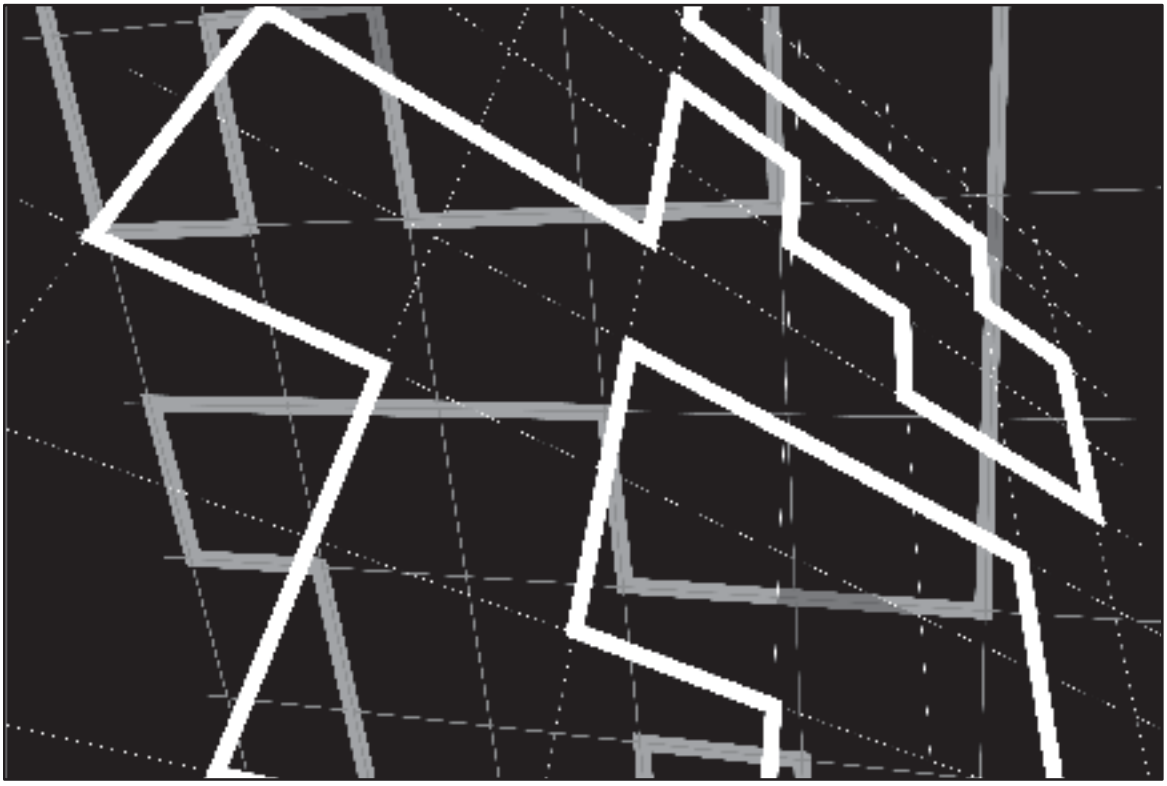
CHAPTER 2

Goal Area 1: Preventing Initiation of Tobacco Use



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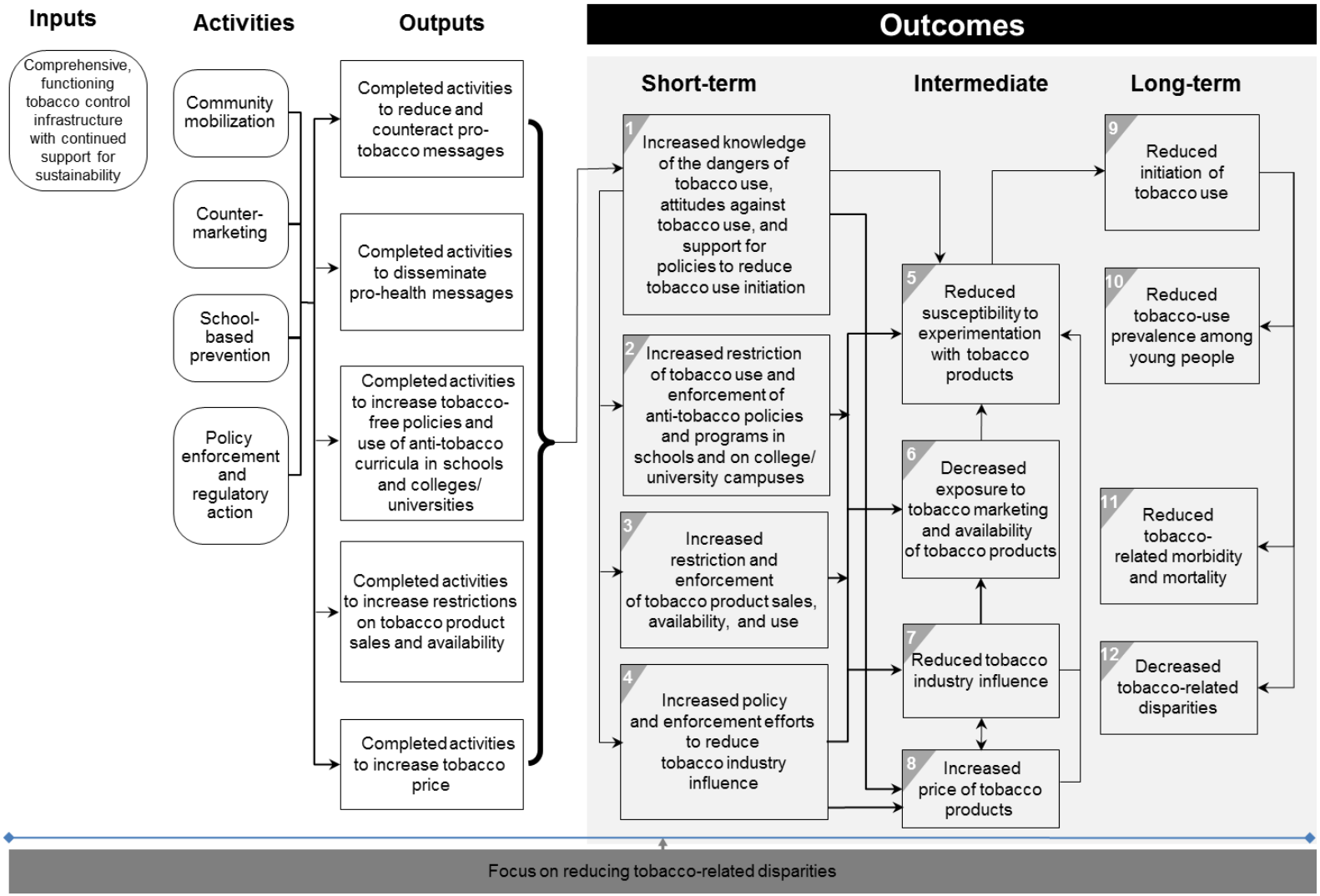
Goal Area 1

Preventing Initiation of Tobacco Use



Goal Area 1

Preventing Initiation of Tobacco Use

Short-term Outcomes

- **Outcome 1: Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation**
  - **1.1.a** Level of awareness of anti-tobacco media messages
  - **1.1.b** Level of receptivity to anti-tobacco media messages
  - **1.1.c** Level of support for policies, and for enforcement of policies, to decrease availability of tobacco to young people
  - **1.1.d** Level of support for creating comprehensive tobacco-free policies in schools and on college and university campuses
  - **1.1.e** Proportion of young people who think that the tobacco companies try to get young people to use tobacco products
  - **1.1.f** Level of perceived harm of traditional, non-traditional, and emerging tobacco products among young people

- **Outcome 2: Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses**
  - **1.2.a** Proportion of schools or colleges/universities implementing 100% tobacco-free policies
  - **1.2.b** Proportion of schools or school districts that provide tobacco-use prevention that meets CDC guidelines
  - **1.2.c** Proportion of young people who participate in tobacco-use prevention activities
  - **1.2.d** Level of reported exposure to school-based tobacco-use prevention that meets CDC guidelines
  - **1.2.e** Perceived compliance with tobacco-free policies in schools and on college/university campuses

- **Outcome 3: Increased restriction and enforcement of tobacco product sales, availability, and use**
  - **1.3.a** Proportion of jurisdictions with strong policies that ban non-sale distribution or free sampling of all tobacco products everywhere
  - **1.3.b** Proportion of jurisdictions with strong policies that require retail licenses to sell tobacco products
  - **1.3.c** Proportion of jurisdictions with strong policies that control the type, location, number, and/or density of tobacco retail outlets
  - **1.3.d** Proportion of jurisdictions with strong policies that ban tobacco vending machine sales everywhere

- **1.3.e** Number and type of enforcement actions issued for violations of restrictions on tobacco product availability
- **1.3.f** Proportion of jurisdictions that regulate sales of other tobacco products
- **1.3.g** Proportion of jurisdictions with strong public policies for tobacco-free workplaces and other public places
- **1.3.h** Proportion of states with tobacco control laws that preempt stronger local tobacco control and prevention laws

■ **Outcome 4: Increased policy and enforcement efforts to reduce tobacco industry influence**

- **1.4.a** Proportion of jurisdictions with strong policies that regulate tobacco advertising
- **1.4.b** Proportion of jurisdictions with strong policies that regulate the extent and type of consumer-focused tobacco promotions
- **1.4.c** Proportion of jurisdictions with strong policies that regulate the extent and type of merchant-focused industry promotions
- **1.4.d** Proportion of jurisdictions with strong minimum tobacco product price laws
- **1.4.e** Proportion of jurisdictions with strong public policies to establish a fee on each package of tobacco product sold to cover government costs
- **1.4.f** Proportion of jurisdictions with strong policies that limit tobacco industry sponsorship of public and private events
- **1.4.g** Number and type of enforcement actions for violations of restrictions on tobacco marketing
- **1.4.h** Number and type of Master Settlement Agreement violations by tobacco companies

Intermediate Outcomes

■ **Outcome 5: Reduced susceptibility to experimentation with tobacco products**

- **1.5.a** Proportion of young people who think that tobacco use is cool and helps them fit in
- **1.5.b** Proportion of young people who think that young people who use tobacco products have more friends
- **1.5.c[NR]** Proportion of young people who overestimate the smoking rate among their peers
- **1.5.d[NR]** Proportion of young people who report that their parents would strongly disapprove of their use of tobacco products
- **1.5.e** Proportion of young people who have a favorite tobacco brand
- **1.5.f** Proportion of young people who have never used tobacco but are susceptible to its use

- **Outcome 6: Decreased exposure to tobacco marketing and availability of tobacco products**
  - **1.6.a** Density of stores selling tobacco
  - **1.6.b** Proportion of young people who report receiving non-sale distribution or free samples of tobacco products
  - **1.6.c** Proportion of retailers selling tobacco products to youth
  - **1.6.d** Proportion of young people reporting that they have purchased tobacco products from a retailer
  - **1.6.e** Proportion of youth reporting that they have been unsuccessful in purchasing tobacco products from a retailer
  - **1.6.f** Proportion of youth reporting that they have received tobacco products from a social source
  - **1.6.g** Proportion of young people reporting that they purchased tobacco products from a vending machine
  - **1.6.h** Proportion of young people who believe that it is easy to obtain tobacco products

- **Outcome 7: Reduced tobacco industry influence**
  - **1.7.a** Extent and type of retail tobacco advertising
  - **1.7.b** Extent of tobacco industry sponsorship of public and private events
  - **1.7.c** Extent of tobacco advertising in media
  - **1.7.d** Extent of tobacco in movies
  - **1.7.e^{NR}** Extent of pro-tobacco Internet presence
  - **1.7.f** Amount and quality of news media stories about tobacco industry practices and political lobbying
  - **1.7.g^{NR}** Extent of industry-sponsored tobacco use prevention activities
  - **1.7.h** Amount of tobacco industry contributions to institutions and groups
  - **1.7.i** Amount of tobacco industry campaign contributions to local and state politicians

- **Outcome 8: Increased price of tobacco products**
  - **1.8.a** Amount of tobacco product taxes and fees
  - **1.8.b** Price paid for tobacco products
  - **1.8.c** Extent and type of consumer-focused industry promotions
  - **1.8.d** Extent and type of merchant-focused industry promotions

Long-term Outcomes

- **Outcome 9: Reduced initiation of tobacco use**
  - **1.9.a** Average age at which young people first smoked a whole cigarette
  - **1.9.b** Average age at which young people first tried a commercial tobacco product other than cigarettes
  - **1.9.c** Proportion of young people who report never having tried a tobacco product

- **Outcome 10: Reduced tobacco-use prevalence among young people**
  - **1.10.a** Prevalence of tobacco use among young people
  - **1.10.b** Proportion of established young tobacco users
  - **1.10.c** Type and brand preferences of young tobacco users
  - **1.10.d** Proportion of poly-tobacco product use among young people
  - **1.10.e** Level of tobacco use among young people

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

The table below summarizes changes made to Goal 1 indicators since KOI 2005. As shown, we deleted 14 KOI 2005 indicators, revised the titles of 29 KOI 2005 indicators, and added 23 new indicators. Indicator deletions were based on changes in policy and the evidence base that made a subset of the previous indicators obsolete or unwarranted. For example, indicator 1.6.3 "Proportion of students who would ever wear or use something with a tobacco company name or picture" was deleted because provisions of the 2009 Tobacco Control Act banned all non-tobacco promotional items with tobacco company names or pictures. 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 control programs.

2014 Revised and 2005 KOI Goal 1 Indicators Crosswalk

Revised Indicator Number	Original KOI Number	Revised Title
Outcome 1		
1.1.a	1.6.1	
1.1.b	1.6.2	
Deleted	1.6.3	
1.1.c	1.6.4	✓
Deleted	1.6.5	
Deleted	1.6.6	
1.1.d	1.6.7	✓
1.1.e	1.6.8	✓
1.1.f	**New**	

Revised Indicator Number	Original KOI Number	Revised Title
Outcome 2		
1.2.a	1.7.1	✓
1.2.b	1.7.2	✓
Deleted	1.7.3	
Deleted	1.7.4	
Deleted	1.7.5	
Deleted	1.7.6	
Deleted	1.7.7	
1.2.c	1.7.8	✓
1.2.d	1.7.9	✓
1.2.e	1.7.10	✓
Deleted	1.7.11	
Outcome 3		
1.3.a	**New**	
1.3.b	1.8.2	✓
1.3.c	1.8.3	✓
1.3.d	1.8.1	✓
Deleted	1.8.4	
Deleted	1.8.5	
1.3.e	1.8.6	✓
1.3.f	**New**	
1.3.g	2.4.1	✓
1.3.h	1.8.7	✓
Outcome 4		
1.4.a	1.9.2	✓
Deleted	1.9.3	
1.4.b	**New**	
Deleted	1.9.4	
1.4.c	**New**	
1.4.d	**New**	
1.4.e	**New**	
1.4.f	1.9.6	✓
1.4.g	**New**	
1.4.h	1.9.10	

Revised Indicator Number	Original KOI Number	Revised Title
Deleted	1.9.7	
Outcome 5		
1.5.a	1.10.1	✓
1.5.b	1.10.2	✓
Deleted	1.10.4	
1.5.c[NR]	**New**	
1.5.d[NR]	**New**	
1.5.e	**New**	
1.5.f	1.10.5	✓
Outcome 6		
1.6.a	**New**	
1.6.b	**New**	
1.6.c	1.11.1	
1.6.d	1.11.2	✓
1.6.e	1.11.3	
1.6.f	1.11.4	✓
1.6.g	1.11.5	✓
1.6.h	1.11.6	
Outcome 7		
1.7.a	1.9.1	✓
1.7.b	1.9.5	
1.7.c[NR]	1.9.8	✓
1.7.d	**New**	
1.7.e[NR]	**New**	
1.7.f	1.9.9	
1.7.g[NR]	**New**	
1.7.h	1.9.11	
1.7.i	1.9.12	
Outcome 8		
1.8.a	1.12.1	✓
1.8.b	**New**	
1.8.c	**New**	
1.8.d	**New**	

Revised Indicator Number	Original KOI Number	Revised Title
Outcome 9		
1.9.a	1.13.1	
1.9.b	**New**	
1.9.c	1.13.2	✓
Outcome 10		
1.10.a	1.14.1	
1.10.b	1.14.2	✓
1.10.c	**New**	
1.10.d	**New**	
1.10.e	**New**	

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

Outcome 1

Increased Knowledge of the Dangers of Tobacco Use, Attitudes Against Tobacco Use, and Support for Policies to Reduce Tobacco Use Initiation

The theory of change (rationale for expected linkages between outcomes) associated with preventing people from starting to use tobacco has been shown to begin with increasing knowledge of the dangers of tobacco use, changing attitudes toward tobacco use, changing attitudes about tobacco industry practices, and increasing public support for effective policies and practices that reduce the likelihood that people will use tobacco. The tobacco industry spends almost $8.8 billion per year on marketing smokeless tobacco and cigarettes.[1,2] Adolescents are bombarded with pro-tobacco messages in and around retail stores, in magazines, in movies, and by having people smoke in their presence. Evidence shows that anti-tobacco media campaigns, either in combination with other interventions or by themselves, are effective in reducing smoking by adolescents.[3] For example, the "truth" anti-tobacco media campaign in Florida achieved nearly 93% confirmed awareness of the message among young people and was associated with improved anti-tobacco attitudes.[4] After 1 year, both susceptibility to smoking and cigarette use declined more among Florida's young people than among young people in the rest of the nation. Furthermore, the national truth® campaign was responsible for approximately 22% of the decline in youth smoking from 2000 to 2002.[5-7]

In addition to changing people's attitudes toward tobacco use, evidence demonstrates that increasing public support for implementing and enforcing tobacco control policies reduces the likelihood that people will begin smoking. Such policies include passing and enforcing strong laws that decrease access to tobacco products and exposure to advertising, and implementing comprehensive tobacco-free school and college campus policies. Policies such as these create an environment that supports tobacco-free communities.

The following indicators are associated with this outcome:

- **1.1.a** Level of awareness of anti-tobacco media messages
- **1.1.b** Level of receptivity to anti-tobacco media messages
- **1.1.c** Level of support for policies, and for enforcement of policies, to decrease availability of tobacco to young people
- **1.1.d** Level of support for creating comprehensive tobacco-free policies in schools and on college and university campuses
- **1.1.e** Proportion of young people who think that the tobacco companies try to get young people to use tobacco products
- **1.1.f** Level of perceived harm of traditional, non-traditional, and emerging tobacco products among young people

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Outcome 1

Increased Knowledge of the Dangers of Tobacco Use, Attitudes Against Tobacco Use, and Support for Policies to Reduce Tobacco Use Initiation

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.1.a	Level of awareness of anti-tobacco media messages		$$	●	◓	◓	●
1.1.b	Level of receptivity to anti-tobacco media messages		$$	●	◓	◓	●
1.1.c	Level of support for policies, and for enforcement of policies, to decrease availability of tobacco to young people	††	$$	◓	◓	◓	●
1.1.d	Level of support for creating comprehensive tobacco-free policies in schools and on college and university campuses		$$	◓	◓	◓	◓
1.1.e	Proportion of young people who think that the tobacco companies try to get young people to use tobacco products		$$	◓	◓	◓	●
1.1.f	Level of perceived harm of traditional, non-traditional, and emerging tobacco products among young people		$$	◓	◓	◓	◓

$ 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 fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

Indicator 1.1.a

Level of Awareness of Anti-tobacco Media Messages

KOI 2005	1.6.1
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Proportion of the target population that can accurately recall a media message
Why this indicator is useful	Evaluating recall 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]
Example data source(s)	Centers for Disease Control and Prevention (CDC) 2012 Tips From Former Smokers Campaign, Follow-up Questionnaire New York State Adult Tobacco Survey, 2011 and 2013
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	*Unaided Awareness:* **From New York State Adult Tobacco Survey, 2013** "Are you aware of any advertising or campaigns against smoking that is are now taking place?" Follow up: "What is the theme or slogan of this advertising or campaign?" *Aided Awareness:* **From CDC 2012 Tips From Former Smokers Campaign, Follow-up Questionnaire** (Online survey) "Now, we would like you to view a series of television advertisements that have been shown in the U.S. When you are ready, please click on the link below to view the first advertisement. There are a total of XX ads to view. After you view each ad, there will be a few questions that ask about your opinions of the ad." Have you seen this ad on television in the past 3 months that is, since [Date]? 1. Yes 2. No? If yes*:* In the past 3 months, how frequently have you seen this ad on television? (Rarely, Sometimes, Often, Very Often) *Confirmed Awareness:* **From New York State Adult Tobacco Survey, 2011** (telephone survey)2 "Have you recently seen an anti-smoking ad on TV that shows [insert ad description here]?" "What happens in this ad?"

Comments

There are three ways to measure individual-level recall and recognition of advertisements: unaided recall, aided recall, and confirmed awareness. *Aided recall* is also referred to as recognition or encoded exposure in the health communication research literature. *Unaided recall* items provide little or no cues about the content of an ad and require the respondent to recall the details of an ad from memory. Aided recall items consist of an interviewer providing respondents with a verbal description of an advertisement'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 if they recognize the advertisement. *Confirmed awareness* items include a brief description of an advertisement with a request of the respondent to provide additional details about the ad.

Aided recall helps determine specific campaign and ad awareness or exposure, [2] whereas unaided recall allows for tracking which campaign messages are most prominent in the minds of the target population. For aided recall items, evaluators may choose to include decoy responses to determine "yea-saying" bias. Research has questioned the marginal utility of confirmed awareness items compared to aided recall measures, and given the extra respondent and interviewer burden in asking open-ended confirmed awareness items, aided awareness measures may be preferable.[3] The mode of survey administration is also important to consider when choosing awareness items. Online administration of surveys allows advertisements and other materials (Web site banner ads, TV ads, etc.) to be shown directly to survey participants, rather than relying on crude interviewer descriptions of advertisements as in telephone interviews. Examples of each type of measure are included in "Example Survey Question(s)" above.

Programs may want to evaluate recall of an advertisement by respondents' smoking status (current, former, or never), demographics, and tobacco use characteristics. Additionally, frequency of exposure should be measured to allow greater variation and provide for dose-response analyses.

Evaluators should work closely with countermarketing 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.

Rating

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

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Indicator 1.1.b

Level of Receptivity to Anti-tobacco Media Messages

KOI 2005	1.6.2
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Level of receptivity to media messages by the intended audience. In tobacco control, receptivity is the extent to which people believe that the message was convincing, made them think about their behavior, and stimulated discussion with others.[1]
Why this indicator is useful	Message awareness is necessary but not sufficient to change knowledge, attitudes, and intentions. Media messages are effective only if they reach and resonate with the intended audience.[2,3] Well-received messages help ensure campaign effectiveness.[4-7] 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. A growing literature has established that measures of media message receptivity predict changes in attitudes about the topic.[8] One study has found that receptivity to anti-tobacco messages was a significant predictor of lower rates of intention to smoke.[9]
Example data source(s)	Legacy Media Tracking Survey (LMTS), 2004
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From LMTS** Tell me how much you agree or disagree with the following statement: This ad is convincing. Would you say you: ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ Have no opinion ☐ Don't know "On a scale from 1 to 5, where 1 means you don't like this ad at all and 5 means you like the young adult ad very much, how much do you like this ad?" ☐ One ☐ Two ☐ Three ☐ Four ☐ Five Would you say the ad gave you good reasons not to smoke? ☐ Yes ☐ No ☐Don't know Did you talk to your friends about this ad? ☐ Yes ☐ No ☐ Don't know **From evaluation of national truth® campaign[10]** Perceived Evaluative Effectiveness Scale (reliability = 0.94) • These ads are worth remembering. • These ads grabbed my attention. • These ads are powerful. • These ads are informative. • These ads are meaningful to me. • These ads are convincing.

Comments	Evaluators may want to assess receptivity to messages transmitted through various channels (e.g., social media, television, print, radio, or retail warning signs). See Davis et al. (2011) in "Further Reading" for guidance on measuring perceived effectiveness of media messages. Evaluators should work closely with countermarketing 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.

