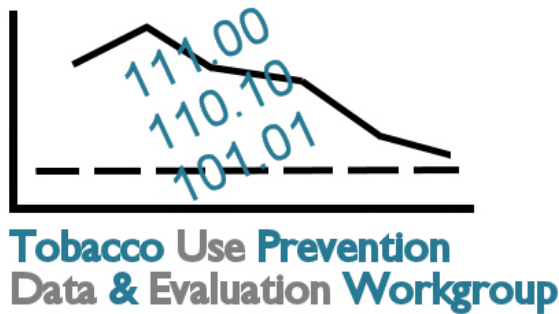


Goal Area 1

Preventing Initiation of Tobacco Use Among Young People