Rating

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

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Indicator 1.1.c

Level of Support for Policies, and for Enforcement of Policies, to Decrease Availability of Tobacco to Young People

KOI 2005	1.6.4 Revised Title (Previously: "Level of support for policies, and enforcement of policies, to decrease young people's access to tobacco")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Proportion of adults who support policies and enforcement of policies to decrease the availability of tobacco products to young people
Why this indicator is useful	Tobacco-free policies are unlikely to be adopted without support from policy makers and the general public.[1-4] Prematurely advancing a policy without sufficient support may result in its initial defeat and make it more difficult to address the issue in the future.[5] In California, for example, public support for retail tobacco sales licensing policies has grown since 1990, and this has contributed to the passage of local tobacco licensing ordinances in several jurisdictions.[6]
Example data source(s)	California Adult Tobacco Survey (CATS), 2008 Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPCaliforniaAdultTobaccoSurvey2008.pdf Mississippi 2011 Social Climate Survey of Tobacco Control Information available at: http://surveillance.mstobaccodata.org/mississippi-tobacco-control-data/social-climate-of-tobacco-adult-survey/
Population group(s)	Decision makers, opinion leaders, and/or the general public aged 18 years or older
Example survey question(s)	**From CATS** Please tell me whether you agree or disagree with the following. Store owners should need a license to sell cigarettes (just like alcoholic beverages). **From MS Social Climate Survey** In pharmacies and drug stores, should the sale of tobacco products be: ☐ Allowed ☐ Allowed, but only if the products are hidden from view ☐ Not allowed at all ☐ Don't know/not sure ☐ Refused
Comments	Evaluators may want to analyze the level of support for creating policies to decrease availability of tobacco products by respondents' tobacco use status.

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.1.d

Level of Support for Creating Comprehensive Tobacco-Free Policies in Schools and on College and University Campuses

KOI 2005	1.6.7 Revised Title (Previously: "Level of support for creating policies in schools")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Proportion of the population that supports creating and actively enforcing comprehensive tobacco-free policies in schools and on college and university campuses. Comprehensive policies (a) prohibit anyone from using any type of tobacco product at all times on school or university grounds, at all school-sponsored functions, and in school vehicles; (b) ban all tobacco industry marketing, sponsorship, and recruitment efforts; (c) call for divestiture of all tobacco company stocks or holdings; and (d) provide cessation services/resources for students, faculty, and staff.
Why this indicator is useful	Young people's attitudes about the acceptability of tobacco use are influenced by what they see their peers and adult role models doing at school. Although tobacco is increasingly banned in primary and secondary school settings, students are often exposed in post-secondary settings including technical schools and college campuses, which may still allow for the sale, advertisement, and promotion of tobacco products in school owned and leased properties as well as during school-sponsored events.[1] Strong school anti-tobacco policies require the support of parents, teachers, administrators, policy makers, and the general public.[2]
Example data source(s)	State Adult Tobacco Survey (ATS): Questions Recommended for Specific Purposes, Section F: Policy Issues, 2009 Information available at: http://apps.nccd.cdc.gov/QIT/QuickSearch.aspx Behavioral Risk Factor Surveillance System (BRFSS), Tobacco Use Prevention Module, 2000 Information available at: http://www.cdc.gov/brfss/ California Tobacco Survey (CTS), 1999 Information available at: http://libraries.ucsd.edu/locations/sshl/data-gov-info-gis/ssds/guides/tobacco-surveys.html California Tobacco Survey (CTS), 2005 Information available at: http://libraries.ucsd.edu/locations/sshl/data-gov-info-gis/ssds/guides/tobacco-surveys.html
Population group(s)	Decision makers, opinion leaders, and/or the general public
Example survey question(s)	**From ATS** How strongly do you agree or disagree with the following statement: Tobacco use by adults should not be allowed on school grounds or at any school events. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ No opinion/Don't know ☐ Refused **From BRFSS** In schools, do you think that smoking should be allowed in all areas, some areas, or not allowed at all? ☐ All areas ☐ Some areas ☐ Not allowed ☐ Don't know/Not sure ☐ Refused

	From CTS Do you think schools should prohibit students from wearing clothing or bringing gear with tobacco brand logos to school? ☐ Yes ☐ No ☐ Refused ☐ Don't know 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: ☐ Allowed ☐ Not allowed ☐ Refused ☐ Don't know
Comments	Evaluators should determine the scope of policies before evaluating the presence/absence and reach of such policies. See the American College Health Association Position Statement on Tobacco on College and University Campuses for suggested policies and actions colleges and universities may take: http://www.acha.org/Publications/docs/Position_Statement_on_Tobacco_Nov2011.pdf Evaluators may want to analyze the level of support for creating tobacco-free policies in schools based on the respondent's tobacco use status.

Rating

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

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Indicator 1.1.e

Proportion of Young People Who Think that the Tobacco Companies Try to Get Young People to Use Tobacco Products

KOI 2005	1.6.8 Revised Title (Previously: "Proportion of young people who think that the cigarette companies try to get young people to smoke")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Proportion of young people who believe that tobacco companies try to get young people to start or continue using tobacco products
Why this indicator is useful	If young people are aware of the tobacco industry's attempts to persuade them to start smoking, they may become less susceptible to the tobacco industry's marketing tactics.[1] Additionally, focusing on the deceitful practices of the tobacco industry may also deter tobacco use, an effect that appears to be sustained over time and results in lowered intentions to start smoking.[2-4]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ California Student Tobacco Survey (CSTS), 2011–2012
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** Do you believe that tobacco companies try to get young people under 18 to use tobacco products? ☐ Yes ☐ No **From CSTS** Tobacco companies try to get young people to start smoking by using advertisements that are attractive to young people. ☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not
Comments	None noted

Rating

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

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Indicator 1.1.f

Level of Perceived Harm of Traditional, Non-Traditional, and Emerging Tobacco Products Among Young People

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased knowledge of the dangers of tobacco use, attitudes against tobacco use, and support for policies to reduce tobacco use initiation
What to measure	Young people's perceived direct and comparative harms of traditional, non-traditional, and emerging tobacco products. See "Comments" below for clarification of nontraditional and emerging tobacco products.
Why this indicator is useful	Evidence suggests that young people's belief in harm from tobacco products is associated with lower smoking frequency.[1,2] The tobacco industry is increasingly introducing new tobacco products, such as smokeless tobacco (e.g., snus), dissolvable tobacco (e.g., sticks, strips, and tablets), and electronic cigarettes,[3] that may in fact be "safer" than traditional tobacco products, but contain nicotine and tobacco and are therefore addictive and not without harm. Research on risk perceptions of young adult smokers related to use of tobacco products has found that new products are generally perceived as safer than cigarettes.[4] Research on the safety of new and emerging products in relation to cigarettes is only emerging; however, it is important that the public's perceptions of all tobacco products be monitored and corrected through education as research emerges.
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: 2000 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Youth Tobacco Survey (NYTS), 2006 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Youth Tobacco Survey (NYTS), 2009 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Survey on Drug Use and Health (NSDUH), 2009 Information available at: http://www.samhsa.gov/data/NSDUH.aspx International Tobacco Control Survey (ITC), 2009 Information available at: http://www.itcproject.org/ Minnesota Adult Tobacco Survey (MATS), 2007 Information available at: http://www.mntobacco.nonprofitoffice.com/
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years

Example survey question(s)

From NYTS

Do you think it is safe to smoke for only a year or two, as long as you quit after that?
☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not

Do you think people risk harming themselves if they smoke one or more packs of cigarettes per day?
☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not

From NSDUH

How much do you think people risk harming themselves physically and in other ways if they do the following? Smoke one or more packs of cigarettes per day?
☐ No risk ☐ Slight risk ☐ Moderate risk ☐ Great risk ☐ Don't know/Refused

From ITC

As far as you know, are ANY smokeless tobacco products less harmful than ordinary cigarettes?
☐ Yes ☐ No ☐ Not applicable ☐ Refused ☐ Don't know

Thinking about different types of tobacco products that are smoked—that is, factory-made cigarettes, roll-your-own, pipes, and cigars—are SOME of these less harmful than others or are they equally harmful?
☐ Don't know ☐ Not applicable ☐ Refused ☐ Don't know
☐ All kinds are equally harmful ☐ Some kinds are more harmful than others

From MATS

In your opinion, are any of the following products less harmful, more harmful, or just as harmful as smoking cigarettes? Smokeless tobacco such as snuff and chewing tobacco?
☐ More ☐ Less ☐ Don't know ☐ Refused ☐ Just as harmful

Comments

Nontraditional and emerging tobacco products include all tobacco or nicotine-containing products that are not nicotine replacement therapies (NRTs). These include products such as dissolvable tobacco products, snus, and e-cigarettes.

In order for the example survey questions above to be useful, evaluators need to analyze how inaccurate perceptions are compared with actual harm. The example items from NYTS and NSDUH measure perceived direct harm, whereas the example items from ITC and MATS measure perceived comparative harm.

Rating

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

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Outcome 2

Increased Restriction of Tobacco Use and Enforcement of Anti-tobacco Policies and Programs in Schools and on College/University Campuses

School-based prevention programs and policies, when combined with a comprehensive approach to prevention efforts including family, mass media, and community programs, can be effective at preventing and reducing tobacco use.[1] School tobacco prevention programs and policies are widely applied in the United States today and have been recommended as a component of comprehensive tobacco prevention programs. In 1994, CDC provided guidelines for school health programs to prevent tobacco use and addiction.[2] These guidelines include recommendations on policies, curricula and instruction, teacher training, parental involvement, tobacco-use cessation, and evaluation.

Research has shown that school tobacco-free policies need to be enforced and take a proactive approach to implementation, rather than a punitive one, in order to be effective.[1] Smoke-free policies in post-secondary educational institutions have also increased rapidly over the past decade. As of April 2013, at least 1,159 college and university campuses were 100% smoke-free with no exemptions in the United States.[3] The American College Health Association encourages its members to implement 100% indoor and outdoor campus-wide tobacco-free environments to reduce health risks related to tobacco use.[4] Although little research has examined the effectiveness of policy changes to promote tobacco-free campuses in colleges and universities, evidence from community- and state-level comprehensive tobacco control programs that use a socioecological approach to address multiple factors has shown that such policies, combined with education and cessation programs, decrease tobacco use prevalence.[5, 6]

Evidence shows that school-based prevention programs that are comprehensive, interactive, and sustained; begin early in the students' school career; incorporate an appropriate number of lessons; and are integrated into a community-wide approach can be effective at preventing or reducing tobacco use among students.[1] The Surgeon General's Report on preventing tobacco use among youth and young adults states that "Evidence is sufficient to conclude that school-based programs with evidence of effectiveness, containing specific components, can produce at least short-term effects and reduce the prevalence of tobacco use among school-aged youth" (p. 812).[1]

The following indicators are associated with this outcome:

- **1.2.a** Proportion of schools or colleges/universities implementing 100% tobacco-free policies
- **1.2.b** Proportion of schools or school districts that provide tobacco-use prevention that meets CDC guidelines
- **1.2.c** Proportion of young people who participate in tobacco-use prevention activities
- **1.2.d** Level of reported exposure to school-based tobacco-use prevention that meets CDC guidelines
- **1.2.e** Perceived compliance with tobacco-free policies in schools and on college/ university campuses

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Outcome 2

Increased Restriction of Tobacco Use and Enforcement of Anti-tobacco Policies and Programs in Schools and on College/University Campuses

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.2.a	Proportion of schools or colleges/ universities implementing 100% tobacco-free policies		$$$	●	●	●	●
1.2.b	Proportion of schools or school districts that provide tobacco-use prevention that meets CDC guidelines		$$	◒	◓	◓	◓
1.2.c	Proportion of young people who participate in tobacco-use prevention activities		$$	◓	◓	◓	◓
1.2.d	Level of reported exposure to school-based tobacco-use prevention that meets CDC guidelines		$$$	◒	◒	◓	◓
1.2.e	Perceived compliance with tobacco-free policies in schools and on college/university campuses	 ††	$$	◓	◓	◓	◓

$ 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 fewer than 75% of valid ratings being within ±2 points of the median for overall quality of the indicator.

Indicator 1.2.a

Proportion of Schools or Colleges/Universities Implementing 100% Tobacco-free Policies

KOI 2005	1.7.1 Revised Title (Previously: "Proportion of schools or school districts reporting the implementation of 100% tobacco-free policies")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses
What to measure	Proportion of schools or colleges/universities that report having a policy that (a) prohibits anyone from using any type of tobacco product at all times on school or university grounds, at all school-sponsored functions, and in school vehicles; (b) bans all tobacco industry marketing, sponsorship, and recruitment efforts, as well as calls for divestiture of all tobacco company stocks or holdings; and (c) provides cessation services/resources for students, faculty, and staff
Why this indicator is useful	Young people's attitudes toward the acceptability of tobacco use in general are influenced by the actions of their peers and educators at school.[1,2] Comprehensive policies that apply to everyone in all areas of a campus may increase student support and compliance and decrease tobacco use among young people.[3-6] However, changes in tobacco initiation and prevalence are reliant on strong enforcement of school policies.
Example data source(s)	CDC School Health Profiles: School Principal Questionnaire (Profiles), 2010 Information available at: http://www.cdc.gov/healthyyouth/profiles/ American College Health Association (ACHA) College Campus Tobacco Cessation and Prevention Survey, 2005 Information available at: /http://www.acha.org/
Population group(s)	School principals College Health Center Directors
Example survey question(s)	**From Profiles** Has this school adopted a policy prohibiting tobacco use? ☐ Yes ☐ No Does the tobacco prevention policy specifically prohibit use of each type of tobacco product for each of the following groups?

Type of tobacco product	Students		Faculty/Staff		Visitors	
	Yes	No	Yes	No	Yes	No
• Cigarettes	☐	☐	☐	☐	☐	☐
• Smokeless tobacco	☐	☐	☐	☐	☐	☐
• Cigars	☐	☐	☐	☐	☐	☐
• Pipes	☐	☐	☐	☐	☐	☐

Does the tobacco prevention policy specifically prohibit use during each of the following times for each of the following groups?

Time	Students		Faculty/Staff		Visitors	
	Yes	No	Yes	No	Yes	No
• During school hours	☐	☐	☐	☐	☐	☐
• During non-school hours	☐	☐	☐	☐	☐	☐

Does the tobacco prevention policy specifically prohibit tobacco use in each of the following locations for each of the following groups?

Location	Students		Faculty/Staff		Visitors	
	Yes	No	Yes	No	Yes	No
• In school buildings	☐	☐	☐	☐	☐	☐
• On school grounds	☐	☐	☐	☐	☐	☐
• In school buses or other vehicles used to transport students	☐	☐	☐	☐	☐	☐
• At off-campus, school-sponsored events	☐	☐	☐	☐	☐	☐

Does your school have arrangements with any organizations or health care professionals not on school property to provide tobacco cessation services for each of the following groups?

	Students		Faculty/Staff		Visitors	
	Yes	No	Yes	No	Yes	No
• Faculty and staff	☐	☐	☐	☐	☐	☐
• Students	☐	☐	☐	☐	☐	☐

From ACHA Survey

Does your campus currently have smoke-free/clean indoor air policies? If yes, check all areas that are covered. Sample response options:

☐ Inside residence halls—common areas ☐ Student recreational areas
☐ Bars on campus ☐ Outdoor events

What kind of programs does your college now offer to help people who want to quit smoking (check all that apply)? Sample response options:

☐ quitlines ☐ cessation groups ☐ referral to community-based program

What kind of program does your campus now offer for smoking prevention (check all that apply)? Sample response options:

☐ Health clinic programs ☐ Student mobilization/organization
☐ Social marketing campaign

Comments

Evaluators should determine the level of tobacco-free policies when operationalizing this indicator. Some states have a statewide or community-wide (e.g., city, county) policy in effect that may lead program managers and evaluators to focus on policy implementation and compliance whereas in other jurisdictions, policies may be implemented at the district or individual school level. Data collection methods and measures should be tailored to the appropriate policy level.

Additionally, the scope of tobacco-free policies should be considered when operationalizing this indicator. Considering guidelines such as those contained in the American College Health Association (ACHA) Position Statement on Tobacco on College and University Campuses may help with this task: http://www.acha.org/Publications/docs/Position_Statement_on_Tobacco_Nov2011.pdf

This indicator can be used to measure progress toward achieving recommendations of CDC's "Guidelines for School Health Programs to Prevent Tobacco Use and Addiction."[1]

Rating

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

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Indicator 1.2.b

Proportion of Schools or School Districts That Provide Tobacco-Use Prevention That Meets CDC Guidelines

KOI 2005	1.7.2 Revised title (Previously: "Proportion of schools or school districts that provide instruction on tobacco-use prevention that meets CDC guidelines")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses
What to measure	Proportion of schools or school districts that report implementing tobacco use prevention that includes (1) developing and enforcing a school policy on tobacco use; (2) providing instruction on the physiological and social consequences of tobacco use, social influences on tobacco use, peer norms, and refusal skills; (3) providing tobacco-use prevention education in kindergarten through 12th grade; (4) providing program-specific training for teachers; (5) involving parents or families in support of school-based programs to prevent tobacco use; (6) supporting cessation efforts among students and all school staff who use tobacco; and (7) assessing the tobacco-use prevention program at regular intervals
Why this indicator is useful	CDC's publication, "Guidelines for School Health Programs to Prevent Tobacco Use and Addiction"[1] was designed to guide health promotion and disease prevention policy and programs at the federal, state, and local levels. The Guidelines recognize the important role that parents and families play in providing social and environmental support that will help young people remain tobacco-free.[1,2] Additionally, evidence suggests that programs that include the short- and long-term physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms, and life skills may prevent or reduce tobacco use among students in the short-term.[1,3,4]
Example data source(s)	CDC School Health Profiles: School Principal Questionnaire (Profiles), 2010 Information available at: http://www.cdc.gov/healthyyouth/profiles/ CDC School Health Profiles: School Teacher Questionnaire (Profiles), 2010 Information available at: http://www.cdc.gov/healthyyouth/profiles/ California Tobacco Use Prevention Education Evaluation: Teacher Survey, 2003 Information available at: http://www.dhs.ca.gov/ps/cdic/ccb/TCS/html/Evaluation_Resources.htm
Population group(s)	Teachers and school administrators
Example survey question(s)	**From Principal Profiles** During the past two years, has your school done each of the following activities? a. Gathered and shared information with students and families about mass-media messages or community-based tobacco-use prevention efforts ☐ Yes ☐ No b. Worked with local agencies or organizations to plan and implement events or programs intended to reduce tobacco use ☐ Yes ☐ No

From Teacher Profiles

During this school year, did your school provide parents and families with health information designed to increase parent and family knowledge of each of the following topics?

	Yes	No
b. Tobacco-use prevention	☐	☐

During this school year, did teachers in your school teach each of the following tobacco-use prevention topics in a required course for students in any of grades 6 through 12? (Mark yes or no for each topic.)

	Yes	No
a. Identifying tobacco products and the harmful substances they contain	☐	☐
b. Identifying short- and long-term health consequences of tobacco use	☐	☐
c. Identifying legal, social, economic, and cosmetic consequences of tobacco use	☐	☐
d. Understanding the addictive nature of nicotine	☐	☐
e. Effects of tobacco use on athletic performance	☐	☐
f. Effects of secondhand smoke and benefits of a smoke-free environment	☐	☐
g. Understanding the social influences on tobacco use, including media, family, peers, and culture	☐	☐
h. Identifying reasons why students do and do not use tobacco	☐	☐
i. Making accurate assessments of how many peers use tobacco	☐	☐
j. Using interpersonal communication skills to avoid tobacco use (e.g., refusal skills, assertiveness)	☐	☐
k. Using goal-setting and decision-making skills related to not using tobacco	☐	☐
l. Finding valid information and services related to tobacco-use prevention and cessation	☐	☐
m. Supporting others who abstain from or want to quit using tobacco	☐	☐
n. Supporting school and community action to support a tobacco-free environment	☐	☐
o. Identifying harmful effects of tobacco use on fetal development	☐	☐

From California Tobacco Use Prevention Education Evaluation: Teacher Survey

To what extent have you tried to get students' parents involved in tobacco use prevention education? Type of Involvement

- ☐ Included parents in homework assignments
- ☐ Held meeting with parents of student smokers
- ☐ Distributed parent-student handbook that included description of tobacco-free school policy
- ☐ Distributed newsletters or educational materials to parents
- ☐ Provided information on smoking cessation to parents
- ☐ Had tobacco education displays or discussions at open houses, meetings, health fairs
- ☐ Invited parents to be guest speakers on tobacco issues
- ☐ Involved parents in school-related activities (e.g., as judges of poster essay contests)
- ☐ Other (describe) _____

Comments	This indicator can be used to measure progress toward achieving recommendations of CDC's "Guidelines for School Health Programs to Prevent Tobacco Use and Addiction."[1]

Rating

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

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For Further Reading

Institute of Medicine (IOM). *Ending the tobacco problem: a blueprint for the nation*. Washington, DC: The National Academies Press; 2007.

Indicator 1.2.c

Proportion of Young People Who Participate in Tobacco-Use Prevention Activities

KOI 2005	1.7.8 Revised Title (Previously: "Proportion of students who participate in tobacco-use prevention activities")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses
What to measure	Proportion of young people who report participating in tobacco-use prevention activities including policy-related initiatives in the past 12 months
Why this indicator is useful	Youth engagement has evolved to become a common component of coordinated tobacco control efforts helping to pass local policies, expose industry tactics, and take a stand against the tobacco industry and other prolific pro-tobacco influences.[1] Involving young people in anti-tobacco activities has been shown to contribute to comprehensive tobacco control effectiveness and may help reduce young people's susceptibility to experimenting with tobacco by changing the social norm regarding tobacco use.[2,3] Ensuring sufficient reach and dose of school-based prevention programs and augmenting with school-plus-community programming has been shown to enhance longer-term outcomes, including reduced smoking rates.[4]
Example data source(s)	National Youth Tobacco Survey (NYTS), 2002 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** During the past 12 months, have you been involved in any organized activities to keep people your age from using any form of tobacco product? ☐ Yes ☐ No Please indicate on the list below ANY anti-smoking event or meeting that you attended in the past 12 months: Meeting with community officials to talk about a tobacco issue?
Comments	Evaluators may choose to categorize data by grade level and type of school (elementary, middle, high school, technical school, college/university, private, parochial, public).

Rating

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

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Indicator 1.2.d

Level of Reported Exposure to School-based Tobacco-Use Prevention that Meets CDC Guidelines

KOI 2005	1.7.9 Revised Title (Previously: "Level of reported exposure to school-based tobacco-use prevention curricula that meet CDC guidelines")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses
What to measure	Proportion of students who report exposure to school-based prevention, defined as (1) strategies to develop and enforce a school policy on tobacco use; (2) instruction on the physiological and social consequences of tobacco use, social influences on tobacco use, peer norms, and refusal skills; (3) involvement of parents or families in support of school-based programs to prevent tobacco use; and (4) support of cessation efforts among students and all school staff who use tobacco.
Why this indicator is useful	Although multi-dimensional school-based tobacco-use prevention programs have shown promise,[1,2] understanding the exposure to and reach of these programs is important for evaluation. Resource cuts to programming can result in significant declines in exposure to tobacco-use prevention and may impact longer-term outcomes.[3]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ California Tobacco Use Prevention Evaluation As part of its evaluation of the school-based Tobacco Use Prevention Education (TUPE) programs, the California Department of Public Health, Tobacco Control Program, uses data collected from a variety of sources. These sources include students, teachers, school administrators, school coordinators, and district coordinators. A unique data collection instrument, tailored for each source, captures information on program implementation and effectiveness. The surveys include items to quantify exposure to school tobacco use policies, practices and enforcement; instruction on why people smoke, smoking prevalence and physical harm from smoking; smoking decision-making and refusal skills training; as well as cessation training and classes. For more information, see Park et al.[2] and http://www.cdph.ca.gov/programs/tobacco/Documents/Resources/Publications/TUPE%2007-08.pdf
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** During this school year, were you taught in any of your classes about why you should not use tobacco products? ☐ Yes ☐ No **From California Tobacco Use Prevention Evaluation** See Park et al.[2] for description of tobacco-use prevention exposure index.

Comments	Evaluators may also choose to categorize data by grade level and type of school (elementary, middle, high school, private, parochial, public). Exposure measures should be appropriate for the type of tobacco-use prevention activities being assessed. Student perceptions of tobacco prevention should also be evaluated; students who perceive the prevention as helpful are less susceptible to smoking than those who do not perceive it as useful.[4]

Rating

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

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Indicator 1.2.e

Perceived Compliance with Tobacco-free Policies in Schools and on College/University Campuses

KOI 2005	1.7.10 Revised Title (Previously: "Perceived compliance with tobacco-free policies in schools")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction of tobacco use and enforcement of anti-tobacco policies and programs in schools and on college/university campuses
What to measure	Proportion of students who report that the school/college/university population is complying with the school's tobacco-free policy
Why this indicator is useful	Perceived compliance with tobacco-free policies is one measure of actual compliance with these policies.[1,2] If tobacco-free policies are not seen to be adhered to by members of the school community, then these policies are unlikely to be effective in changing social norms or inhibiting tobacco use among young people. Consistent enforcement of tobacco-free policies is important to ensuring high levels of observed compliance in the school environment.[3]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** During the past 30 days, to your knowledge, has anyone, including yourself, smoked a tobacco product on school property when he or she was not supposed to? ☐ Yes ☐ No During the past 30 days, to your knowledge, has anyone, including yourself, used some other type of tobacco product (that is, one that is not smoked) on school property when he or she was not supposed to? ☐ Yes ☐ No 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	Evaluators should determine the scope of the tobacco-free policies before evaluating perceived compliance. Considering guidelines such as those contained in the American College Health Association (ACHA) Position Statement on Tobacco on College and University Campuses may help with this task: http://www.acha.org/Publications/docs/Position%20Statement%20on%20Tobacco_Sep2009.pdf.

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Outcome 3

Increased Restriction and Enforcement of Tobacco Product Sales, Availability, and Use

Coordinated activities to decrease access to tobacco products are recognized components of a comprehensive approach to reducing the number of people who start using tobacco products.[1] Studies show that aggressive enforcement of laws regulating tobacco sales to youth, when part of a comprehensive tobacco control program, results in significantly reduced sales to minors and may also result in reduced smoking prevalence among teenagers.[2-4] Because youth may make multiple purchase attempts, especially in areas of high retailer density, and rely on social sources to supplement or substitute for reduced retail availability, enforcing policies that target the entire population may have a greater impact on reduced initiation.[5] Additionally, strategies that reduce the availability of tobacco products, even to those of legal age to purchase them, can help to reduce initiation of tobacco product use.

Experience shows that adoption and sustained enforcement of strong laws are prerequisites for reducing young people's access to tobacco.[6] According to the *Guide to Community Preventive Services*, the most effective approach to preventing youth from gaining access to tobacco products (as measured by minors' self-reported tobacco purchase or use behaviors) consists of a combination of strong local and state laws, vigorous and sustained enforcement of these laws, retailer education, and community mobilization to generate community support for efforts to reduce youth access to tobacco products.[7] Community mobilization plays a particularly important role because of its ability to change social norms regarding the social acceptability of selling or otherwise providing tobacco products to minors. The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 prohibits the sale of cigarettes and smokeless tobacco in vending machines, self-service displays, or other impersonal modes of sale, except in adult-only facilities. The law also prohibits free cigarette sampling but allows sampling of smokeless tobacco products in qualified adult-only facilities. Under the Tobacco Control Act, states and local jurisdictions may consider banning vending machines entirely and banning free or low-cost smokeless tobacco sampling.

In addition to laws banning self-service displays and laws barring the sale and purchase of tobacco products to and by minors, laws that require retailers to maintain a license to sell tobacco products can help to reduce illegal sales to youth. Licensing can serve as an effective mechanism to reduce the concentration, location, and type of tobacco retailers. Licensing is also useful for imposing restrictions on the sale and promotion of tobacco products, including indoor and outdoor advertising and the display of tobacco products. Moreover, strong tobacco licensing policies that provide for suspension or revocation can serve as effective means to regulate retailer behavior. This is especially true if the licensing policy is written so that a violation of any tobacco-related ordinance or law at the local, state, or federal level triggers enforcement action.[8]

High tobacco retail density is associated with experimental smoking and greater smoking prevalence among youth. Evidence demonstrates that the greater the number of tobacco retailers surrounding schools, the more likely youth smokers are to purchase their own cigarettes.[6] Limiting the number of retail tobacco outlets in a community decreases the availability of tobacco products and the number of pro-tobacco messages in a community.[9]

Finally, marketing of new and other tobacco products could undermine effective tobacco control policies. Some new smokeless tobacco products, including e-cigarettes, are being marketed as substitution or poly-use products to supplement tobacco use when cigarette smoking is not permitted. Electronic or e-cigarettes are also emerging as heavily marketed cigarette alternatives.[10,11] In addition to enacting policies that apply to cigarettes at the point of sale (e.g., limiting the size and placement of cigarette advertising), jurisdictions can apply similar policies to regulate sales of other tobacco products.

The following indicators are associated with this outcome:

- **1.3.a** Proportion of jurisdictions with strong policies that ban non-sale distribution or free sampling of all tobacco products everywhere
- **1.3.b** Proportion of jurisdictions with strong policies that require retail licenses to sell tobacco products
- **1.3.c** Proportion of jurisdictions with strong policies that control the type, location, number, and/or density of tobacco retail outlets
- **1.3.d** Proportion of jurisdictions with strong policies that ban tobacco vending machine sales everywhere
- **1.3.e** Number and type of enforcement actions issued for violations of restrictions on tobacco product availability
- **1.3.f** Proportion of jurisdictions that regulate sales of other tobacco products
- **1.3.g** Proportion of jurisdictions with strong public policies for tobacco-free workplaces and other public places
- **1.3.h** Proportion of states with tobacco control laws that preempt stronger local tobacco control and prevention laws

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Outcome 3

Increased Restriction and Enforcement of Tobacco Product Sales, Availability, and Use

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.3.a	Proportion of jurisdictions with strong policies that ban non-sale distribution or free sampling of all tobacco products everywhere		$$$$	◓	◓	◓	●
1.3.b	Proportion of jurisdictions with strong policies that require retail licenses to sell tobacco products		$$$	◓	●	●	●
1.3.c	Proportion of jurisdictions with strong policies that control the type, location, number, and/or density of tobacco retail outlets		$$$	◓	◓	◓	◓
1.3.d	Proportion of jurisdictions with strong policies that ban tobacco vending machine sales everywhere	††	$$$	◓	◓	◓	◓
1.3.e	Number and type of enforcement actions issued for violations of restrictions on tobacco product availability		$$†	◓	◓	◓	◓
1.3.f	Proportion of jurisdictions that regulate sales of other tobacco products	††	$$$$	◓	◓ †	◓	◓
1.3.g	Proportion of jurisdictions with strong public policies for tobacco-free workplaces and other public places		$$$$	●	●	●	●
1.3.h	Changes in state tobacco control laws that preempt stronger local tobacco control and prevention laws	††	$	●	●†	●	●

$ 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 fewer than 75% of valid ratings within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

Indicator 1.3.a

Proportion of Jurisdictions with Strong Policies that Ban Non-sale Distribution or Free Sampling of All Tobacco Products Everywhere

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions with public policies that universally ban non-sale distribution or free tobacco sampling in all settings, including adult-only facilities. See "Comments" below for applicable definitions and clarification of "strong" policies.
Why this indicator is useful	The 2009 Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) prohibits free cigarette sampling but allows sampling of smokeless tobacco products in qualified adult-only facilities. As demonstrated in the period following the 1998 Master Settlement Agreement, the tobacco industry increases its marketing expenditures on activities not explicitly banned by legal agreement/legislation.[1] Closing the federal loopholes by banning low-cost, nominal cost, or free sampling of all tobacco products is one way that local jurisdictions can mitigate industry efforts to increase tobacco use initiation and engage individual consumers.
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent state and local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Note that under the Tobacco Control Act, state and local governments are not prohibited from initiating state and local bans on tobacco product sampling. Non-sale distribution is defined as giving a tobacco product to the general public at no cost, or at nominal cost, including via coupons, coupon offers, gift certificates, gift cards, or other similar offers. Evaluators should determine the scope of the policy standards before evaluating the presence/absence and reach of such policies. See the Public Health Law and Policy, Technical Assistance Legal Center for an example Model Tobacco Sampling Ordinance for example guidance and definitions: http://changelabsolutions.org/publications/model-ord-tobacco-sampling. A strong policy is one that includes all of the model policy provisions. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws and ordinances.

Rating

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

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Indicator 1.3.b

Proportion of Jurisdictions with Strong Policies That Require Retail Licenses to Sell Tobacco Products

KOI 2005	1.8.2 Revised Title (Previously: "Proportion of jurisdictions with policies that require retail licenses to sell tobacco products")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions that have strong public policies requiring a license for retail sale of tobacco products. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Laws that require retailers to maintain a license to sell tobacco products can help to reduce illegal sales to youth and can be used to increase compliance with other local, state, and federal tobacco laws. Licensing can also serve as an effective mechanism to reduce the concentration, location, and type of tobacco retailers and to impose restrictions on the sale and promotion of tobacco products at the point of sale, including indoor and outdoor advertising and the display of tobacco products.[1] As of 2011, 40 states and the District of Columbia required tobacco retailers to obtain a license for over-the-counter tobacco sales and 37 states and the District of Columbia had laws in place identifying circumstances in which retail licenses can be suspended or revoked.[2]
Example data source(s)	Policy tracking system Americans for Nonsmokers' Rights (ANR) Information available at: http://www.no-smoke.org CDC State Tobacco Activities Tracking and Evaluation (STATE) system—Licensure: over-the-counter. 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 pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators should determine the scope of the policy standards before evaluating the presence/absence and reach of such policies. "Strong" licensure includes, among other things, a requirement to obtain a license and renew it annually; a license fee set high enough to cover state costs associated with administration, implementation, and enforcement of the license; and provisions authorizing a penalty to the business, including suspension or revocation of the license for any violations of local, state, or federal tobacco laws. See The Center for Tobacco Policy & Organizing, American Lung Association in California Web site as an example for policy guidelines: http://www.center4tobaccopolicy.org/CTPO/_files/_file/Matrix%20of%20Strong%20Local%20Tobacco%20Retailer%20Licensing%20Ordinances%20March%202011.pdf Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

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

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Indicator 1.3.c

Proportion of Jurisdictions with Strong Policies That Control the Type, Location, Number, and/or Density of Tobacco Retail Outlets

KOI 2005	1.8.3 Revised Title (Previously: "Proportion of jurisdictions with policies that control the location, number, and density of retail outlets")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions that have public policies controlling the store type, location, number, and/or density of tobacco retail outlets. Example policies enacted through retailer licensing requirements or zoning restrictions include banning tobacco sales in pharmacies and restricting tobacco retailers within close proximity to schools. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Limiting the number of retail tobacco outlets decreases the availability of tobacco products and the number of pro-tobacco messages in a community. High tobacco retail density is associated with experimental smoking and greater smoking prevalence among youth.[1,2] Evidence demonstrates that the greater the numbers of tobacco retailers surrounding schools, the more likely youth smokers are to purchase their own cigarettes.[3] Furthermore, the density of tobacco retail outlets has been shown to be higher in low-income neighborhoods with greater health disparities.[4,5] Therefore, regulating the density of tobacco retailers may improve the health of susceptible populations.[6]
Example data source(s)	Policy tracking system Americans for Nonsmokers' Rights (ANR) Information available at: http://www.no-smoke.org
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Operationalizing the indicator will require identifying discrete policies of interest and determining the scope of the policy standards prior to evaluating the presence/absence and reach of such policies. Example policies may include restricting the type of business that can sell tobacco and related products, such as pharmacy bans, and/or regulating where tobacco retail outlets can be physically located, for example, banning retail outlets near schools. More information on pharmacy bans, including model ordinance language, can be found at http://changelabsolutions.org/publications/tobacco-free-pharmacies. "Strong" policies that control the type, location, number, and/or density of tobacco retail outlets are able to withstand legal challenge, provide meaningful enforcement provisions that require compliance with all relevant laws, limit loopholes such as transferability clauses, and are actively enforced. See the Public Health Law Center Web site for additional information: http://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-regulating-retailer-locations-2012.pdf. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

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

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Indicator 1.3.d

Proportion of Jurisdictions with Strong Policies That Ban Tobacco Vending Machine Sales Everywhere

KOI 2005	1.8.1 Revised Title (Previously: "Proportion of jurisdictions with policies that ban tobacco vending machine sales in places accessible to young people")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions that have enforceable policies banning tobacco vending machine sales in all locations, whether an adult-only facility or a location accessible to youth younger than age 18. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Banning vending machines has been shown to reduce smoking onset.[1] The 2009 Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) prohibits nationally the sale of cigarettes and smokeless tobacco in vending machines, self-service displays, or other impersonal modes of sales, except in adult-only facilities. Given the increasing rate of smoking initiation among young adults,[2] states and local jurisdictions may consider banning the sale of all tobacco products in vending machines entirely, an action allowable under the Tobacco Control Act. As of 2011, no states ban tobacco vending machines in all locations.[3]
Example data source(s)	Policy tracking system Americans for Nonsmokers' Rights (ANR) Information available at: http://www.no-smoke.org American Lung Association's State Legislated Actions on Tobacco Issues (SLATI) Information available at: http://slati.lungusa.org CDC State Tobacco Activities Tracking and Evaluation (STATE) system—Youth access: cigarette vending machines 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 pertinent state and local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators should determine the scope of the policy standards before evaluating the presence/absence and reach of such policies. "Strong" policies are those that ban tobacco vending machine sales in all locations, whether an adult-only facility or a location accessible to youth younger than age 18, and are able to withstand legal challenge, provide meaningful enforcement provisions that require compliance with all relevant laws, limit loopholes such as transferability clauses, and are actively enforced. See the Tobacco Control Legal Consortium document *Location, Location, Location: Regulating Tobacco Retailer Locations for Public Health* for more information: http://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-regulating-retailer-locations-2012.pdf. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.3.e

Number and Type of Enforcement Actions for Violations of Restrictions on Tobacco Product Availability

KOI 2005	1.8.6 Revised Title (Previously: "Number of warnings, citations, and fines issued for infractions of public policies against young people's access to tobacco products")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Number and type of enforcement actions, including warnings, citations, and fines issued to retailers for infractions of public policies restricting tobacco product availability. Penalties may include civil and/or criminal penalties, including citations, graduated fines, and suspension or loss of license to sell tobacco. Examples of public policies restricting tobacco product availability include illegal sales to minors, restricting retailer outlet density, restricting tobacco sampling, and banning vending machines and self-service displays of all tobacco products.
Why this indicator is useful	Studies show that aggressive enforcement of laws regulating tobacco sales to youth results in significantly reduced sales to minors and may also result in reduced smoking prevalence among teenagers.[1-4] However, because youth may make multiple purchase attempts, especially in areas of high retailer density, and rely on social sources to supplement or substitute for reduced retail availability, enforcing policies that target the entire population may have a greater impact on reduced initiation.[5]
Example data source(s)	FDA, Compliance Check Inspection of Tobacco Product Retailers Information available at: http://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm California Tobacco Control Program: Enforcement Survey (2008) Information available at: http://www.dhs.ca.gov/ps/cdic/ccb/TCS/html/Evaluation_Resources.htm
Population group(s)	Agency representatives responsible for enforcement
Example survey question(s)	**From FDA, Compliance Check Inspection of Tobacco Product Retailers:** FDA conducts compliance check inspections of tobacco product retailers to determine a retailer's compliance with federal laws and regulations. Results from compliance check inspections covering cigarettes and smokeless tobacco products are available in a searchable inspection database that includes the following variables: Retailer Name, City, State, Zip, Decision Type: No violations observed, Warning letters issued **From California Tobacco Control Program: Enforcement Survey** Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPEnforcementReport08-05.pdf In the past year, how often has your agency conducted any of the following types of enforcement activities related to Penal Code §308?

	Never	Rarely	Very often	Don't know
• Responded to complaints about merchants selling tobacco products to minors	☐	☐	☐	☐
• Issued warnings to merchants selling tobacco products to minors	☐	☐	☐	☐
• Issued citations to merchants for illegal sales of tobacco products to minors	☐	☐	☐	☐

Comments

Evaluators may want to assess the effects that different penalties (e.g., graduated fines, loss of license to sell tobacco) have on violations of public policies. Data must be interpreted in context. For example, a low number of citations may indicate either high levels of compliance or low levels of enforcement.

Rating

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

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Indicator 1.3.f

Proportion of Jurisdictions that Regulate Sales of Other Tobacco Products

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions with public policies that regulate the sales and distribution of other tobacco products in addition to cigarettes
Why this indicator is useful	Marketing of new and other, non-cigarette, tobacco products is being used to undermine effective tobacco control policies. Internal industry documents outline the increasing importance of the development of smokeless tobacco products to offset smoking reductions due to clean indoor air policy restrictions.[1] These new products are marketed as substitution or poly-use products to supplement tobacco use when cigarette smoking is not permitted. New and alternative tobacco products are being developed by the tobacco industry as a method for increasing tobacco use among targeted subpopulations and are frequently used in combination with aggressive consumer marketing campaigns.[2]
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	None noted

Rating

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.3.g

Proportion of Jurisdictions with Strong Public Policies for Tobacco-Free Workplaces and Other Public Places

KOI 2005	2.4.1 Revised Title (Previously: "Proportion of jurisdictions with public policies for tobacco-free workplaces and other indoor and outdoor public places")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Proportion of local jurisdictions that have public policies requiring tobacco-free workplaces, including restaurants, bars, and other indoor and outdoor places. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Tobacco-free policies help establish nonsmoking environments as a social norm while also protecting nonsmoking community members from exposure to secondhand smoke.[1,2] Youth living in communities with strong smoke-free policies are more likely to perceive a lower prevalence of adult smoking and are less likely to progress to established smoking.[3,4] By changing the perception that smoking is a normal adult behavior, "these policies can change the attitudes and behaviors of adolescents, resulting in a reduction in tobacco use initiation" (Task Force on Community Preventive Services,[5] p. 48). Young people who work in smoke-free workplaces have been shown to be 32% less likely to be smokers than peers who work in locations with only partial smoke-free bans.[3]
Example data source(s)	Policy tracking system Americans for Nonsmokers' Rights (ANR) Information available at: http://www.no-smoke.org
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators should determine the scope of the policy standards before evaluating the presence/absence and reach of such policies. "Strong" tobacco-free policies include those that apply to all public and private workplaces, restaurants, and bars at all times and do not include preemptions, opt-out provisions, or exemptions. See the Americans for Nonsmokers' Rights Web site for additional information: http://www.no-smoke.org/ Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

Rating

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

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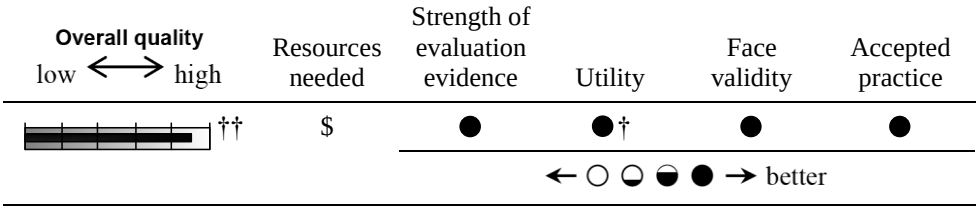
Indicator 1.3.h

Proportion of States with Tobacco Control Laws That Preempt Stronger Local Tobacco Control and Prevention Laws

KOI 2005	1.8.7 Revised Title (Previously: "Changes in state tobacco control laws that preempt stronger local tobacco control laws")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased restriction and enforcement of tobacco product sales, availability, and use
What to measure	Any change in legislation that prevents local jurisdictions from enacting restrictions that are more stringent than the state's tobacco control statutes and/or regulations (e.g., restrictions on youth access to tobacco, smoke-free indoor air, or tobacco-related advertising)
Why this indicator is useful	Preemptive legislation is the tobacco industry's chief strategy for eradicating local tobacco control ordinances. The industry aggressively pushes for states to pass legislation that preempts local regulation of tobacco in various areas, including youth access, smoke-free indoor air, and tobacco advertising.[1] Preemptive laws prevent communities from engaging in the process of public education, mobilization, and debate that occurs when a local ordinance is under consideration. Suppressing public education, mobilization, and debate undermines changes in awareness and social norms. As of December 31, 2010, 27 states had some type of preemption related to youth access, smoke-free indoor air, or tobacco advertising.[2] Although progress has been made in repealing preemptive provisions related to smoke-free indoor air, more work is needed under youth access and tobacco advertising.[3]
Example data source(s)	CDC State Tobacco Activities Tracking and Evaluation (STATE) System Information available at: http://www.cdc.gov/tobacco/STATEsystem
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	None
Rating	

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

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Outcome 4

Increased Policy and Enforcement Efforts to Reduce Tobacco Industry Influence

According to the most recent Federal Trade Commission tobacco reports, the U.S. tobacco industry spends almost $8.8 billion per year to advertise and promote its products.[1,2] It is not surprising, therefore, that studies show that a high percentage of young people are exposed to, aware of, and able to recall tobacco advertising.[3,4] Moreover, numerous studies have found a causal relationship between the advertising and promotional activities of the tobacco industry and initiation and progression of tobacco use among youth and young adults.[3-5] In addition, tobacco advertising can distort young people's perceptions of tobacco use.[2, 6-8]

In 2011, the tobacco companies spent 87% of their marketing dollars in the retail environment, including point-of-sale advertising, price discounts, retail promotional allowances, and retail-value-added items.[1,2] The tobacco industry offers retailers volume discounts, price promotions, in-store branded displays, and payment for prime shelf space, exposing all consumers, including youth, to pro-smoking messages in the retail environment. In return for financial incentives, retailers enter into contractual agreements with tobacco companies to ensure high visibility and accessibility of their products to stimulate impulse purchases.[6,7] Studies have shown that point-of-sale tobacco advertising is more prevalent in stores near schools and in minority and low-income neighborhoods.[8-11] Research has also identified a relationship between exposure to tobacco marketing in the retail environment and use of tobacco by youth, including experimentation and uptake of smoking.[12-14] Signage visible outside the stores exposes entire communities to tobacco marketing. The result is that many U.S. children grow up surrounded by pro-tobacco messages.[10]

Exposure to cigarette advertising at the point of sale is a risk factor for smoking initiation,[14] suggesting that countermarketing messages delivered in tobacco retail outlets could contribute to prevention of tobacco use initiation among youth and young people. Posting health warnings at the point of sale provides potential users with factual information about the health risks of tobacco use, as well as information on how to access effective cessation services.

Advertising bans have been shown to reduce per capita tobacco consumption.[15] Following the ban on television and radio tobacco advertising in 1971, the United States instated additional restrictions on advertising as part of the 1998 Master Settlement Agreement, which banned any advertising targeting youth, as well as billboard and transit ads. Furthermore, the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 set forth additional rules banning promotional activities, such as the sale and distribution of tobacco-branded nontobacco products, and sponsorship of music and sporting events. States and localities can restrict or regulate the time, place, and manner (but not the content) of tobacco advertising under the Tobacco Control Act. It is important to note, however, that noncomprehensive restrictions can result in increased advertising in "non-banned" media and increased expenditures in other promotion and marketing activities.[3]

The following indicators are associated with this outcome:

- **1.4.a** Proportion of jurisdictions with strong policies that regulate tobacco advertising
- **1.4.b** Proportion of jurisdictions with strong policies that regulate the extent and type of consumer-focused tobacco promotions
- **1.4.c** Proportion of jurisdictions with strong policies that regulate the extent and type of merchant-focused industry promotions
- **1.4.d** Proportion of jurisdictions with strong minimum tobacco product price laws
- **1.4.e** Proportion of jurisdictions with strong public policies to establish a fee on each package of tobacco product sold to cover government costs
- **1.4.f** Proportion of jurisdictions with strong policies that limit tobacco industry sponsorship of public and private events
- **1.4.g** Number and type of enforcement actions issued for violations of restrictions on tobacco marketing
- **1.4.h** Number and type of Master Settlement Agreement violations by tobacco companies

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Outcome 4

Increased Policy and Enforcement Efforts to Reduce Tobacco Industry Influence

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.4.a	Proportion of jurisdictions with strong policies that regulate tobacco advertising		$$$	●	●	●	●
1.4.b	Proportion of jurisdictions with strong policies that regulate the extent and type of consumer-focused tobacco promotions		$$$$	●	●	●	●
1.4.c	Proportion of jurisdictions with strong policies that regulate the extent and type of merchant-focused industry promotions		$$$$	◓	◓	◓	◓
1.4.d	Proportion of jurisdictions with strong minimum tobacco product price laws		$$$$	◓	◓	◓	◓
1.4.e	Proportion of jurisdictions with strong public policies to establish a fee on each package of tobacco product sold to cover government costs	 ††	$$$$	◒	◓	◓	◓
1.4.f	Proportion of jurisdictions with strong policies that limit tobacco industry sponsorship of public and private events	 ††	$$$$	◓	◓	◓	◓
1.4.g	Number and type of enforcement actions issued for violations of restrictions on tobacco marketing		$$†	◓	◓	◓	◓
1.4.h	Number and type of Master Settlement Agreement violations by tobacco companies		$$$	◓	◓	●	◓

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±2 points of the median for overall quality of the indicator.

⃠ Denotes no data.

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

Indicator 1.4.a

Proportion of Jurisdictions with Strong Policies That Regulate Tobacco Advertising

KOI 2005	1.9.2 Revised Title (Previously: "Proportion of jurisdictions with policies that regulate the extent and type of retail tobacco advertising and promotions")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with public policies that regulate time, place, and/or manner of retail tobacco advertising (either inside or outside stores), such as product displays and printed or electronic tobacco advertisements. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	There is a causal relationship between exposure to tobacco advertising and tobacco initiation and increased tobacco use.[1] Studies have shown that the volume of in-store advertisements and the proportion of stores with sales promotions have increased more rapidly in neighborhoods with a higher proportion of African Americans than in other communities.[2] Regulating retail advertising and promotions may significantly reduce young people's exposure to tobacco advertising.[3,4] As of 2011, 20 states had some type of tobacco advertising restriction in place. These restrictions varied by state but included provisions such as bans on tobacco advertising in certain locations, restrictions on size or placement of advertisements, bans on certain manner of advertising such as in video games, and requirements for warning labels on tobacco advertisements.[5]
Example data source(s)	Policy tracking system Americans for Nonsmokers' Rights (ANR) Information available at: http://www.no-smoke.org CDC State Tobacco Activities Tracking and Evaluation (STATE) system—Legislation-Advertising Data 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 pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 gave the U.S. Food and Drug Administration the authority to regulate the manufacturing, marketing, and sale of tobacco products and allows states and localities to restrict or regulate the time, place, and manner (but not the content) of cigarette advertising (Pub. L. No. 111-31, § 203 (2009). Evaluators should determine the scope of the policy standards before evaluating the presence/absence and reach of such policies. See the Center for Public Health Law and Tobacco Policy for an example Model Tobacco Product Display Ban Ordinance: http://publichealthlawcenter.org/sites/default/files/resources/nycenter-syn-tobproductdisplaybans-2010.pdf Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances. It may also be useful to gather details regarding any time, location, and medium restrictions included in the policies.

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

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Indicator 1.4.b

Proportion of Jurisdictions with Strong Policies that Regulate the Extent and Type of Consumer-Focused Tobacco Promotions

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with public policies that regulate consumer-focused promotions, such as cents off, rebates, coupons, and buy-one-get-one-free offers. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	There is a causal relationship between tobacco promotion and increased tobacco use.[1,2] In 2011, almost $8.4 billion was spent on cigarette advertising and promotion expenditures, with approximately 84% of these expenditures directed at price promotions in the retail setting.[3] A substantial increase in the percentage of stores offering price promotions for cigarettes has been documented over the past decade.[4] Recent studies show that price-related promotions are accelerating disproportionately among retailers in neighborhoods with lower socioeconomic status and higher proportions of racial and ethnic populations experiencing health disparities.[5,6] Greater availability of cigarette promotions and lower cigarette prices are associated with increased initiation and uptake among youth and decreased quit attempts among current smokers.[2,7-9]
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators should determine the scope of policy standards before evaluating the presence/absence and reach of such policies. "Strong" policies that regulate the extent and type of consumer-focused tobacco promotions may include those that restrict the distribution or redemption of discount coupons for tobacco products, that limit discounts and incentive programs offered by tobacco manufacturers to retailers, and that prohibit "buy-one-get-one-free" and other value-added promotional discounts. See the Center for Public Health and Tobacco Policy's report, *Tobacco Price Promotion: Policy Responses to Industry Price Manipulation*, for more information: http://www.tobaccopolicycenter.org/documents/Final%20Report%20with%20covers%2010.28.11.pdf. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

Rating

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

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Indicator 1.4.c

Proportion of Jurisdictions with Strong Policies that Regulate the Extent and Type of Merchant-Focused Industry Promotions

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with public policies that regulate merchant-focused industry promotions. These promotions include those where tobacco manufacturers provide retail and/or wholesale discounts on tobacco products or payments in return for prime advertising space. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Tobacco manufacturers have increasingly focused marketing resources on price promotions in the years since the 1998 Master Settlement Agreement.[1,2] In 2011, almost $8.4 billion was spent on cigarette advertising and promotion expenditures, with approximately $6.99 billion (84%) of these expenditures directed at price discounts.[3] The industry's increased use of slotting fees and trade promotions has kept prices lower and increased youth exposure to tobacco products and pro-tobacco messaging in the retail setting.[4,5] Price-sensitive groups, including young and low-income people, are especially vulnerable to industry price promotions, and thus these incentives may place a higher burden on these populations.[6,7] For a discussion of policy options, see http://www.tobaccopolicycenter.org/documents/Final%20Report%20with%20covers%2010.28.11.pdf.
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators should determine the scope of policy standards before evaluating the presence/absence and reach of such policies. "Strong" policies that regulate the extent and type of merchant-focused industry promotions include those that limit allowances paid to retailers, slotting fees, price discounts, and buy-downs. See the Center for Public Health and Tobacco Policy's report, *Tobacco Price Promotion: Policy Responses to Industry Price Manipulation*, for more information: http://www.tobaccopolicycenter.org/documents/Final%20Report%20with%20covers%2010.28.11.pdf. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

Rating

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

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

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Indicator 1.4.d

Proportion of Jurisdictions with Strong Minimum Tobacco Product Price Laws

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with strong public policies that regulate the minimum price of tobacco products. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Increasing the price of tobacco products reduces tobacco consumption and prevalence, especially among price-sensitive populations (e.g., youth).[1,2] The tobacco industry uses price promotions, including discounts and coupons, to undermine government efforts to raise the price of tobacco products.[3,4] Minimum price laws are one way for states to counteract the tobacco companies' efforts by prohibiting cigarettes from being sold for less than a specific, formulated price. Minimum price laws are a means to prevent or mitigate tobacco industry efforts to keep effective prices low.[5] As of December 31, 2009, 24 states and the District of Columbia had minimum price laws in place.[6]
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	"Strong" laws may include those that prohibit trade discounts from the minimum price calculation, set a minimum price by mandating a high percentage markup for tobacco wholesalers and retailers, and are applied to a breadth of tobacco products. Evaluators should determine the scope of the policy standards, and set an operational definition of strong minimum tobacco product price laws before evaluating the presence/absence and reach of such policies. See the Tobacco Control Legal Consortium for policy considerations relevant to minimum tobacco price laws and possible elements of a strong law: http://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-cigminimumpricelaws-2011.pdf Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

Rating

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

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Indicator 1.4.e

Proportion of Jurisdictions with Strong Public Policies to Establish a Fee on Each Package of Tobacco Product Sold to Cover Government Costs

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with public policies that establish a fee on each package of tobacco product sold to cover government costs related to improperly discarded tobacco products. The fee might be used to cover the cost of tobacco-related health care, litter mitigation, wildfire management, or other types of social and environmental protection programs. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	Increasing price is one of the most effective methods to decrease tobacco use and prevent initiation.[1] Although limited studies have assessed the impact of mitigation fees on tobacco price, a fee that is consistently applied to every tobacco product sold may have effects similar to an excise tax.[2] Additionally, policies to recover costs of tobacco product litter would have secondary environmental, health, and economic benefits.[3-5]
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	These types of fees may not be able to be imposed at the local level in some states. Evaluators should determine the scope of policy standards before evaluating the presence/absence and reach of such policies. "Strong" policies are those that are actively enforced and include a fee on each package of tobacco product sold to cover governmental costs. Applicable costs may include, but are not limited to, tobacco-related health care, litter mitigation, wildfire management, or other types of social and environmental protection programs.

Rating

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.4.f

Proportion of Jurisdictions with Strong Policies That Limit Tobacco Industry Sponsorship of Public and Private Events

KOI 2005	1.9.6 Revised Title (Previously: "Proportion of jurisdictions with policies that regulate tobacco industry sponsorship of public events")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Proportion of local jurisdictions with policies that limit tobacco industry sponsorship. The Master Settlement Agreement and the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) placed limitations on cigarette brand sponsorship. However, local jurisdictions may seek to expand sponsorship policies relevant to other tobacco products and in other venues. See "Comments" below for clarification of "strong" policies.
Why this indicator is useful	The tobacco industry sponsors highly publicized community, cultural, and sporting events to build brand recognition and increase exposure to pro-tobacco messaging.[1-6] These efforts serve to buy legitimacy for the tobacco industry while increasing public opinion of tobacco companies and their products.[1-3] These efforts may also make community members and key opinion leaders resistant to anti-tobacco messaging and weaken support for tobacco control policies.[3]
Example data source(s)	Policy tracking system
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring pertinent local tobacco laws, ordinances, or regulations.
Example survey question(s)	Not applicable
Comments	Evaluators are encouraged to document existing policies impacting sponsorship such as marketing exceptions in the Master Settlement Agreement and the Family Smoking and Tobacco Control Act of 2009. Evaluators should determine the scope of policy standards before evaluating the presence/absence and reach of such policies. "Strong" policies that limit tobacco industry sponsorship include actively enforced provisions banning all types of industry sponsorship in all venues including adult only facilities and venues. See Change Lab Solutions Web site for additional information: http://changelabsolutions.org/tobacco-control/question/what-is-tobacco-sponsorship. Evaluators may also choose to gather data on the size and demographics of the population protected by the relevant laws or ordinances.

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.4.g

Number and Type of Enforcement Actions Issued for Violations of Restrictions on Tobacco Marketing

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Number and type of enforcement actions, including warnings, citations, and fines issued to manufacturers, wholesalers, and/or retailers for infractions of public policies restricting tobacco marketing. Penalties may include civil and/or criminal penalties, including citations, graduated fines, and suspension or loss of license to sell tobacco for retailers.
Why this indicator is useful	An effective means of enforcing tobacco control public policies is to conduct regular compliance checks.[1] Such checks convey the message that policy makers and the public care about tobacco policies and are serious about enforcing them.[2-4]
Example data source(s)	FDA, Compliance Check Inspection of Tobacco Product Retailers Information available at: http://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm California Tobacco Control Program: Enforcement Survey Information available at: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPEnforcementReport08-05.pdf
Population group(s)	Agency representatives responsible for enforcement
Example survey question(s)	**From FDA, Compliance Check Inspection of Tobacco Product Retailers:** Retailer Name, City, State, Zip, Decision Type: No violations observed, Warning letters issued **From California Tobacco Control Program: Enforcement Survey** In the past year, how often has your agency conducted any of the following types of enforcement activities? • Compliance checks of tobacco advertisement restrictions _____ • Compliance checks of tobacco promotions _____ • Issued warnings for marketing violations _____ • Issued penalties for marketing violations _____ Proportion of retailers who have received a compliance check in the past 12 months. _____
Comments	Example survey questions are adapted from existing youth access enforcement surveys: http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPEnforcementReport08-05.pdf

Rating

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

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Indicator 1.4.h

Number and Type of Master Settlement Agreement Violations by Tobacco Companies

KOI 2005	1.9.10
Goal area	Preventing initiation of tobacco use among young people
Outcome box	Increased policy and enforcement efforts to reduce tobacco industry influence
What to measure	Number and type of Master Settlement Agreement (MSA) violations by tobacco companies
Why this indicator is useful	The 1998 MSA prohibits tobacco advertising to youth and limits the extent and distribution of marketing to "adult-only" venues. However, the MSA contains numerous loopholes related to sponsorship, advertising, and promotions that provide ongoing exposure to youth.[1] Although tobacco companies have shifted their marketing policies to exploit these loopholes, the industry also continues to violate existing provisions.[2] Tracking MSA violations will aid in enforcement[3] and may decrease exposure to tobacco industry marketing.[4,5]
Example data source(s)	Tobacco industry monitoring system Information available at: http://tobaccocontrol.bmj.com/content/19/Suppl_1/i21.full California Tobacco Industry Monitoring Evaluation: Project SMART Money Information available in Roeseler et al.[6]
Population group(s)	Not applicable. This indicator is best measured by monitoring and tracking tobacco industry practices.
Example survey question(s)	Not applicable
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 Susceptibility to Experimentation with Tobacco Products

The combination of de-normalization of tobacco use, decreased perception of ease of retail access among youth, increased price, and reduced tobacco industry influence would be expected to lead to reduced susceptibility to experiment with tobacco products. Youth and young adults are uniquely vulnerable to influences to use tobacco due to their developmental stage.[1]

The original model of susceptibility to smoking was defined as the intention to smoke or the absence of a strong intention not to smoke.[2] Other classifications have since added intermediate stages to this model; the development of smoking is heterogeneous, and several trajectories exist in the uptake and progression of smoking.[1] Studies show that susceptibility to experimentation is a valid and reliable predictor of future smoking behavior.[2] Studies also show that susceptible youth (those who have not made a firm decision not to smoke) are more likely than other youth to experiment with smoking.[2] Moreover, recent evidence suggests that even low levels of smoking experimentation (two to four cigarettes smoked by age 10) substantially increase the likelihood of daily smoking in late adolescence.[3] To reduce the percentage of youth who take up smoking, it is therefore necessary to prevent youth from becoming susceptible to experimenting with tobacco.

A number of biological, environmental, and psychosocial factors contribute to smoking uptake and progression, with each having different levels of influence at different stages of smoking progression. In addition to tobacco industry influences, tobacco use by peers and perceptions that peers smoke are strongly associated with initiation and maintenance of smoking among adolescents.[1] Beyond parental smoking and smoking by older siblings, parenting practices and quality of family relationships also predict smoking among youth.[1] Finally, both explicit (e.g., beliefs about the health consequences of smoking) and implicit (e.g., memory associations related to tobacco use) cognitive processes also influence smoking experimentation and use.[2] Specifically, given the relationship between exposure to tobacco marketing and initiation of tobacco use by youth, having a favorite tobacco advertisement indicates receptivity to advertising, which predicts smoking among youth.[1]

The following indicators are associated with this outcome:

- **1.5.a** Proportion of young people who think that tobacco use is cool and helps them fit in
- **1.5.b** Proportion of young people who think that young people who use tobacco products have more friends
- **1.5.c^{NR}** Proportion of young people who overestimate the smoking rate among their peers
- **1.5.d^{NR}** Proportion of young people who report that their parents would strongly disapprove of their use of tobacco products
- **1.5.e** Proportion of young people who have a favorite tobacco brand
- **1.5.f** Proportion of young people who have never used tobacco but are susceptible to its use

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Outcome 5

Reduced Susceptibility to Experimentation with Tobacco Products

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.5.a	Proportion of young people who think that tobacco use is cool and helps them fit in		$$	●	◓	◓	●
1.5.b	Proportion of young people who think that young people who use tobacco products have more friends		$	◓	◓	◓	◓
1.5.c[NR]	Proportion of young people who overestimate the smoking rate among their peers	⊘	⊘	⊘	⊘	⊘	⊘
1.5.d[NR]	Proportion of young people who report that their parents would strongly disapprove of their use of tobacco products	⊘	⊘	⊘	⊘	⊘	⊘
1.5.e	Proportion of young people who have a favorite tobacco brand	 ††	$	●	◓	◓	◓
1.5.f	Proportion of young people who have never used tobacco but are susceptible to its 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 low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

⊘ Denotes no data.

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

Indicator 1.5.a

Proportion of Young People Who Think That Tobacco Use Is Cool and Helps Them Fit In

KOI 2005	1.10.1 Revised Title (Previously: "Proportion of young people who think that smoking is cool and helps them fit in")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of young people who believe that tobacco use will improve their social standing
Why this indicator is useful	Tobacco advertising has been shown to target young people's psychological needs, including the desire to be popular and accepted by their peers, and creates the perception that using tobacco products will satisfy these desires. Young people who believe that tobacco use will meet their social needs are more likely to use tobacco.[1] Additionally, studies demonstrate that adolescent cigarette smokers are significantly more likely to believe that smokers are more socially adept than nonsmokers.[2-4] These data can be used to estimate norms regarding the social desirability of smoking, which in turn affect tobacco use initiation and cessation.[5]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm Legacy Media Tracking Survey (LMTS), 2003
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** Do you think smoking cigarettes makes young people look cool or fit in? ☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not **From LMTS** Smoking cigarettes makes people your age look cool or fit in? ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐ No opinion
Comments	These items can be modified to address other tobacco products.

Rating

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

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Indicator 1.5.b

Proportion of Young People Who Think That Young People Who Use Tobacco Products Have More Friends

KOI 2005	1.10.2 Revised Title (Previously: "Proportion of young people who think that young people who smoke have more friends")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of young people who believe that those who use tobacco products have more friends than those who do not use tobacco products
Why this indicator is useful	Data indicate that both daily and nondaily cigarette smokers are significantly more likely to believe that those who smoke have more friends than those who do not smoke.[1-4] Additionally, youth who perceive smoking to be more prevalent were significantly more likely to smoke.[5] These data can be used as an estimate of norms concerning the social desirability of smoking.
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** Do you think young people who smoke cigarettes have more friends? ☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not
Comments	These items can be modified to address other tobacco products.

Rating

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

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Indicator 1.5.c[NR]

Proportion of Young People Who Overestimate the Smoking Rate Among Their Peers

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of youth and young adults who perceive smoking rates to be higher than they actually are
Why this indicator is useful	Adolescents and young adults tend to overestimate actual smoking prevalence among their peers and adults.[1-3] Such false normative expectations have been shown to predict initiation, experimentation, and progression in smoking in youth.[3] In one study of 7th graders, perceived smoking prevalence among peers, but not actual smoking prevalence, predicted future smoking.[4] Youth prevention mass media campaigns often target perceived prevalence as a factor for intervention in order to increase realistic perceptions of smoking prevalence, given its influence on youth smoking behavior. Because youth perceptions of peer smoking levels can matter more than actual smoking levels,[5] adolescent perception of peer smoking is important to monitor as a salient risk factor upon which to intervene.
Example data source(s)	Legacy Media Tracking Survey (LMTS), 2003
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From LMTS: Perceived peers' smoking** Out of every 10 people your age, how many do you think smoke? _____ Similar measure used by other researchers (e.g., Sussman et al.[6]): Out of every 100 students, how many do you think smoke? _____ Botvin et al.[1]: How many people your own age smoke cigarettes? ☐ None ☐ Only a few ☐ Less than half ☐ About half ☐ More than half ☐ Almost all Cunningham and Selby[2]: What percentage of people your age and sex do you think smoke cigarettes? _____ **Perceived adults' smoking** Botvin et al.[1]: How many adults smoke cigarettes? ☐ None ☐ Only a few ☐ Less than half ☐ About half ☐ More than half ☐ Almost all
Comments	These items can be modified to address other tobacco products.

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

⊘ Denotes no data.

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Indicator 1.5.d[NR]

Proportion of Young People Who Report That Their Parents Would Strongly Disapprove of Their Use of Tobacco Products

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of young people who report that their parents would strongly disapprove of their tobacco use
Why this indicator is useful	Youth in families with parents who discuss the harms of tobacco use are less likely to smoke.[1,2] Conversely, youth who report that their parents are unconcerned about smoking or do not talk to them about it are more likely than their peers to take up smoking.[3-5] Irrespective of parental smoking, youth who perceive strong parental disapproval of their smoking are significantly less likely to become established smokers than those who do not perceive strong disapproval.
Example data source(s)	No commonly used data sources were found.
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	Modified from Sargent and Dalton[6] to address tobacco use, not just smoking: How do you think your mother (father) would react if you were using tobacco products and she (he) knew about it?" ☐ S/he would tell me to stop and be very upset ☐ S/he would tell me to stop, but not be too upset ☐ S/he would not tell me to stop, but would disapprove ☐ S/he would have no reaction ☐ Don't know how s/he would react ☐ Don't have a stepmother/father Question is repeated to ask about each parent
Comments	Strong disapproval is defined as youth reporting that both parents (if applicable) or one parent (if applicable) "would tell me to stop and be very upset."

Rating

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

⊘ Denotes no data.

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Indicator 1.5.e

Proportion of Young People Who Have a Favorite Tobacco Brand

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of young people who identify that they have a favorite tobacco brand. Given the extensive tobacco industry use of integrated marketing communication strategies, brand advertising may include many types of marketing, including print advertising (e.g., in magazines, newspapers, signage at point-of-sale), electronic advertising (e.g., company Web sites, industry-sponsored online social media), direct-to-consumer advertising (e.g., direct mail, coupons), product packaging, paid product placement, and sponsorship.
Why this indicator is useful	Marketing by the tobacco industry raises awareness of smoking and increases brand recognition.[1] Having a favorite brand is an indicator of receptivity to marketing. Receptivity to tobacco industry marketing is associated with susceptibility toward tobacco use among youth.[2] Having a favorite tobacco brand advertisement has been shown to be a predictor of future experimentation and initiation of tobacco.[1-5] The 2000 Surgeon General's report stated that most adolescents can recall certain brands, and such recall is correlated with smoking intentions and behavior.[6] One study found that adolescents who had never smoked but reported having a favorite cigarette advertisement had a 50% increase in probability of future experimentation with smoking.[7] Favorite brand is a measure of receptivity to advertising that predicts smoking behavior among youth.[1]
Example data source(s)	National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** What is the name of your favorite tobacco brand? ☐ American Spirit ☐ Camel ☐ GPC, Basic, or Doral ☐ Kool ☐ Marlboro ☐ Newport ☐ Some other brand not listed here ☐ I don't know/I'm not sure **Created verification question** If you have a favorite cigarette brand, where was the most recent place you saw this brand advertised? ☐ Billboard ☐ Print advertisement in a magazine ☐ Television ☐ Radio ☐ Inside a store that sells tobacco products ☐ Internet ☐ Movie **Created question** Tell me how much you agree or disagree with the following statement: I tell other kids my age to check out my favorite tobacco brand. Would you say you: ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ I don't have a favorite tobacco brand
Comments	The authors created the second example question. It is not in any commonly used data source. The intent is to provide a check to eliminate potential respondents who may have noted a favorite brand in the first example question simply because of the demand characteristics of the question. Respondents with a favorite tobacco brand who note that they saw the brand advertised most recently in a banned mode, such as television, would be omitted from analyses for this indicator.

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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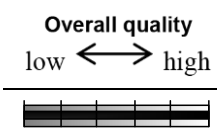
Indicator 1.5.f

Proportion of Young People Who Have Never Used Tobacco but are Susceptible to its Use

KOI 2005	1.10.5 Revised Title (Previously: "Proportion of young people who are susceptible never-smokers")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced susceptibility to experimentation with tobacco products
What to measure	Proportion of young people who have never used a tobacco product but have not made a firm decision not to use a tobacco product
Why this indicator is useful	Studies show that susceptible young people (those who have not made a firm decision not to smoke) are more likely than other young people to experiment with smoking.[1,2] Additionally, these young people tend to be more receptive to pro-tobacco advertising, an additional risk factor for smoking initiation.[2-4]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/QuickSearch.aspx
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** Have you ever tried cigarette smoking, even one or two puffs? ☐ Yes ☐ No Do you think that you will try a cigarette soon? ☐ I have already tried smoking cigarettes ☐ Yes ☐ No Do you think you will smoke a cigarette at any time during the next year? ☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not If one of your best friends offered you a cigarette, would you smoke it? ☐ Definitely yes ☐ Probably yes ☐ Probably not ☐ Definitely not **From NATS** How likely are you to smoke a cigarette in the next year …? ☐ Very likely ☐ Somewhat likely ☐ Refused ☐ Not at all likely ☐ Don't know/Not sure
Comments	Evaluators should ask all four example questions from the NYTS to create a susceptibility index. [1] These items can be modified to address other tobacco products.
Rating	 Overall quality low ⟷ high Resources needed: $ Strength of evaluation evidence: ● Utility: ● Face validity: ● Accepted practice: ● ← ○ ◒ ◒ ● → better

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Outcome 6

Decreased Exposure to Tobacco Marketing and Availability of Tobacco Products

Exposure to tobacco retail advertising is associated with experimental smoking and greater smoking prevalence among youth.[1,2] Evidence demonstrates that the greater the number of tobacco retailers surrounding schools, the more likely youth smokers are to purchase their own cigarettes.[3] Local jurisdictions may use local zoning laws to limit the number of retail tobacco outlets in a community, thereby decreasing the availability of tobacco products and the number of pro-tobacco messages in a community.[2]

The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 establishes 18 as the nationwide minimum age to purchase cigarettes and smokeless tobacco legally and requires all retailers to verify the age of purchasers younger than age 27 by checking photographic identification that includes date of birth.[4] The 1992 Synar Amendment requires all states to enact and enforce laws that prohibit the sale of tobacco to those younger than 18 years of age. Currently, all states have enacted youth tobacco access laws. Federal and state-level regulations are enforced using compliance checks that monitor retailers' compliance with youth tobacco access laws. A recent study on youth access to tobacco reported that after controlling for price changes, media campaigns, and smoking restrictions, merchant compliance was associated with a 20.8% reduction from 1997 to 2003 in the odds of daily smoking among 10th graders.[5] Additionally, the Task Force on Community Preventive Services recommends interventions such as stronger local laws directed at retailers and enforcement of retailer sales laws in combination with community mobilization, "on the basis of sufficient evidence of effectiveness in reducing youth tobacco use and access to tobacco products from commercial sources" (p. 19).[6]

Efforts by the U.S. Food and Drug Administration (FDA) and state and local agencies to educate retailers and conduct compliance checks may make tobacco retailers less likely to sell tobacco products to youth. However, the 2012 Surgeon General Report, *Preventing Tobacco Use Among Youth and Young Adults*, concluded that "[d]ata on whether interventions to restrict access can lead to a reduction in the number of retailers selling tobacco to minors are mixed"[2] (p. 712). Additionally, youth who purchase tobacco products from commercial sources may begin to rely more heavily on social sources. Because of this, it will continue to be important to monitor exposure to tobacco marketing and availability of tobacco products.

The following indicators are associated with this outcome:

- **1.6.a** Density of stores selling tobacco
- **1.6.b** Proportion of young people who report receiving non-sale distribution or free samples of tobacco products
- **1.6.c** Proportion of retailers selling tobacco products to youth
- **1.6.d** Proportion of young people reporting that they have purchased tobacco products from a retailer

- **1.6.e** Proportion of youth reporting that they have been unsuccessful in purchasing tobacco products from a retailer
- **1.6.f** Proportion of youth reporting that they have received tobacco products from a social source
- **1.6.g** Proportion of young people reporting that they purchased tobacco products from a vending machine
- **1.6.h** Proportion of young people who believe that it is easy to obtain tobacco products

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Outcome 6

Decreased Exposure to Tobacco Marketing and Availability of Tobacco Products

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.6.a	Density of stores selling tobacco		$$	◓	●	●	●
1.6.b	Proportion of young people who report receiving non-sale distribution or free samples of tobacco products	††	$$	◓	●†	●	◓
1.6.c	Proportion of retailers selling tobacco products to youth	††	$	◓	◓	●	◓
1.6.d	Proportion of young people reporting that they have purchased tobacco products from a retailer	††	$	◓	◓†	◓	●
1.6.e	Proportion of youth reporting that they have been unsuccessful in purchasing tobacco products from a retailer	††	$	◓	◓	◓	◓
1.6.f	Proportion of youth reporting that they have received tobacco products from a social source	††	$	◒	◓	◓	◓
1.6.g	Proportion of young people reporting that they purchased tobacco products from a vending machine	††	$	◒	◒	◓	◒†
1.6.h	Proportion of young people who believe that it is easy to obtain tobacco products		$	◓	◓	◓	◓

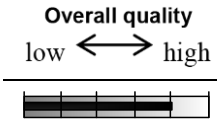
$ Dollar signs denote a qualitative rating of the resources (funds, time, and effort) needed to collect and analyze data using the most commonly available data source. The more dollar signs (maximum four), the more resources needed. Dollar signs do not represent a specific amount or range of costs but 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 fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±2 points of the median for overall quality of the indicator.

Indicator 1.6.a

Density of Stores Selling Tobacco

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	The number of stores selling tobacco products within a given geographic area or population size. Density may be determined by calculating the number of tobacco retailers per population or the number of retailers per land area/street segment. The most appropriate method should be determined based on the specific geographic circumstances.
Why this indicator is useful	State and local governments may reduce tobacco retailer density using tobacco retailer licensing and/or local zoning code restrictions to limit the number and location of tobacco sales outlets.[1] Research shows that the density of tobacco retailers influences smoking behaviors for youth and adults.[2-5] A recent study using cross-sectional survey data from California found that density of tobacco retailers is associated with experimental smoking among high school students in urban areas.[4] This finding supports previous work showing that retailer density is also associated with student-reported tobacco use,[5] as well as a higher proportion of students purchasing cigarettes rather than obtaining them from social sources.[6] Local jurisdictions can use policy options to reduce the density of tobacco retailers; for example, in November 2010, the Santa Clara County (California) Board of Supervisors adopted a strong tobacco retail licensing ordinance that requires retailers in the unincorporated areas of the county to obtain an annual license to sell tobacco and that limits new tobacco retail licenses and tobacco sales near schools (see http://www.sccgov.org/SCC/docs%2FEnvironmental%20Health,%20Department%20of%20(DEP)%2Fattachments%2FTMPKeyboard203261357.pdf).
Example data source(s)	No commonly used data sources were found.
Population group(s)	Not applicable. This indicator is best measured by reviewing tobacco retailer information.
Example survey question(s)	Not applicable
Comments	Evaluators may want to consider using licensing information to begin assessing retailer density. Note that licensing lists often contain omissions or dated information. Evaluators may also choose to utilize geographic information system (GIS) information when examining tobacco retailer density to identify differences that may be associated with demographics of populations in different geographic areas.
Rating	

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Indicator 1.6.b

Proportion of Young People Who Report Receiving Non-sale Distribution or Free Samples of Tobacco Products

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of young people who report having been given free, nominal cost, or low cost samples of tobacco products in the past 30 days
Why this indicator is useful	The tobacco industry has encouraged sampling of tobacco products as a marketing activity to target subgroups of the population, appeal to new users, and teach current users how to use their products.[1,2] The 2009 Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act), which gives the U.S. Food and Drug Administration (FDA) regulatory authority over tobacco, prohibits free cigarette sampling but allows sampling of smokeless tobacco products in qualified adult-only facilities, including marketing tents at concerts, rodeos, and other sporting events often attended by young people. In 2008, the tobacco industry spent $29.9 million on smokeless tobacco samples or coupons for free smokeless tobacco products with no additional purchase required.[3]
Example data source(s)	Monitoring the Future (MTF), 2010 Information available at: http://monitoringthefuture.org/
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From MTF** Has anyone from a tobacco company ever given you, or mailed you a free sample of their cigarettes? ☐ Never ☐ Yes, in the past 12 months ☐ Yes, but not in the past 12 months Has anyone from a tobacco company ever given you, or mailed you a free sample of their smokeless tobacco? ☐ Never ☐ Yes, in the past 12 months ☐ Yes, but not in the past 12 months In the last 6 months, have YOU received free samples of smokeless tobacco? ☐ Yes ☐ No ☐ Not applicable ☐ Refused ☐ Don't know
Comments	Under the FDA law, state and local governments are not prohibited from initiating state and local bans on tobacco product sampling. Monitoring tobacco company sampling can be time and resource intensive.

Rating

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

← ○ ◒ ◒ ● → better

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.c

Proportion of Retailers Selling Tobacco Products to Youth

KOI 2005	1.11.1 Revised Title (Previously: "Proportion of successful attempts to purchase tobacco products by young people")
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of retailers not in compliance with policies prohibiting the sale of tobacco products to minors
Why this indicator is useful	Youth who live in states with more stringent laws preventing youth access to tobacco products are less likely to be daily smokers or experiment with smoking than youth who live in states with less strict tobacco access laws.[1] Decreasing the rate at which youth are successful in purchasing tobacco may contribute to reductions in their tobacco use.[2] However, youth access initiatives require sustained compliance along with stringent enforcement and penalization of lawbreakers to be effective.[3-5]
Example data source(s)	FDA, Compliance Check Inspection of Tobacco Product Retailers Information available at: http://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm Substance Abuse and Mental Health Services Administration (SAMHSA) Compliance Checks Information available at: http://prevention.samhsa.gov/tobacco/guidance.asp
Population group(s)	Tobacco retailers
Example survey question(s)	FDA, Compliance Check Inspection of Tobacco Product Retailers: Retailer Name, City, State, Zip, Decision Type: No violations observed, Warning letters issued
Comments	Evaluators must consider a number of factors when determining the proportion of successful purchase attempts, including (1) variations in the sampling frame (e.g., number, type, and location of stores), (2) number of successful and unsuccessful purchase attempts per store, and (3) real and apparent ages of minors attempting to purchase tobacco.[6]

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.d

Proportion of Young People Reporting That They Have Purchased Tobacco Products from a Retailer

KOI 2005	1.11.2 Revised Title (Previously: "Proportion of young people reporting that they have been sold tobacco products by a retailer")
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of young people who report having purchased a tobacco product from a retailer in the previous 30 days
Why this indicator is useful	Young people who buy their own tobacco products from commercial sources are more likely to be established smokers and to become heavy smokers than those who acquire cigarettes through social sources alone.[1,2] Retailers who illegally sell to minors increase availability to tobacco throughout an entire community.[3] Additionally, retailers who fail to demand identification when selling tobacco products have been shown to sell significantly more to minority youth.[4]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Adult Tobacco Survey (NATS), 2012–2013 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years
Example survey question(s)	**From NYTS** During the past 30 days, how did you get your own cigarettes? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ I did not smoke cigarettes during the past 30 days ☐ I had someone else buy them for me ☐ Someone gave them to me without my asking ☐ I got them some other way ☐ I bought them myself ☐ I borrowed or bummed them ☐ I took them from a store or another person During the past 30 days, how did you get your own cigars, cigarillos, or little cigars? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ I did not smoke cigars, cigarillos, or little cigars during the past 30 days ☐ I had someone else buy them for me ☐ I took them from a store or another person ☐ I got them some other way ☐ I bought them myself ☐ I borrowed or bummed them ☐ Someone gave them to me without my asking
	From NATS (2012–2013) (Asked of respondents who bought cigarettes for themselves in the past 30 days) The last time you bought cigarettes for yourself, did you buy them… ☐ At a convenience store or gas station ☐ At a supermarket ☐ At a liquor store ☐ At a drug store ☐ At a tobacco discount store ☐ At another discount store, such as Wal-Mart or Costco ☐ On an Indian reservation ☐ From a vending machine ☐ On the Internet ☐ From another person ☐ Other (specify)
Comments	None noted

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.e

Proportion of Youth Reporting That They Have Been Unsuccessful in Purchasing Tobacco Products from a Retailer

KOI 2005	1.11.3 Revised Title (Previously: "Proportion of young people reporting that they have been unsuccessful in purchasing tobacco products from a retailer")
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of youth who report that they were refused sale of tobacco products because of their age during the previous 30 days
Why this indicator is useful	Restricting youth access increases the opportunity cost for youth attempting to purchase tobacco products.[1] Measuring the proportion of youth who have been refused sale of a tobacco product helps determine the extent to which local and state policies and enforcement activities are reducing young people's access to tobacco.[2]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2004 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Youth aged younger than 18 years
Example survey question(s)	**From NYTS** During the past 30 days, did anyone ever refuse to sell you cigarettes because of your age? ☐ I did not try to buy cigarettes in a store during the past 30 days ☐ Yes ☐ No
Comments	Evaluators may also want to assess the type of retailer (e.g., gas station, convenience store, grocery store) that sold tobacco to a minor. The item can be modified to address other tobacco products.

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.f

Proportion of Youth Reporting That They Have Received Tobacco Products from a Social Source

KOI 2005	1.11.4 Revised Title (Previously: "Proportion of young people reporting that they have received tobacco products from a social source")
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of youth who report getting their cigarettes or other tobacco products from a social source such as a friend, family member, or schoolmate during the previous 30 days
Why this indicator is useful	There has been a shift in cigarette acquisition among teen smokers, from retail and commercial to social sources; this suggests that the barriers to youth tobacco access in the retail setting are strengthening and thus social sources are an even greater concern.[1,2] Although increasing enforcement of laws prohibiting the sale of tobacco to minors reduces illegal sales, studies also suggest that more than half of high school–aged smokers report obtaining cigarettes from social sources.[3] An inverse relationship has been found between obtaining cigarettes from a social source and the likelihood of transitioning to heavy smoking.[2]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Youth aged younger than 18 years
Example survey question(s)	**From NYTS** During the past 30 days, how did you get your own cigarettes? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ I did not smoke cigarettes during the past 30 days ☐ I bought them myself ☐ I had someone else buy them for me ☐ I borrowed or bummed them ☐ Someone gave them to me without my asking ☐ I took them from a store or another person ☐ I got them some other way During the past 30 days, how did you get your own cigars, cigarillos, or little cigars? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ I did not smoke cigars, cigarillos, or little cigars during the past 30 days ☐ I bought them myself ☐ I had someone else buy them for me ☐ I borrowed or bummed them ☐ Someone gave them to me without my asking ☐ I took them from a store or another person ☐ I got them some other way
Comments	None

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.g

Proportion of Young People Reporting That They Purchased Tobacco Products from a Vending Machine

KOI 2005	1.11.5 Revised Title (Previously: "Proportion of young people reporting that they purchased cigarettes from a vending machine")
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Proportion of young people who usually purchased their tobacco products from a vending machine during the previous 30 days
Why this indicator is useful	Banning vending machines has been shown to reduce smoking onset.[1] Although the 2009 Family Smoking Prevention and Tobacco Control Act included provisions to prohibit the sale of cigarettes and smokeless tobacco in vending machines except in adult-only facilities, these machines are still available to young adults and to youth in areas with poor enforcement. As of 2011, no states ban vending machines in all locations.[2]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Adult Tobacco Survey (NATS), 2012–2013
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** During the past 30 days, where did you buy your own cigarettes? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ I did not buy cigarettes during the past 30 days ☐ A gas station ☐ A convenience store ☐ A grocery store ☐ A drugstore ☐ A vending machine ☐ Over the Internet ☐ Through the mail ☐ Some other place not listed here During the past 30 days, where did you buy your own cigars, cigarillos, or little cigars? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) _____ ☐ I did not buy cigars, cigarillos, or little cigars during the past 30 days ☐ A gas station ☐ A convenience store ☐ A grocery store ☐ A drugstore ☐ A vending machine ☐ Over the Internet **From NATS** (Asked of respondents who bought cigarettes for themselves in the past 30 days) The last time you bought cigarettes for yourself, did you buy them… ☐ At a convenience store or gas station ☐ At a supermarket ☐ At a liquor store ☐ At a drug store ☐ At a tobacco discount store ☐ At another discount store, such as Wal-Mart or Costco ☐ On an Indian reservation ☐ From a vending machine ☐ On the Internet ☐ From another person ☐ Other (specify)
Comments	None noted

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±1 point of the median for this indicator-specific criterion.

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.6.h

Proportion of Young People Who Believe That It Is Easy to Obtain Tobacco Products

KOI 2005	1.11.6
Goal area	Preventing initiation of tobacco use
Outcome box	Decreased exposure to tobacco marketing and availability of tobacco products
What to measure	Degree to which young people believe that it is easy or difficult to obtain tobacco products
Why this indicator is useful	Believing that cigarettes are easy to obtain increases young people's risk for both smoking initiation and continued use.[1]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** How easy would it be for you to get tobacco products if you wanted some? ☐ Very easy ☐ Somewhat easy ☐ Not easy at all
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 7

Reduced Tobacco Industry Influence

In 2011, the tobacco companies spent 87% of their marketing dollars in the retail environment, including point-of-sale advertising, price discounts, retail promotional allowances, and retail-value-added items.[1,2] The tobacco industry offers retailers volume discounts, price promotions, in-store branded displays, and payment for prime shelf space, exposing all consumers, including youth, to pro-smoking messages in the retail environment. In return for financial incentives, retailers enter into contractual agreements with tobacco companies to ensure high visibility and accessibility of their products to stimulate impulse purchases.[3,4] Studies have shown that point-of-sale tobacco advertising is more prevalent in stores near schools and in minority and low-income neighborhoods.[5-8] Research has also identified a relationship between exposure to tobacco marketing in the retail environment and use of tobacco by youth, including experimentation and uptake of smoking.[9-11] Signage visible outside the stores exposes entire communities to tobacco marketing. The result is that many U.S. children grow up surrounded by pro-tobacco messages.[10]

The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 set forth rules banning promotional activities, such as the sale and distribution of tobacco-branded non-tobacco products, and sponsorship of music and sporting events. In addition, cities and counties can limit the free or low-cost distribution of tobacco products known as "sampling" under the Tobacco Control Act.[12]

Comprehensive advertising bans can reduce tobacco consumption.[13] Following the ban on television and radio tobacco advertising in 1971, the U.S. federal government established additional restrictions on advertising as part of the 1998 Master Settlement Agreement, which banned any advertising targeting youth, as well as billboard and transit ads. Under the Tobacco Control Act, states and localities can restrict or regulate the time, place, and manner (but not the content) of tobacco advertising. It is important to note, however, that noncomprehensive restrictions can result in increased advertising in "non-banned" media and increased expenditures in other promotional and marketing activities.[14]

Many tobacco companies host Web sites for particular brands, where consumers are encouraged to register to receive exclusive promotions and watch videos, play games, enter contests, and converse with other consumers on message boards. Most of these Web sites require age verification for entry. In addition to brand-specific Web sites, some companies sponsor smokers' rights Web sites, such as R.J. Reynolds' "My Smokers' Rights" Web site of 2010 and, more recently, Philip Morris' "Citizens for Tobacco Rights" Web site,[15] which encourages consumers to engage by contacting their legislative representative to oppose tobacco control policies. These attempts to foster individual political activism are consistent with the tobacco industry's long history of political influence through contributions and lobbying at the corporate level.[16,17]

Movies deliver billions of onscreen images of smoking to youth audiences. Both the Surgeon General and the National Cancer Institute have concluded that exposure to depictions of smoking in the movies causes tobacco use among youth.[13,14] Giving movies with tobacco an R rating might reduce the number of exposures of youth to tobacco onscreen.[18] Showing an antismoking

advertisement before a movie containing smoking has also been shown to affect how audiences view smoking and react to its depiction.[19]

Even though news media coverage can help frame the discussion of tobacco-related issues among the public, organized media advocacy on behalf of tobacco control is underutilized. Studies on news coverage of tobacco-related issues show that secondhand smoke, policies, and health effects of smoking are most frequently covered.[14] Less frequently covered are issues related to tobacco industry practices and political lobbying.

To improve its public image, the tobacco industry sponsors events and causes such as the arts and minority organizations.[14] Additionally, the industry has sponsored youth smoking prevention campaigns with little to no success—the efforts have been largely ineffective at reducing youth smoking and may have increased smoking in some subgroups of youth.[20-22] The tobacco industry's activities and corporate sponsorships should be monitored.[14]

The following indicators are associated with this outcome:

- **1.7.a** Extent and type of retail tobacco advertising
- **1.7.b** Extent of tobacco industry sponsorship of public and private events
- **1.7.c^{NR}** Extent of tobacco advertising in media
- **1.7.d** Extent of tobacco in movies
- **1.7.e^{NR}** Extent of pro-tobacco internet presence
- **1.7.f** Amount and quality of news media stories about tobacco industry practices and political lobbying
- **1.7.g^{NR}** Extent of industry-sponsored tobacco use prevention activities
- **1.7.h** Amount of tobacco industry contributions to institutions and groups
- **1.7.i** Amount of tobacco industry campaign contributions to local and state politicians

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Outcome 7

Reduced Tobacco Industry Influence

Indicator Rating
← ○ ◒ ◒ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.7.a	Extent and type of retail tobacco advertising		$$$	●	●	●	●
1.7.b	Extent of tobacco industry sponsorship of public and private events	††	$$$	◒	◒	●	◒
1.7.c[NR]	Extent of tobacco advertising in media	⊘	⊘	⊘	⊘	⊘	⊘
1.7.d	Extent of tobacco in movies	††	$$	●	◒	◒	◒
1.7.e[NR]	Extent of pro-tobacco Internet presence	⊘	⊘	⊘	⊘	⊘	⊘
1.7.f	Amount and quality of news media stories about tobacco industry practices and political lobbying		$$$	◒	◒	◒	◒
1.7.g[NR]	Extent of industry sponsored tobacco use prevention activities	⊘	⊘	⊘	⊘	⊘	⊘
1.7.h	Amount of tobacco industry contributions to institutions and groups		$$$*	◒	◒	●	●
1.7.i	Amount of tobacco industry campaign contributions to local and state politicians	††	$$$*	◒	◒	◒	◒

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings being within ±2 points of the median for overall quality of the indicator.

⊘ Denotes no data.

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

Indicator 1.7.a

Extent and Type of Retail Tobacco Advertising

KOI 2005	1.9.1 Revised Title (Previously: "Extent and type of retail tobacco advertising and promotions")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Amount and type of tobacco advertising in and around retail outlets, including strategic product placement
Why this indicator is useful	There is a causal relationship between exposure to retail tobacco advertising and promotion and tobacco initiation and use.[1-4] Studies have shown that the volume of in-store advertisements and the proportion of retail outlets with sales promotions have increased more rapidly in neighborhoods with a higher proportion of African Americans than in other communities.[5] Additionally, evidence demonstrates that the tobacco industry targets youth through increased advertising and promotions in stores located near schools.[6-9] Contradicting tobacco manufacturer claims that advertising is not targeted on race/ethnicity, recent studies have shown that advertising for menthol cigarettes is significantly higher in neighborhoods around high schools with a high proportion of African American students than in neighborhoods around schools with lower proportions of African Americans.[8]
Example data source(s)	Environmental scan of tobacco advertising in retail outlets Operation Storefront: Youth Against Tobacco Advertising and Promotion Initiative Information available at: http://www.dhs.ca.gov/tobacco/html/Evaluation_Resources.htm New York State's Retail Advertising Tobacco Survey (RATS) Information available at: http://www.health.ny.gov/prevention/tobacco_control/docs/tobacco_marketing_exposure_rpt.pdf
Population group(s)	Not applicable. This indicator is best measured by observation.
Example survey question(s)	Not applicable
Comments	The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) of 2009 gave the U.S. Food and Drug Administration the authority to regulate the manufacturing, marketing, and sale of tobacco products and allow states and localities to restrict or regulate the time, place, and manner (but not the content) of cigarette advertising or promotions. Findings from this work have utility for monitoring compliance with existing laws or informing new policy; therefore, evaluators may choose to measure local-level geographic variables to inform policy initiatives. Evaluators may also choose to gather and report their findings by type of retailer (e.g., grocery store, convenience store, gas station); by proximity to schools, parks, and other areas where young people congregate; by neighborhood characteristics; and by affected population size, density, and demographics. State-specific lists of tobacco retailers will inform sampling strategies.

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

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Indicator 1.7.b

Extent of Tobacco Industry Sponsorship of Public and Private Events

KOI 2005	1.9.5 "Extent of tobacco industry sponsorship of public and private events"
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Extent of tobacco industry sponsorship of public and private events (e.g., sports, recreation, music, family, or work-related events)
Why this indicator is useful	Tobacco companies use sponsorship as a key public relations strategy to buy legitimacy for the industry.[1,2] Sponsorship of sporting events, such as rodeos, is strategically used by the tobacco industry to reach young people, enhance the brand image of tobacco products, and conduct market research.[3] Attendance at industry-sponsored events at bars, clubs, and fraternities has been associated with higher smoking prevalence among young adults.[4]
Example data source(s)	Event sponsorship tracking system California Tobacco Industry Monitoring Evaluation: Project SMART Money Information available in Roeseler et al.[5]
Population group(s)	Not applicable. This indicator is best measured by observation.
Example survey question(s)	Not applicable
Comments	Evaluators may want to assess the number and types of events that are being sponsored and the numbers of attendees as well as predominant population groups at these events.

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.7.c[NR]

Extent of Tobacco Advertising in Media

KOI 2005	1.9.8 Revised Title (Previously: "Extent of tobacco advertising in print media")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Extent of tobacco advertisement in print advertising (e.g., in magazines, newspapers, signage at point of sale), electronic advertising (e.g., company Web sites, industry-sponsored online social media), direct-to-consumer advertising (e.g., direct mail, coupons), product packaging, and paid product placement
Why this indicator is useful	The Master Settlement Agreement (MSA) regulated aspects of tobacco advertising in print media; one study, however, found that after the MSA, the combined advertising expenditures of the four major tobacco companies increased in 19 magazines that have a youth focus, and more than half (54%) of magazines preferred by teens contained cigarette advertisements.[1] Additionally, the tobacco industry is using "new media" and other advertising modes to create intense engagement of target audiences with entertaining and participatory events, using new technologies to collect data and target behaviors, and implementing a "360-degree" strategy that encompasses multiple forms of media.[3] Understanding the extent of tobacco advertising will help to monitor the impact of regulations and provide additional information regarding the ways the tobacco industry targets youth.
Example data source(s)	Print, Internet Media Monitoring: Kantar Media Intelligence's Stradegy™ database Information available at:: http://kantarmediana.com/intelligence Self-reported exposure: National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
Population group(s)	This indicator is best measured by directly tracking tobacco advertisements in media; however, currently tested methodologies for monitoring media channels are often expensive. Therefore, capturing information on reported exposure by youth younger than 18 years and young adults aged 18 to 25 years may provide additional useful information.
Example survey question(s)	**From NYTS** When you read newspapers or magazines, how often do you see ads or promotions for cigarettes and other tobacco products? ☐ I do not read newspapers or magazines ☐ Sometimes ☐ Never ☐ Most of the time ☐ Rarely ☐ Always When you are using the Internet, how often do you see ads or promotions for cigarettes or other tobacco products? ☐ I do not use the Internet ☐ Sometimes ☐ Never ☐ Most of the time ☐ Rarely ☐ Always During the past 30 days, did you receive ads from a tobacco company through… (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ The mail ☐ Facebook ☐ E-mail ☐ Myspace ☐ The Internet ☐ A text message

Comments	Evaluators may want to assess tobacco advertising by type or channel of media, by content theme, and/or by target audience. The distinction between commercial and personal tobacco promotion online is often hard to discern. See indicator 1.7.e for additional data sources and information on surveillance of pro-tobacco content on the Internet.

Rating

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

⊘ Denotes no data.

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Indicator 1.7.d

Extent of Tobacco in Movies

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Proportion of movies that show tobacco use and/or tobacco products
Why this indicator is useful	Extensive evidence indicates a causal relationship between exposure to movie smoking depictions and youth smoking initiation.[1-3] Additional evidence is needed to determine whether this also holds true for young adults or for specific racial and ethnic groups.[1] Smoking in movies serves as an important form of indirect marketing that normalizes tobacco use. Although the Master Settlement Agreement (MSA) in 1998 prohibited paid placement of tobacco products in movies, the number of tobacco incidents in films reached a peak in 2005.[4] By 2009, the number of incidents had been reduced by approximately half, the first time a decline of that magnitude and duration has been observed.[4]
Example data source(s)	Scene Smoking, "Thumbs Up! Thumbs Down!" sponsored by Breathe California of Sacramento-Emigrant Trails Information available at: http://www.scenesmoking.org/frame.htm
Population group(s)	Not applicable
Example survey question(s)	Not applicable
Comments	The extent of tobacco in movies can be measured using a number of methods. The 2012 Surgeon General's Report[1] describes using content analysis to capture the prevalence of smoking in movies. Multiple variables may be measured, including type of movie in which tobacco appears (i.e., youth rated movies), tobacco portrayal (characters using products vs. tobacco imagery), positive or negative framing of tobacco, and number of appearances of tobacco.[5] Assessing exposure to tobacco in movies is challenging. Commonly used methods include using general self-reported exposure items, asking young people to list their favorite actors and actresses and then linking this information with content analyses for pertinent movies, and asking young people to identify movies that they have seen among a lengthy list of movies.[1] Each of these methods raises the potential for bias. Evaluators should consider methods most appropriate for their needs.

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Indicator 1.7.e[NR]

Extent of Pro-Tobacco Internet Presence

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Amount and type of pro-tobacco presence online, including corporate and brand Web sites, advertising, and social media. Proportion of youth who report seeing advertisements or other content on the Internet about tobacco products. Content could include industry- and non-industry-sponsored Web sites or advertisements, pro-tobacco user-generated content, and retail Web sites that sell cigarettes online.
Why this indicator is useful	While Federal Trade Commission reporting indicates that tobacco companies do not report expenditures for advertising their products online via banner advertisements or through social media marketing, they do maintain interactive Web sites promoting specific brands that could appeal to youth.[1-3] In addition, consumer-generated content on social media and tobacco sales Web sites has the potential to promote tobacco use indirectly.[4-7] Finally, tobacco products are being sold online at lower prices than in retail stores because online retailers do not charge excise taxes, making online purchasing potentially more appealing to youth, given youth price sensitivity.[8]
Example data source(s)	Environmental scan of social media Web sites for industry presence and pro-tobacco content; monitoring and content analysis of brand and corporate Web sites for age identification requirements and messaging Social media monitoring tools can be used for surveillance. To examine audience engagement with pro-tobacco content online, metrics for tobacco-related posts on social media sites, such as number of "likes" on Facebook, video views on YouTube, and followers on Twitter, are publicly available. Social media monitoring software (e.g., Radian6, Attensity, Buzzmetrics) summarizes trends in social media conversations and online earned media (e.g., blog posts) using keywords to monitor product and Web site mentions. National Youth Tobacco Survey (NYTS), 2009
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** When you are using the Internet, how often do you see any ads or promotion for cigarettes or other tobacco products? ☐ I do not use the Internet ☐ Sometimes ☐ Never ☐ Most of the time ☐ Rarely ☐ Always During the past 30 days, where did you buy the last pack of cigarettes you bought? ☐ I did not buy a pack of cigarettes during the past 30 days ☐ A gas station ☐ A convenience store ☐ A grocery store ☐ A drugstore ☐ A vending machine ☐ I bought them over the Internet ☐ Other_____

Comments	Social media monitoring programs are often proprietary and can be quite costly. The 2012 Surgeon General's Report concludes that the sheer number of Web pages that mention tobacco makes it very difficult to track comprehensively, and verifying that no Web site has been established by tobacco companies is also extremely difficult.[9] The NYTS item only measures exposure to Internet advertising, but additional items could be created to measure the other dimensions of pro-tobacco Internet presence: exposure to online tobacco retail Web sites, exposure to brand or corporate Web sites, and exposure to social media and other user-generated tobacco content. Any items developed by evaluators should undergo cognitive testing and validation before widespread use.

Rating

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

⦸ Denotes no data.

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Indicator 1.7.f

Amount and Quality of News Media Stories About Tobacco Industry Practices and Political Lobbying

KOI 2005	1.9.9
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Quantity and quality of media coverage of tobacco industry practices and political lobbying. Quality includes, but is not limited to, timeliness, accuracy, and emotional valence.
Why this indicator is useful	News media coverage can frame discussion of tobacco-related issues among policy makers and the general public.[1] The quantity, quality, and accuracy of tobacco-related media information influences individuals' knowledge, perceptions, and behaviors related to tobacco.[2] However, news media coverage can also be a tool exploited by the tobacco industry to oppose tobacco control efforts.[3] Therefore, public health advocates should focus on ensuring that coverage includes accurate health outcomes related to proposed or adopted legislation.[4] One study found that an increase in the volume of newspaper articles per community was associated with increased odds of youth perceiving harm in smoking one or more packs of cigarettes per day as well as a decreased likelihood of smoking in the past 30 days.[5]
Example data source(s)	Media tracking service (e.g., clipping service) Information available at: http://kantarmediana.com/intelligence
Population group(s)	Not applicable. This indicator is best measured by monitoring and tracking pertinent media coverage of tobacco industry practices.
Example survey question(s)	Not applicable
Comments	Quantitative studies involve counting articles, measuring column-inches, or noting article placement. Qualitative studies require detailed content analyses to detect article themes and emotional valence. More information on how to collect data on this indicator is presented in Stillman et al. (2001).[6]

Rating

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

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Indicator 1.7.g[NR]

Extent of Tobacco Industry-Sponsored Tobacco Use Prevention Activities

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Extent of tobacco industry sponsorship of prevention activities and educational programs, including publication of self-help booklets, distribution of school-based prevention curricula and programs, programs to prevent youth access to tobacco products, mass media campaigns advocating that youth not smoke, and community-based programs for youth
Why this indicator is useful	A substantial body of research has demonstrated that anti-tobacco-industry attitudes reduce the likelihood of future initiation of smoking among youth and young adults; however, industry-sponsored efforts with the stated purpose of preventing youth tobacco use could create favorable impressions of the sponsoring tobacco companies among young people, their parents, or others in the community.[1] Sussman concluded that the prevention activities and educational programs developed and/or supported by the industry do not include key elements of proven tobacco use prevention programs and avoid any reference to the tobacco industry's role in tobacco initiation and maintenance of tobacco use behaviors.[2] Instead, these programs portray smoking as an "adult choice" or "adult decision," which further glamorizes the behavior. The tobacco industry's youth smoking prevention activities and programs have not provided evidence that they are effective at reducing youth smoking. Indeed, published studies by independent academic researchers, as well as unpublished industry studies, indicate that industry-sponsored prevention activities and programs are ineffective and can lead to a greater likelihood of uptake among youth.[3-5] The tobacco industry receives several benefits from its youth smoking prevention initiatives.[1] These include promoting positive attitudes among key constituencies (e.g., policy makers, the legal system); managing impressions among youth to maintain the potential for tobacco use initiation when these children become young adults;[5-8] using the relationships created with sponsored organizations to counter proposed tobacco control legislation;[9-11] arguing against the need for public-health-funded tobacco control strategies because industry-sponsored programs fill the need;[12] and providing a "cover" for industry-conducted research on determinants of smoking among youth, which could inform tobacco marketing efforts.[12]
Example data source(s)	School district/board or school-level records of curricula adopted or sponsored programs and activities Tobacco industry fiscal reports
Population group(s)	Not applicable. This indicator is best measured by reviewing public and tobacco industry records.
Example survey question(s)	Not applicable
Comments	Evaluators may want to categorize the types of activities and programs that are tobacco industry-sponsored by the target sector (family, school, community, media), and measure the reach of these efforts.

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

⊘ Denotes no data.

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Indicator 1.7.h

Amount of Tobacco Industry Contributions to Institutions and Groups

KOI 2005	1.9.11
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Amount of funds contributed by the tobacco industry to institutions and groups (e.g., universities and higher education, hospitality industry, movie industry, sports organizations, civic groups). See additional notes in "Comments" below.
Why this indicator is useful	Corporate philanthropy is one way for the tobacco industry to simultaneously engage local and national institutions while building their influence; the amount of the tobacco industry's influence on these groups is directly related to the amount it contributes.[1-5] Tobacco companies strategically use such campaigns to improve public opinion and company image.[6] This type of corporate philanthropy not only legitimizes the tobacco industry, but also has been shown to weaken tobacco control efforts.[6-9] Tracking this indicator will help to understand tobacco industry influence.
Example data source(s)	Public records of political contributions Information available from the Office of the State Secretary or equivalent in each state Center for Responsive Politics (CRP) Information available at: http://www.opensecrets.org Tobacco industry fiscal reports
Population group(s)	Not applicable. This indicator is best measured by reviewing public and tobacco industry records.
Example survey question(s)	Not applicable
Comments	Tobacco control programs may want to examine the source of industry contributions to assist with media advocacy intended to expose the tobacco industry, its lobbying and public relations firms, and tobacco industry front groups as the source of contributions to legitimate causes and organizations. Evaluators may want to categorize their findings by type of business or organization (e.g., hospitality industry, movie industry, sports organizations, civic groups) that received funds from the tobacco industry. More information on how to collect data on this indicator is presented in Tesler and Malone.[6]

Rating

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

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

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Indicator 1.7.i

Amount of Tobacco Industry Campaign Contributions to Local and State Politicians

KOI 2005	1.9.12
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco industry influence
What to measure	Amount of funds contributed to aid local and state politicians by the tobacco industry
Why this indicator is useful	During the 2008 campaign cycle, the tobacco industry donated $4.4 million to federal political interests, including presidential, senatorial, and congressional candidates.[1] Studies show an association between political contributions from the tobacco industry and pro-tobacco legislation.[2-4] There is a positive association between the amount of money received by a congressman and his/her propensity to vote pro-tobacco, even after controlling for political party and state of origin.[4] Thus, tobacco industry contributions are a significant predictor of the industry's political influence, including its influence on votes for tobacco-related legislation.[2-5] Tracking this indicator may help states to publicize and counter the influence of the tobacco industry.
Example data source(s)	Public records of political contributions Information available from the Office of the State Secretary or equivalent in each state Federal Election Commission (FEC) Searchable database available at: http://www.fec.gov Center for Responsive Politics (CRP) Information available at: http://www.opensecrets.org
Population group(s)	Not applicable. This indicator is best measured by reviewing public records.
Example survey question(s)	Not applicable
Comments	More information on how to collect data on this indicator is presented in Givel and Glantz (2001)[6] and Morley et al. (2002).[7]

Rating

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

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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Outcome 8

Increased Price of Tobacco Products

Raising the retail price of tobacco products through excise tax increases is one of five strategic actions endorsed by the U.S. Department of Health and Human Services to end the tobacco epidemic.[1] Studies show an inverse relationship between cigarette price and smoking prevalence by youth and young adults.[2] Additionally, some evidence has shown an inverse relationship between price of other tobacco products (e.g., cigars and smokeless tobacco) and propensity of use, intensity of use, and prevalence of tobacco use among youth.[2] Increasing excise taxes on cigarettes is an effective method of increasing the purchase price of cigarettes.[2] Not only can high tobacco taxes serve directly as a barrier to tobacco use initiation and as a motivator for quitting among current users, but tax-driven price increases also can indirectly reduce tobacco use if a portion of the excise tax revenue is dedicated to tobacco control efforts.[3]

Maintaining higher real prices of tobacco products requires ongoing tax increases to offset the effects of inflation and industry practices designed to control retail product prices.[2] The industry employs a variety of marketing mechanisms to control the price of tobacco products; in fact, price-reducing promotions have become a key marketing strategy for the tobacco industry, which can mitigate the impact of tobacco taxes.[2] Historically price competition in the industry has been rare, but it has been increasing over time. The cigarette manufacturers spent 84% of their annual marketing budget to reduce retail cigarette prices in 2011, compared to 60% in 1988.[4] In the 1980s, discount brands were created to offset the increasing price of cigarettes due to federal taxes and an ailing economy. By the 1990s, discount brands accounted for 40% of consumption. When Philip Morris slashed prices on Marlboro brand cigarettes by introducing price-reducing promotions in 1993, other companies followed suit, stopping the decline in U.S. cigarette sales for at least a few years, while smoking among youth rose dramatically.[2]

More recently, the industry has responded to cigarette tax increases by engaging in a variety of price-related marketing strategies to control prices charged consumers. These strategies include distributing coupons via print ads, at the point of sale, and via direct mail, and offering multipack discounts.[2] In response to the 2009 increase in the federal excise tax on cigarettes, Philip Morris increased prices on its brands while simultaneously engaging in marketing messages blaming the entire increase on the federal government and promoting coupons and special offers for its customers to counteract the increase.[2] The tobacco industry also engages in price discrimination, wherein cigarette prices are lower in states with stronger tobacco control policies to offset the impact of these policies on tobacco use.[5-6] Studies of internal tobacco documents have shown that the industry employs price-reducing strategies with the knowledge that youth and young adults are more responsive to price increases than adults and that this knowledge has informed their use of price-reducing promotions.[2]

The following indicators are associated with this outcome:

- **1.8.a** Amount of tobacco product taxes and fees
- **1.8.b** Price paid for tobacco products

- **1.8.c** Extent and type of consumer-focused industry promotions
- **1.8.d** Extent and type of merchant-focused industry promotions

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Outcome 8

Increased Price of Tobacco Products

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.8.a	Amount of tobacco product taxes and fees		$$	●	●	●	●
1.8.b	Price paid for tobacco products		$	●	●	●	●
1.8.c	Extent and type of consumer-focused industry promotions		$$$	●	●	●	●
1.8.d	Extent and type of merchant-focused industry promotions		$$$†	◒	◒	◒	◒

$ 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 fewer than 75% of valid ratings being within ±1 point of the median for this indicator-specific criterion.

Indicator 1.8.a

Amount of Tobacco Product Taxes and Fees

KOI 2005	1.12.1 Revised Title (Previously: "Amount of tobacco product excise tax")
Goal area	Preventing initiation of tobacco use
Outcome box	Increased price of tobacco products
What to measure	(1) Excise tax per individual unit of tobacco product, (2) sales tax per unit of tobacco product, (3) applicable fees per unit, and (4) percentage of the total price of a unit of tobacco product that is attributable to taxes and fees
Why this indicator is useful	The level of excise tax on tobacco products is one of the most fundamental and reliable indicators of the success of a tobacco control program.[1] Increasing tax on tobacco products increases the price of tobacco products, and higher tobacco prices are associated with overall reductions in tobacco use prevalence and tobacco consumption. These outcomes are achieved by preventing initiation and uptake by young people and promoting cessation and lowering consumption among tobacco users, especially price-sensitive populations (e.g., young people, ethnic or racial disparate populations).[2-10]
Example data source(s)	CDC State Tobacco Activities Tracking and Evaluation (STATE) system Data available at: http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx Campaign For Tobacco-Free Kids (CTFK) Information available at: http://tobaccofreekids.org/research/factsheets State departments of revenue
Population group(s)	Not applicable. This indicator is best measured by tracking and monitoring state excise and sales tax and fees on tobacco products.
Example survey question(s)	Not applicable
Comments	To gather more complete data on tobacco price, evaluators should consider collecting data on other tobacco products, such as smokeless tobacco, snus, small cigars, and loose tobacco (roll-your-own).

Rating

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

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Indicator 1.8.b

Price Paid for Tobacco Products

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased price of tobacco products
What to measure	Price paid by a consumer for a unit of tobacco product adjusted for inflation and including industry discounts and applicable taxes and fees
Why this indicator is useful	There is a strong, inverse relationship between cigarette price and smoking prevalence, particularly among price-sensitive populations (e.g., young people).[1-6] Additionally, lower cigarette prices are associated with increased smoking initiation among youth.[7,8]
Example data source(s)	National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30 Scanner data Retail observation
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NATS** What price did you pay for the last pack of cigarettes you bought? _____ What price did you pay for the last carton of cigarettes you bought? _____ The last time you bought cigarettes, did you take advantage of coupons, rebates, buy 1 get 1 free, 2 for 1, or any other special promotions for cigarettes? ☐ Yes ☐ No
Comments	States can track the price of tobacco products using retail scanner data that provide information on volume, price, brand, product type, package type, and promotions; however, scanner data are generally only available for designated market areas (DMAs) that may not correspond with state borders. Additionally, scanner data can be costly to obtain and complex to analyze. States may also use retail observation to capture price information with the benefits of flexibility in obtaining unique price data (e.g., advertised prices), specific price-promotional strategies, and compliance with certain policies such as minimum price law. Additionally, evaluators may adjust the sampling frame and link observational data to census tract or other ecological data depending on study needs; however, it can be costly to collect observational data, difficult to ensure high inter-rater reliability, and challenging to develop and test new valid and reliable measures.

Rating

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

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Indicator 1.8.c

Extent and Type of Consumer-Focused Industry Promotions

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased price of tobacco products
What to measure	Level and type of consumer-focused tobacco industry promotions, such as sale price, rebates, coupons, and buy-one-get-one-free offers. See "Comments" below for additional information.
Why this indicator is useful	Greater availability of cigarette promotions and lower cigarette prices are associated with increased initiation and uptake among youth and decreased quit attempts among current smokers.[1-7]
Example data source(s)	National Adult Tobacco Survey (NATS), 2012–2013 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30 Retail observation Operation Storefront: Youth Against Tobacco Advertising and Promotion Initiative Information available at: http://www.dhs.ca.gov/tobacco/html/Evaluation_Resources.htm New York State's Retail Advertising Tobacco Survey (RATS) Information available at: http://www.health.ny.gov/prevention/tobacco_control/docs/tobacco_marketing_exposure_rpt.pdf Scanner data
Population group(s)	Not applicable. This indicator is best measured by observation.
Example survey question(s)	**From NATS** In the past 30 days, did you use coupons, rebates, buy 1 get 1 free, 2 for 1, or any other special promotions when you bought cigarettes? ☐ Yes ☐ No ☐ Not applicable
Comments	States can track the price of tobacco products using retail scanner data that provide information on volume, price, brand, product type, package type, and promotions; however, scanner data are generally only available for designated market areas (DMAs) that may not correspond with state borders. Additionally, scanner data can be costly to obtain and complex to analyze. States may also use retail observation to capture price information with the benefits of flexibility in obtaining unique price data (e.g., advertised prices), specific price-promotional strategies, and compliance with certain policies such as minimum price law. Additionally, evaluators may adjust the sampling frame and link observational data to census tract or other ecological data depending on study needs; however, it can be costly to collect observational data, difficult to ensure high inter-rater reliability, and challenging to develop and test new valid and reliable measures. Suggested variables for retail observation include • tobacco product prices and promotions (sale price, rebates, coupons, buy one get one free, bundles, gifts with purchase), • average number of tobacco promotions, and • percentage of tobacco retailers with promotions.

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

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Indicator 1.8.d

Extent and Type of Merchant-Focused Industry Promotions

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Increased price of tobacco products
What to measure	The level and type of merchant-focused tobacco industry promotions. These promotions include those where tobacco manufacturers provide retail and/or wholesale discounts on tobacco products or payments in return for prime advertising space. Merchant-focused promotions may include allowances paid to retailers, slotting fees, price discounts, and buy-downs paid to retailers rather than directly to consumers.
Why this indicator is useful	Tobacco manufacturers have increasingly focused marketing resources on price promotions in the years since the 1998 Master Settlement Agreement.[1] In 2011, $8.4 billion was spent on cigarette advertising and promotion expenditures, with approximately $6.99 billion of these expenditures directed at price discounts paid to cigarette retailers or wholesalers to reduce the price of cigarettes.[2] The tobacco industry uses merchant-directed industry promotions to counteract the impact of advertising restrictions.[3] Retailers that participate in tobacco company incentive programs have more prominent placement of cigarettes and advertising.[4] These price promotions may be contributing to tobacco-related disparities as research shows that price-related promotions are accelerating disproportionately among retailers in neighborhoods with lower socioeconomic status and higher proportions of racial and ethnic populations experiencing health disparities.[5]
Example data source(s)	Tobacco Industry document reviews (e.g., Legacy Tobacco Documents Library, available at http://legacy.library.ucsf.edu/) Retail observation Interviews with retailers
Population group(s)	Tobacco retailers
Example survey question(s)	Not applicable
Comments	Retailer interview protocols that include the following topics may enhance application of indicator information for tobacco control program use. See Feighery et al. (2003) for more information:[6] • Types of merchant incentive programs offered by tobacco companies • How these merchant incentive programs function • How these programs affect the store environment

Rating

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

† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±1 point of the median for this indicator-specific criterion.

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Outcome 9

Reduced Initiation of Tobacco Use

Tobacco use begins primarily during adolescence, several decades earlier than when the health, social, and economic impacts associated with tobacco use are likely to occur.[1] The earlier young people begin using tobacco products, the more likely they are to use them as adults and the longer they are likely to be users.[1] The process of nicotine addiction ensures that many of today's adolescent smokers will use tobacco regularly when they are adults.[2]

Smoking initiation is most likely to occur at age 15 or 16.[2] Virtually no daily smokers begin to smoke as adults; almost 90% of adult daily smokers report having tried their first cigarette by the time they were 18 years old, and few transitions to daily smoking occur after young adulthood (i.e., after 26 years of age).[2] In recent years, initiation rates for youth and young adult cigarette smoking have been stable. Initiation of cigar smoking among youth has decreased in recent years; however, from 2006 to 2010, initiation of cigar smoking among young adults remained level for all groups except Hispanics for whom initiation rates increased.[2] During this same time period, initiation of smokeless tobacco use did not increase among youth or young adults overall, except for an increase in initiation among young adult women.[2] The use of multiple tobacco products is common among some youth and young adults, although the sequence of initiation of two or more tobacco products is unknown.[2]

The following indicators are associated with this outcome:

- **1.9.a** Average age at which young people first smoked a whole cigarette
- **1.9.b** Average age at which young people first tried a commercial tobacco product other than cigarettes
- **1.9.c** Proportion of young people who report never having tried a tobacco product

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Outcome 9

Reduced Initiation of Tobacco Use

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.9.a	Average age at which young people first smoked a whole cigarette	 ††	$	●	●	●	●
1.9.b	Average age at which young people first tried a commercial tobacco product other than cigarettes		$	◓	●	●	◓
1.9.c	Proportion of young people who report never having tried a tobacco product		$	●	●	●	●

$ 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 fewer than 75% of valid ratings being within ±2 points of the median for overall quality of the indicator.

Indicator 1.9.a

Average Age at Which Young People First Smoked a Whole Cigarette

KOI 2005	1.13.1
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced initiation of tobacco use
What to measure	Average age at which young smokers first smoked a whole cigarette
Why this indicator is useful	The age at which someone first smokes a whole cigarette is significantly related to that person's long-term smoking habits. Recent estimates demonstrate that more than one-third of adults that ever smoked cigarettes reported trying their first cigarette by age 14, whereas approximately one out of every six adults report first trying a cigarette between the ages of 18 and 26.[1] The younger people are when they start using tobacco, the more likely they are to use tobacco products and the less likely they are to quit smoking and achieve prolonged abstinence as adults.[2,3]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ CDC Youth Risk Behavior Surveillance System (YRBSS), 2012–2013 Information available at: http://www.cdc.gov/HealthyYouth/yrbs/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS and YRBSS** How old were you when you smoked a whole cigarette for the first time? ☐ I have never smoked cigarettes ☐ 8 years or younger ☐ 9 or 10 years ☐ 11 or 12 years ☐ 13 or 14 years ☐ 15 or 16 years ☐ 17 years or older **From NATS** How old were you when you first smoked a whole cigarette for the first time?
Comments	To gather more complete data on tobacco use, evaluators can also ask questions about the use of other tobacco products, such as smokeless tobacco, bidis, small cigars, and loose tobacco (roll-your-own).

Rating

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

†† Denotes low agreement among reviewers, defined as fewer than 75% of valid ratings within ±2 points of the median for overall quality of the indicator.

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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 Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.
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Indicator 1.9.b

Average Age at Which Young People First Tried a Commercial Tobacco Product Other than Cigarettes

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced initiation of tobacco use
What to measure	Average age at which young tobacco users first tried a commercially sold tobacco product other than cigarettes. Other commercial tobacco products include smokeless tobacco (e.g., chew tobacco, snus), dissolvable tobacco (e.g., sticks, strips, and tablets), orbs, water pipes (hookahs), cigars, cigarillos, clove cigars, and electronic cigarettes.
Why this indicator is useful	Smokeless tobacco initiation has continued to increase in recent years for both youth and young adults.[1] Approximately half of smokeless tobacco users try the product before the age of 16.[2] In addition to the direct health consequences of smokeless tobacco, its use also has been associated with initiation of weekly smoking.[3] Future monitoring of the use of other commercially available tobacco products, including emerging products, is needed.[1]
Example data source(s)	National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ National Adult Tobacco Survey (NATS), 2012–2013 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** How old were you when you first tried smoking a cigar, cigarillo, or little cigar even one or two puffs? _____ How old were you when you used chewing tobaccos, snuff, or dip for the first time? _____ **From NATS** How old were you when you first smoked a cigarette, even if only one or two puffs? _____ How old were you when you first smoked any tobacco product other than cigarettes, even if only one or two puffs? _____ How old were you when you first tried any smokeless tobacco product, such as chewing tobacco, snuff, dip, snus, or dissolvable tobacco? _____
Comments	Evaluators may want to capture and report those other commercially available tobacco products most pertinent to unique state and local markets.

Rating

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

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Indicator 1.9.c

Proportion of Young People Who Report Never Having Tried a Tobacco Product

KOI 2005	1.13.2 Revised Title (Previously: "Proportion of young people who report never having tried a cigarette")
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced initiation of tobacco use
What to measure	Proportion of young people who have never tried smoking or using any other tobacco products
Why this indicator is useful	Almost one-third of individuals who have ever tried smoking a cigarette become dependent on smoking.[1] Reducing the number of youth who experiment with tobacco will decrease the number who become established tobacco users.[2,3] Given that the tobacco industry is diversifying its tobacco product mix, monitoring experimentation across many product types as well as the proportion of young people who have never tried any tobacco product will continue to be important for program and evaluation planning.[4]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/ CDC Youth Risk Behavior Surveillance System (YRBSS), 2011 Information available at: http://www.cdc.gov/healthyyouth/yrbs/index.htm National Adult Tobacco Survey (NATS), 2010
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** Have you ever tried smoking cigars, cigarillos, or little cigars, even one or two puffs? ☐ Yes ☐ No Have you ever used chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen, even just a small amount? ☐ Yes ☐ No Have you ever tried smoking tobacco in a pipe, even one or two puffs? ☐ Yes ☐ No Have you ever tried smoking any of the following, even one or two puffs: ☐ I have never smoked bidis (small brown cigarettes wrapped in a leaf) or kreteks (clove cigarettes) ☐ Bidis ☐ Kreteks ☐ I have tried both bidis and kreteks Which of the following tobacco products have you ever tried, even just one time? ☐ Roll-your-own cigarettes ☐ Flavored cigarettes, such as Camel Crush ☐ Clove cigars ☐ Flavored little cigars ☐ Smoking tobacco from a hookah or a waterpipe ☐ Snus, such as Camel or Marlboro Snus ☐ Dissolvable tobacco products, such as Ariva, Stonewall, Camel orbs, Camel sticks, or Camel strips

	☐ Electronic cigarettes or E-cigarettes, such as Ruyan or NJOY ☐ Some other new tobacco products not listed here ☐ I have never tried any of the products listed above or any new tobacco product **From YRBSS** Have you ever tried cigarette smoking, even one or two puffs? ☐ Yes ☐ No **From NATS** Have you ever tried cigarette smoking, even one or two puffs? ☐ Yes ☐ No Have you ever tried chewing tobacco, snuff, or dip, such as Skoal, Copenhagen, Grizzly, Levi Garrett, Red Man, or Day's? ☐ Yes ☐ No ☐ Don't know/Not sure ☐ Refused Have you ever tried snus, even just one time in your entire life? ☐ Yes ☐ No ☐ Don't know/Not sure ☐ Refused 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
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 10

Reduced Tobacco-Use Prevalence Among Young People

According to the 2012 Surgeon General's Report on tobacco use among youth and young adults, one-fourth (23.2%) of U.S. high school seniors currently smoke cigarettes (smoked in the past 30 days).[1] More than one-third of young adults in the United States aged 18 to 25 currently smoke cigarettes (34.2%), the highest prevalence of any age group.[1] One in 10 high school males currently use smokeless tobacco, whereas 15.0% of high school males smoke cigars.[1] Twelve percent of young adult males use smokeless tobacco, and 16.6% currently smoke cigars.[1] Female youth and young adults use smokeless tobacco and cigars at much lower rates than their male counterparts.[1] Concurrent use of multiple tobacco products is common in some subgroups of youth; indeed, fewer than half of high school male tobacco users report using only a single product in the past 30 days.[1] Heavy smoking has declined dramatically in this group over the past several decades, but in 2010 prevalence of light smoking (less than one cigarette per day in the past 30 days) was 8.5% among high school seniors, and intermittent smoking (one to five cigarettes per day in the past 30 days) was 6.1%.[1]

These prevalence rates translate to approximately 4.3 million high school students and about 984,000 middle school students using any tobacco product (including cigarettes, smokeless tobacco, and cigars).[1] Additionally, almost 14 million young adults used a tobacco product within the past month.[1] Dual or poly-tobacco use among youth is concerning, as the tobacco industry has diversified its product offerings to introduce novel tobacco products to the market that can be used where smoking is not allowed.[1] These include dissolvable and smokeless tobacco products as well electronic cigarettes that come in a variety of flavors that could appeal to youth and young adults.[1]

Brand preference for tobacco products begins in adolescence and carries over into adulthood. The most popular brands among youth and young adults also have the greatest market share in the United States: Marlboro (46%), Newport (22%), and Camel (12%).[1] Skoal and Grizzly are the most popular brands of moist snuff smokeless tobacco among youth and young adults, and Black & Mild is the most popular brand of cigar. These data are also consistent with market share for each type of product.[1]

Smoking during childhood and adolescence is associated with serious health problems, such as reduced lung function and impaired lung growth.[1] Smoking by young people also increases the likelihood that they will continue to smoke through adulthood, increasing their risk of tobacco-related diseases later in life, such as lung and other cancers, heart disease, and emphysema.[2] Duration of smoking is a determinant of risk for many tobacco-related cancers, and the mechanisms by which smoking causes cancer are first put in place with the initiation of active smoking, regardless of age. About one-third of youth smokers who continue smoking into adulthood will die prematurely from tobacco-related disease.[1]

The following indicators are associated with this outcome:

- **1.10.a** Prevalence of tobacco use among young people
- **1.10.b** Proportion of established young tobacco users

- **1.10.c** Type and brand preferences of young tobacco users
- **1.10.d** Proportion of poly-tobacco product use among young people
- **1.10.e** Level of tobacco use among young people

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Outcome 10

Reduced Tobacco-Use Prevalence among Young People

Indicator Rating
← ○ ◒ ◓ ● → better

Number	Indicator	Overall Quality low ⟷ high	Resources Needed	Strength of Evaluation Evidence	Utility	Face Validity	Accepted Practice
1.10.a	Prevalence of tobacco use among young people		$	●	●	●	●
1.10.b	Proportion of established young tobacco users		$	●	●	●	●
1.10.c	Type and brand preferences of young tobacco users		$	●	●	●	●
1.10.d	Proportion of poly-tobacco product use among young people		$	●	●	●	●
1.10.e	Level of tobacco use among young people		$	●	●	●	●

$ 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.

Indicator 1.10.a

Prevalence of Tobacco Use Among Young People

KOI 2005	1.14.1
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco-use prevalence among young people
What to measure	Proportion of young people who have smoked or used some type of other tobacco product at least 1 day during the previous 30 days
Why this indicator is useful	One-half of all long-term smokers, especially those who begin smoking in adolescence, will eventually die from their tobacco use.[1] Reducing tobacco use among youth decreases their chances of smoking as adults and consequent smoking-attributable morbidity and mortality.[2]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** During the past 30 days, on how many days did you smoke cigarettes? (Subsequent questions ask about other tobacco products, such as cigars, chewing tobacco, and snuff) ☐ 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 use chewing tobacco, snuff, or dip, [such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen]? ☐ 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 NATS** During the past 30 days, on how many days did you smoke cigarettes? Number of days _____ ☐ Don't know/Not sure ☐ Refused During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip? Number of days _____ ☐ Don't know/Not sure ☐ Refused During the past 30 days, on how many days did you use snus? Number of days _____ ☐ Don't know/Not sure ☐ Refused During the past 30 days, on how many days did you smoke cigars, cigarillos, or very small cigars that look like cigarettes? Number of days _____ ☐ Don't know/Not sure ☐ Refused During the past 30 days, on how many days did you smoke tobacco in a water pipe? Number of days _____ ☐ Don't know/Not sure ☐ Refused During the past 30 days, on how many days did you smoke tobacco in a pipe other than a water pipe? Number of days _____ ☐ Don't know/Not sure ☐ Refused

Comments	To gather more complete data on tobacco use, evaluators can also ask questions about the use of other tobacco products, such as smokeless tobacco, bidis, small cigars, and loose tobacco (roll-your-own).

Rating

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

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Indicator 1.10.b

Proportion of Established Young Tobacco Users

KOI 2005	1.14.2
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco-use prevalence among young people
What to measure	Proportion of young people who smoked 100 cigarettes or more during their lifetimes
Why this indicator is useful	Youth who are established smokers are at high risk of becoming addicted to cigarettes and continuing to smoke as adults.[1] Young people who are nicotine dependent are more likely to become daily smokers and to increase their smoking intensity over time.[2-4]
Example data source(s)	National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**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 About how many cigarettes have you smoked in your entire life? ☐ I have never smoked cigarettes, not even one or two puffs ☐ 1 or more puffs but never a whole cigarette ☐ 1 cigarette ☐ 2 to 5 cigarettes ☐ 6 to 15 cigarettes (about 1/2 a pack total) ☐ 16 to 25 cigarettes (about 1 pack total) ☐ 26 to 99 cigarettes (more than 1 pack, but less than 5 packs) ☐ 100 or more cigarettes (5 or more packs) **From 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 ☐ Not at all ☐ Don't know ☐ Refused
Comments	To gather more complete data on tobacco use, evaluators can also ask questions about the use of other tobacco products, such as smokeless tobacco, bidis, small cigars, hookah, e-cigarettes, and loose tobacco (roll-your-own).
Rating	 Overall quality low ⟷ high Resources needed: $ Strength of evaluation evidence: ● Utility: ● Face validity: ● Accepted practice: ● ← ○ ◒ ◒ ● → better

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Indicator 1.10.c

Type and Brand Preferences of Young Tobacco Users

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco-use prevalence among young people
What to measure	Type and brand of tobacco products young people used in the past 30 days
Why this indicator is useful	Research suggests a link between exposure to tobacco advertising and brand preference.[1,2] Knowing the brand preference of young people can highlight why they are influenced to start smoking and what makes them continue to smoke, and provides information that can be incorporated into targeted mass media campaigns to counter industry messages and reduce smoking initiation.[3] Brand preference among youth and young adults is aligned with market share data (i.e., the top preferred brands among these populations are the most widely sold brands in the United States).[4] Knowing tobacco type and brand preferences of young tobacco users helps tobacco control programs tailor their prevention messages for mass-reach health communication efforts, identify the need for youth access and related interventions in the retail setting, and also provides insight into receptivity to tobacco industry advertising, which in turn, predicts initiation among youth.[4]
Example data source(s)	National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SearchResults.aspx National Survey on Drug Use and Health (NSDUH), 2009
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**From NYTS** In the past 30 days, which of the following products have you used on at least one day? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ Roll-your-own cigarettes ☐ Flavored cigarettes, such as Camel Crush ☐ Clove cigars ☐ Flavored little cigars ☐ Smoking tobacco from a hookah or a water pipe ☐ Snus, such as Camel or Marlboro Snus ☐ Dissolvable tobacco products, such as Ariva, Stonewall, Camel orbs, Camel sticks, or Camel strips ☐ Electronic cigarettes or E-cigarettes, such as Ruyan or NJOY ☐ Some other new tobacco products not listed here During the past 30 days, what brand of cigarettes did you usually smoke? (CHOOSE ONLY ONE ANSWER) ☐ I did not smoke cigarettes during the past 30 days ☐ Camel ☐ Kool ☐ Marlboro ☐ Parliament ☐ Some other brand not listed here ☐ I did not smoke a usual brand ☐ American Spirit ☐ GPC, Basic, or Doral ☐ Lucky Strike ☐ Newport ☐ Virginia Slims

From NATS

During the past 30 days, that is since _____, what brand of cigarettes did you buy most often?

During the past 30 days, that is since _____, what brand of cigarettes did you smoke most often?

During the past 30 days, that is since _____, what brand of smokeless tobacco did you use most often?

From NSDUH

During the past 30 days, what type of cigarettes did you smoke most often?

☐ Lights ☐ Ultra lights ☐ Mediums ☐ Full flavor

Were the cigarettes you smoked during the past 30 days menthol?

☐ Yes ☐ No

During the past 30 days, what brand of cigar did you smoke most often?

☐ Al Capone	☐ Antonio y Cleopatra	☐ Arturo Fuente
☐ Backwoods	☐ Black & Mild	☐ Blackstone
☐ Captain Black	☐ Cohiba	☐ Cuesta-Rey
☐ Dutch Masters	☐ El Producto	☐ Garcia y Vega
☐ Havatampa	☐ King Edward	☐ La Corona
☐ Little Nippers	☐ Macanudos	☐ Montecristo
☐ Muriel	☐ Partagas	☐ Phillies
☐ Punch	☐ Romeo y Julieta	☐ Swisher Sweets
☐ Thompson	☐ Tijuana Smalls	☐ White Owl
☐ Winchester	☐ A brand not on this list	

During the past 30 days, what brand of snuff did you use most often?

☐ Copenhagen	☐ Cougar	☐ Gold River
☐ Grizzly	☐ Happy Days	☐ Hawken
☐ Kodiak	☐ Red Seal	☐ Redwood
☐ Rooster	☐ Silver Creek	☐ Skoal
☐ Timber Wolf	☐ A brand not on this list	

During the past 30 days, what brand of chewing tobacco did you use most often?

☐ Beech-Nut	☐ Chattanooga Chew	☐ Day's Work
☐ Granger	☐ H.B. Scott	☐ Levi Garrett
☐ Red Fox	☐ Redman	☐ Taylor's Pride
☐ Totems	☐ Work Horse	☐ A brand not on this list

Comments

Note that the example survey questions expand beyond tobacco products and include nicotine devices.

Rating

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

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Indicator 1.10.d

Proportion of Poly-Tobacco Product Use Among Young People

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco-use prevalence among young people
What to measure	Proportion of young people who report having smoked on at least 1 day during the previous 30 days and who also report having used other tobacco products in the past 30 days
Why this indicator is useful	Internal tobacco industry documents outline the increasing importance of the development of smokeless tobacco products to offset reductions in smoking by promoting poly-tobacco use as a means for addressing clean indoor air laws.[1] New smokeless tobacco products (i.e., snus and dissolvable products containing nicotine) are being marketed to current smokers as a way of temporarily addressing smoke-free policies in public places.[2-5] More than half of male high school tobacco users report using more than one tobacco product.[2] Monitoring poly-tobacco product use among young people helps to assess important prevalence trends.
Example data source(s)	National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**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 In the past 30 days, which of the following products have you used on at least one day? (You can CHOOSE ONE ANSWER or MORE THAN ONE ANSWER) ☐ Roll-your-own cigarettes ☐ Flavored cigarettes, such as Camel Crush ☐ Clove cigars ☐ Flavored little cigars ☐ Smoking tobacco from a hookah or a waterpipe ☐ Snus, such as Camel or Marlboro Snus ☐ Dissolvable tobacco products, such as Ariva, Stonewall, Camel orbs, Camel sticks, or Camel strips ☐ Electronic cigarettes or E-cigarettes, such as Ruyan or NJOY ☐ Some other new tobacco products not listed here ☐ I have not used any of the products listed above or any new tobacco product During the past 30 days, on how many days did you smoke cigars, cigarillos, 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 use chewing tobacco, snuff, or dip, [such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen]?
☐ 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 NATS

During the past 30 days, on how many days did you smoke cigarettes?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you use snus?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke cigars, cigarillos, or very small cigars that look like cigarettes?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke tobacco in a water pipe?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke tobacco in a pipe other than a water pipe?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

Comments

Note that evaluators may choose to combine responses from multiple tobacco products to assess current poly-tobacco product use. Other tobacco products may include cigars and little cigars, smokeless tobacco products, dissolvable tobacco products, e-cigarettes, and hookah.

Rating

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

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Indicator 1.10.e

Level of Tobacco Use Among Young People

KOI 2005	New
Goal area	Preventing initiation of tobacco use
Outcome box	Reduced tobacco-use prevalence among young people
What to measure	Level of reported tobacco use during the past 30 days
Why this indicator is useful	The more an individual smokes, the more likely he or she is to become nicotine dependent.[1] Young adults reporting daily smoking are more likely to feel addicted and have trouble quitting smoking than those reporting intermittent smoking.[2] Capturing the level of tobacco use among young people is important to understanding the progression to addiction and the subsequent impact on prevalence and smoking-attributable morbidity and mortality.
Example data source(s)	National Youth Tobacco Survey (NYTS), 2011 Information available at: http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm National Adult Tobacco Survey (NATS), 2010 Information available at: http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
Population group(s)	Youth aged younger than 18 years and young adults aged 18 to 25 years
Example survey question(s)	**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 the days you smoked, how many cigarettes did you smoke per day? ☐ I did not smoke cigarettes during the past 30 days ☐ Less than 1 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 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 use chewing tobacco, snuff, or dip, [such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen]? ☐ 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 NATS

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

☐ EVERY DAY,
☐ SOME DAYS,
☐ NOT AT ALL,
☐ DON'T KNOW
☐ Refused

During the past 30 days, on how many days did you smoke cigarettes?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

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

During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you use snus?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke cigars, cigarillos, or very small cigars that look like cigarettes?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke tobacco in a water pipe?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

During the past 30 days, on how many days did you smoke tobacco in a pipe other than a water pipe?
Number of days _____ ☐ Don't know/Not sure ☐ Refused

Comments

None noted

Rating

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

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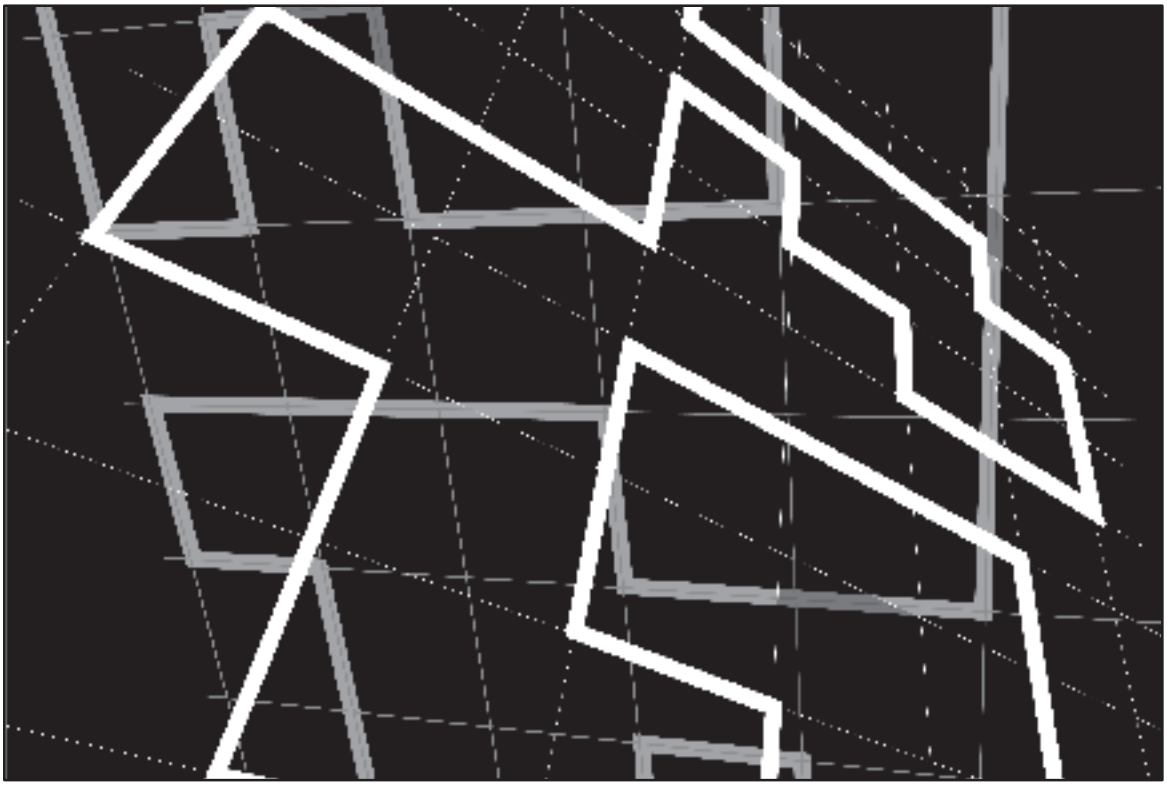
Appendices and Glossary



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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[4-8]
- The Guide to Community Preventive Services: Tobacco Use Prevention and Control[9]

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Expert Panel Members

We thank the following panel of expert members (in alphabetical order) who rated the indicators. Without their generosity in sharing their expertise and donating their time, this publication would not have been possible.

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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 1: Preventing Initiation of Tobacco Use Among Young People 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 1 Outcome Indicators

Revising the Candidate List of Indicators

In 2009, an initial step taken to update the Goal 1 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 1 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 2009. We also conducted targeted literature searches via PubMed. These efforts yielded 120 peer-reviewed articles and reviews, two Surgeon General Reports, three NCI Monographs, 18 *Morbidity and Mortality Weekly Report* articles, two state tobacco control evaluation reports, and a variety of NCI conference statements and practice guidelines.

The 2009 literature review identified the need for additional and more nuanced indicators related to reducing tobacco industry influence on consumers and potential consumers, as well as efforts by the industry to influence voters and policy makers. The issue of tobacco industry influence became more salient with the passage of the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) in 2009. The Office on Smoking and Health (OSH) initiated the "Tobacco Industry Monitoring Summit" in the summer of 2010 to encourage information exchange related to the topic among a distinguished group of tobacco control research and practice experts. These experts provided individual advice and recommendations on opportunities and options for monitoring the actions and influences of the tobacco industry. The meeting addressed six primary topic areas related to tobacco industry influence:

- Advertising
- Pricing
- Impact on the Consumer
- Impact on the Public
- Retail Distribution
- Alternative Distribution

The Summit provided a wealth of information, including 47 individual recommendations for surveillance and evaluation action. These were synthesized and systematically reviewed by an OSH multidisciplinary workgroup, which rated the recommendations on several criteria: alignment with OSH strategic priorities, potential impact, longevity, timeliness, and feasibility. High priority recommendations and information from the 2009 literature review were used to modify the existing goal area logic models and Goal 1 indicator lists. Ultimately, 23 new, candidate indicators were added to the Goal 1 list, and 15 indicators from KOI 2005 were removed.

The draft list of candidate indicators was sent to six external reviewers for informal feedback. As part of this brief review activity, we also asked reviewers to consider the revised Goal 1 logic model and provide comments regarding gaps or errors in the implied logic; missing elements, issues, or indicators; confusing language or terminology; and duplicative indicators. Based on this feedback, we made additional revisions to the list of indicators and developed 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 1. Of the 16 invited

experts, 12 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 on pages 216 through 219 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. The resources needed for data collection and analysis are less 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

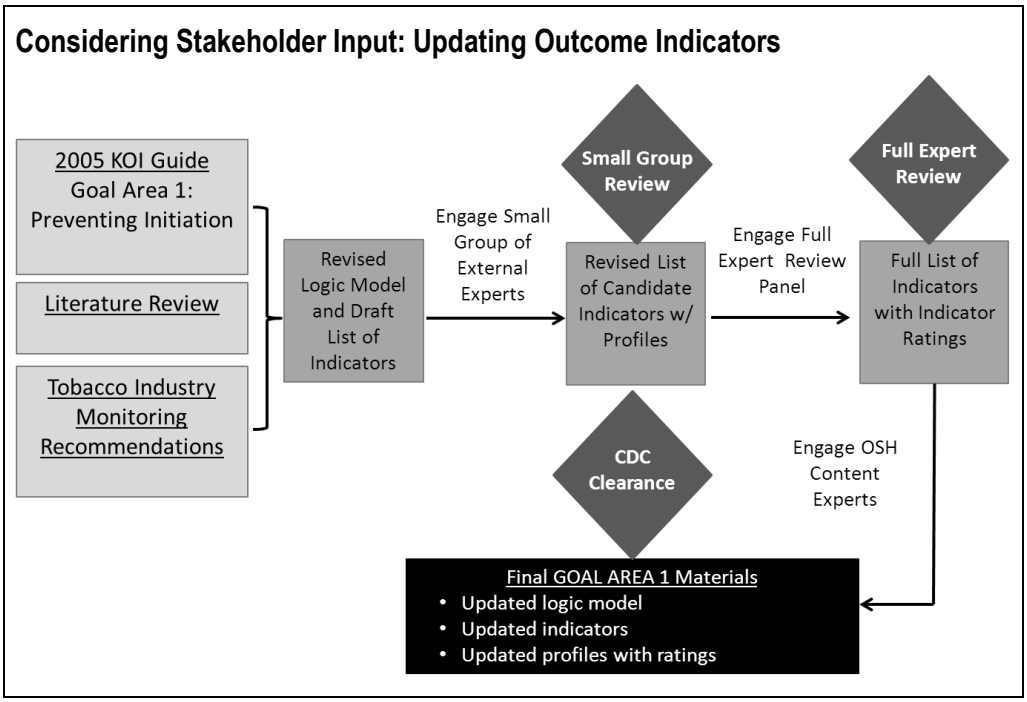
- comment on the data sources and survey questions that CDC had selected for each proposed indicator,
- suggest alternative data sources and questions,

- 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

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 (1999–2011) national data sources, including federal sources, such as the National Adult Tobacco Survey (NATS), National Youth Tobacco Survey (NYTS), STATE System, CDC OSH News Media Surveillance System, Youth Risk Behavior Survey (YRBS), School Health Profiles, National Survey on Drug Use and Health (NSDUH) (Substance Abuse and Mental Health Services Administration [SAMHSA]), Synar reports, and Federal Trade Commission reports; and non-federal sources, including Legacy Media Tracking Survey, Center for Responsive Politics, National Institute on Money in State Politics, and state tobacco control program evaluation reports.



Rationale statements and supporting references for each candidate indicator were updated using the 2009 literature review as well as topic-specific PubMed searches for more recent evidence published since 2009.

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 1.7.h: Amount of tobacco industry contributions to institutions and groups.
- 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 1.9.a: Average age at which young people first smoked a whole cigarette. 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 63 candidate indicators. After reviewing the expert panel ratings and comments carefully, five indicators were added 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 four indicators and merged two indicators with two other similar indicators. Thus, this publication contains information on a total of 62 Goal Area 1 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 38 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 2011 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.

There have been substantial changes and advances in tobacco control since the release of the KOI Guide. The passage of the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) in 2009 expanded federal, state, and local governments' ability to regulate tobacco. The Tobacco Control Act provides an opportunity for expanding tobacco prevention and control policy efforts, especially those focused on reducing tobacco industry influences through marketing, pricing, and promotion. Given these changes in the national policy environment, OSH recognized the need to revisit the key outcome indicators.

As a first step, indicators in OSH Goal Area 1 (Preventing Initiation of Tobacco Use) have been reviewed and revised internally by OSH staff and expert consultants. During this process, some existing key outcome indicators have been removed, others have been substantially revised, and several new indicators have been added. Our intention is to implement an external expert review process similar to what was used during the initial indicator development effort.

The updated KOI Guide will serve the same functions as the initial report, including

- serving as a companion to OSH's *Best Practices for Comprehensive Tobacco Control Programs* and *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*;
- describing key outcome indicators for evaluation of statewide, comprehensive tobacco control programs, and suggesting appropriate data sources and measures for these indicators;
- encouraging states to use consistent evaluation measures and comparable data sources; and
- guiding the provision of consistent 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, including those who participated in the OSH Tobacco Industry Monitoring Summit that was held in July 2010. Each of the proposed indicators included in this document is linked to a component of the revised Goal Area 1 logic model.

Internal indicator selection decisions were guided by a need to highlight key indicators for planning and evaluating comprehensive tobacco control programs. Linkages connecting antecedent and consequent logic model components (boxes) and nested indicators were reviewed for evidence of association. An initial list of draft indicators was sent to a handful of external experts for preliminary review and comment, and their feedback was used to update the indicator list and inform indicator profile development.

As part of the update process, each of the original KOI Guide Goal 1 indicators and their respective profiles were reviewed internally. 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 at present 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 for use in planning and evaluating comprehensive state tobacco control programs, and the data sources and measures that would be most useful for tracking these indicators. Reviewers are 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.
- Offer additional 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 detail 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
- Resources (funds, time, and effort) required to collect and analyze indicator data
- Utility
- Face validity
- Uniqueness
- Conformity with accepted practice
- Overall quality

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

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:

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **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 spaces provided. The electronic copy of the review materials limits where you may add information; however, if you prefer marking up a hard copy, you may print the document and add handwritten notes anywhere on the rating forms to provide additional information, references, or other documentation, as necessary. If you choose to print the materials and write your responses on the rating forms, please contact OSH to arrange for return of the materials. If you are using the electronic version of the rating forms, please save a copy and return as an e-mail attachment.

For More Information

If you have any questions regarding the review process or content of the materials, please contact Erika Fulmer at OSH by telephone (770-488-5334) or e-mail (**efulmer@cdc.gov**). Thank you very much for your time and effort.

[RATING FORM]

Proposed Indicator: 15.d Level of Tobacco Use Among Young People

Please darken the square that best reflects your opinion:

1. Scientific literature supports use of the indicator:		2. Cost (in money, time, other resources) required to collect and analyze indicator data:		3. Utility of the indicator to answer key program effectiveness and impact:	
Strong support	☐	Low cost	☐	Strong utility	☐
Moderate support	☐	Moderate cost	☐	Moderate utility	☐
Minimal support	☐	High cost	☐	Minimal utility	☐
No support	☐	Very high cost	☐	No utility	☐
Don't know	☐	Don't know	☐	Don't know	☐
4. How face valid the indicator would be to policy- and decision-makers:		**5. Contributes unique information:**		**6. How consistent the indicator is with accepted tobacco control practice:**	
Highly valid	☐	Unique	☐	Highly consistent	☐
Moderately valid	☐	Not Unique	☐	Moderately consistent	☐
Minimally valid	☐	**IF NOT UNIQUE, Write Number of Redundant Indicator**		Minimally consistent	☐
Not at all valid	☐			Not at all consistent	☐
Don't know	☐			Don't know	☐

7. Overall quality of the indicator: LOW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 HIGH

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

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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 (ATS) : Questions Recommended for Specific Purposes, Section F: Policy Issues, 2009	1.1.d	► http://apps.nccd.cdc.gov/QIT/QuickSearch.aspx
American College Health Association (ACHA) College Campus Tobacco Cessation and Prevention Survey, 2005	1.2.a	► http://www.acha.org/
American Lung Association's State Legislated Actions on Tobacco Issues (SLATI)	1.3.d	► http://slati.lungusa.org
Americans for Nonsmokers' Rights (ANR)	1.3.b; 1.3.c; 1.3.d; 1.3.g; 1.4.a	► http://www.no-smoke.org ► See "Policy tracking system"
Behavioral Risk Factor Surveillance System (BRFSS), Tobacco Use Prevention Module, 2000	1.1.d	► http://www.cdc.gov/brfss/
California Adult Tobacco Survey (CATS), 2008	1.1.c	► http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPCaliforniaAdultTobaccoSurvey2008.pdf
California Adult Tobacco Survey (CSTS), 2011	1.1.e	► http://www.cdph.ca.gov/data/surveys/Pages/CaliforniaTobaccoSurveys.aspx
California Tobacco Survey (CTS), 1999	1.1.d	► http://libraries.ucsd.edu/locations/sshl/data-gov-info-gis/ssds/guides/tobacco-surveys.html
California Tobacco Survey (CTS), 2005	1.1.d	► http://libraries.ucsd.edu/locations/sshl/data-gov-info-gis/ssds/guides/tobacco-surveys.html
California Tobacco Control Program: Enforcement Survey, 2008	1.3.e; 1.4.g	► http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPEnforcementReport08-05.pdf

Data source	Indicator number	For more information
California Tobacco Industry Monitoring Evaluation: Project SMART Money	1.4.h; 1.7.b	▶ http://tobaccocontrol.bmj.com/content/19/Suppl_1/i21.full ▶ See "Tobacco industry monitoring system."
California Tobacco Use Prevention Education Evaluation: Teacher Survey, 2003	1.2.b	▶ http://www.dhs.ca.gov/ps/cdic/ccb/TCS/html/Evaluation_Resources.htm
California Tobacco Use Prevention Evaluation	1.2.d	▶ http://www.cdph.ca.gov/programs/tobacco/Documents/CTCPTUPE07-08-sm.pdf
Campaign For Tobacco-Free Kids (CTFK)	1.8.a	▶ http://tobaccofreekids.org/research/factsheets
CDC School Health Profiles: School Principal Questionnaire (Profiles), 2010	1.2.a; 1.2.b	▶ http://www.cdc.gov/healthyyouth/profiles/
CDC School Health Profiles: School Teacher Questionnaire (Profiles), 2010	1.2.b	▶ http://www.cdc.gov/healthyyouth/profiles/
CDC State Tobacco Activities Tracking and Evaluation (STATE) system	1.3.b; 1.3.d; 1.3.h; 1.4.a; 1.8.a	▶ http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx
Center for Responsive Politics (CRP)	1.7.h; 1.7.i	▶ http://www.opensecrets.org
Environmental scan of social media Web sites for industry presence and pro-tobacco content; monitoring and content analysis of brand and corporate Web sites for age identification requirements and messaging	1.7.e	▶ Social media monitoring tools can be used for surveillance. For example, keywords can be used to monitor product and Web site mentions on Twitter, blogs, and other social media sites.
Environmental scan of tobacco advertising in retail outlets	1.7.a	▶ Operation Storefront: Youth Against Tobacco Advertising and Promotion Initiative ▶ http://www.dhs.ca.gov/tobacco/html/Evaluation_Resources.htm
Event sponsorship tracking system	1.7.b	▶ Rosenberg NJ, Siegel M. Use of corporate sponsorship as a tobacco marketing tool: a review of tobacco industry sponsorship in the USA, 1995–99. *Tobacco Control*. 2001;10(3):239–46. ▶ Project SMART Money http://www.ttac.org/enews/mailer09-30-03full.html#LinkF
FDA, Compliance Check Inspection of Tobacco Product Retailers	1.3.e; 1.4.g; 1.6.c	▶ http://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm
Federal Election Commission (FEC)	1.7.i	▶ http://www.fec.gov

Data source	Indicator number	For more information
International Tobacco Control Survey (ITC), 2009	1.1.f	▶ http://www.itcproject.org/
Legacy Media Tracking Survey (LMTS), 2003	1.5.a; 1.5.c	▶ http://www.legacyforhealth.org/
Legacy Media Tracking Survey (LMTS), 2004	1.1.a; 1.1.b	▶ http://www.legacyforhealth.org/
Massachusetts Adult Tobacco Survey (MTS), 2005	1.6.b	▶ http://apps.nccd.cdc.gov/QIT/QuickSearch.aspx
Media Tracking Service (e.g., clipping service)	1.7.f	▶ http://kantarmediana.com/intelligence
Minnesota Adult Tobacco Survey (MATS), 2007	1.1.f	▶ http://www.mntobacco.nonprofitoffice.com/
Mississippi Social Climate Survey of Tobacco Control (SCS-TC), 2011	1.1.c	▶ http://surveillance.mstobaccodata.org/mississippi-tobacco-control-data/social-climate-of-tobacco-adult-survey/
Monitoring the Future (MTF), 2010	1.6.b	▶ http://monitoringthefuture.org/
National Adult Tobacco Survey (NATS), 2010	1.5.f; 1.8.b; 1.9.a; 1.9.c; 1.10.a; 1.10.b; 1.10.c; 1.10.d; 1.10.e	▶ http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
National Adult Tobacco Survey (NATS), 2012-2013	1.1.b; 1.6.d; 1.6.g; 1.8.c; 1.9.b	▶ http://apps.nccd.cdc.gov/QIT/SurveyDetails.aspx?SurveyId=30
National Survey on Drug Use and Health (NSDUH), 2009	1.1.f; 1.10.c	▶ http://www.samhsa.gov/data/NSDUH.aspx
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2000	1.1.f	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2002	1.2.c	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2004	1.6.e	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2006	1.1.f	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2009	1.1.f; 1.7.e	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/

Data source	Indicator number	For more information
National Youth Tobacco Survey (NYTS): CDC Recommended Questions: Core, 2011	1.1.e; 1.2.c; 1.2.d; 1.2.e; 1.5.a; 1.5.b; 1.5.e; 1.5.f; 1.6.d; 1.6.f; 1.6.g; 1.6.h; 1.7.c; 1.9.a; 1.9.b; 1.9.c; 1.10.a; 1.10.b; 1.10.c; 1.10.d;1.10.e	▶ http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/
New York State's Retail Advertising Tracking Study (RATS)	1.7.a; 1.8.c	▶ http://www.health.ny.gov/prevention/tobacco_control/docs/tobacco_marketing_exposure_rpt.pdf
Policy tracking system	1.3.a; 1.3.b; 1.3.c; 1.3.d; 1.3.f; 1.3.g; 1.4.a; 1.4.b; 1.4.c; 1.4.d; 1.4.e; 1.4.f	▶ Americans for Nonsmokers' Rights (http://www.no-smoke.org) ▶ State Legislated Actions on Tobacco Issues (SLATI) online database (http://slati.lungusa.org)
Public records of political contributions	1.7.h; 1.7.i	▶ Collected by the Office of State Secretary or equivalent at local level in each state
Retail observation	1.8.b; 1.8.c; 1.8.d	▶ Operation Storefront: Youth Against Tobacco Advertising and Promotion Initiative ▶ http://www.dhs.ca.gov/tobacco/html/Evaluation_Resources.htm
Scanner data	1.8.b; 1.8.c	
Scene Smoking, "Thumbs Up! Thumbs Down!"	1.7.d	▶ http://www.scenesmoking.org/frame.htm
School district/board or school-level records of curricula adopted or sponsored programs and activities	1.7.g	▶ Surveys of school or school district administrators
State departments of revenue	1.8.a	▶ State tax sales data, tobacco product excise taxes
Substance Abuse and Mental Health Services Administration (SAMHSA) compliance checks	1.6.c	▶ http://prevention.samhsa.gov/tobacco/guidance.asp
Tobacco industry fiscal reports	1.7.g; 1.7.h	
Tobacco industry monitoring system	1.4.h	▶ http://tobaccocontrol.bmj.com/content/19/Suppl_1/i21.full ▶ See "California Tobacco Industry Monitoring"
Print, Internet Media Monitoring: Kantar Media Intelligence's Stradegy™ database	1.7.c	▶ http://kantarmediana.com/intelligence
Youth Risk Behavior Surveillance System (YRBSS), 2011	1.9.a; 1.9.c	▶ http://www.cdc.gov/HealthyYouth/yrbs/index.htm

References

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.
3. Johnston LD, O'Malley PM, Bachman JG. Monitoring the Future national survey results on drug use, 1975–2001. Volume I: Secondary school students (NIH Publication No. 02-5106). Bethesda, MD: National Institute on Drug Abuse; 2002.

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Glossary and Acronyms

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

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.

Buy-downs
The [tobacco] manufacturer offers a retailer a rebate for sales of a particular brand of tobacco product. The retailer is given the rebate either for selling a specific quantity of that product or for selling a minimum quantity of that product over a predetermined period of time. [1]

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.

Cognitive-behavioral interventions
Activities based on the premise that people can learn new behaviors to use in response to stimuli and that the thought processes that serve as intermediate steps between stimuli and behaviors can be altered, thereby influencing behavior. Basic applications of this theory for tobacco-use cessation are

- establishing self-awareness of tobacco use,
- providing the motivation to quit,
- preparing to quit, and
- providing strategies to maintain abstinence.

[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

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.

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
A person who gives a positive answer to the question, "Have you tried cigarette smoking, even one or two puffs?"

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)
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 33 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 33 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.

Morbidity
Disease or disease rate.

NCI
National Cancer Institute.

Never-smoker
A person who gives a negative answer to the question, "Have you tried cigarette smoking, even one or two puffs?"

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.

Opinion leader survey
Collection of information (data) from leaders in the community.

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 29 for an example).

Outputs

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

Payers

Health insurance organizations that reimburse providers for services when coverage is purchased by companies, government agencies, or other consortia. Also self-insured companies, government agencies, or other consortia that purchase health care benefits for a group of individuals and use an insurer as a fiscal intermediary to process claims and reimburse for services.

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.

Price discounts

[Tobacco] manufacturers' reductions in the prices paid by retailers and/or wholesalers for tobacco products, who in turn reduce the prices to consumers, such as off-invoice discounts, buy-downs, and voluntary price reductions.[2]

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[2] Ibid.

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.

Purchaser
Purchasers include companies, government agencies, or other consortia that purchase health care benefits for a group of individuals.

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.

Self-service tobacco sales
Sales that allow customers to handle tobacco products before purchasing them.

Slotting fees
Payments for stocking, shelving, displaying and merchandising [tobacco] brands in a certain manner.[3]

Social source
A person or location from which tobacco products are obtained other than a tobacco product retailer.

Some-day smoker
A current smoker who gives a "smoked on some days" response.

[3] Ibid.

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.

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.

Theory of change

Intellectual framework for understanding the process of behavior change.

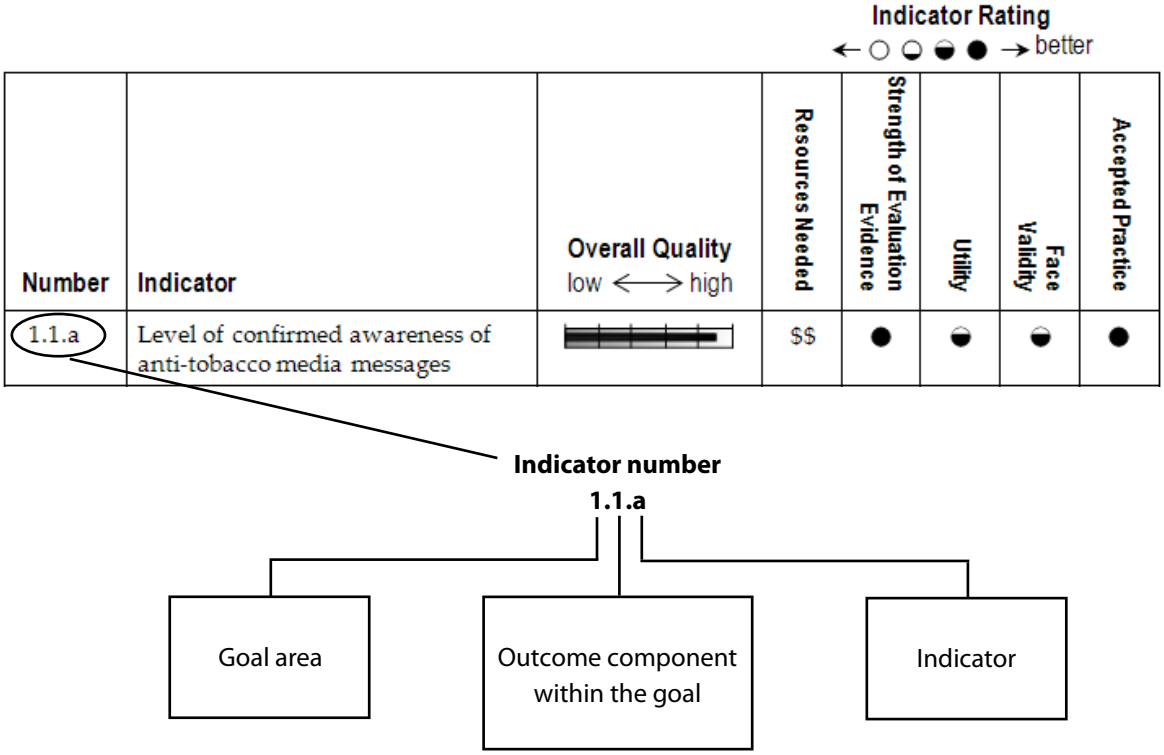
Utility

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 Tobacco Use, Attitudes Against Tobacco Use, and Support for Policies to Reduce Tobacco Use Initiation



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

Resources needed: 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 control programs and considers conflicting evidence as well as concerns regarding the methodology of supporting studies.

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 policy and decision makers who may be users of tobacco control program evaluation results.

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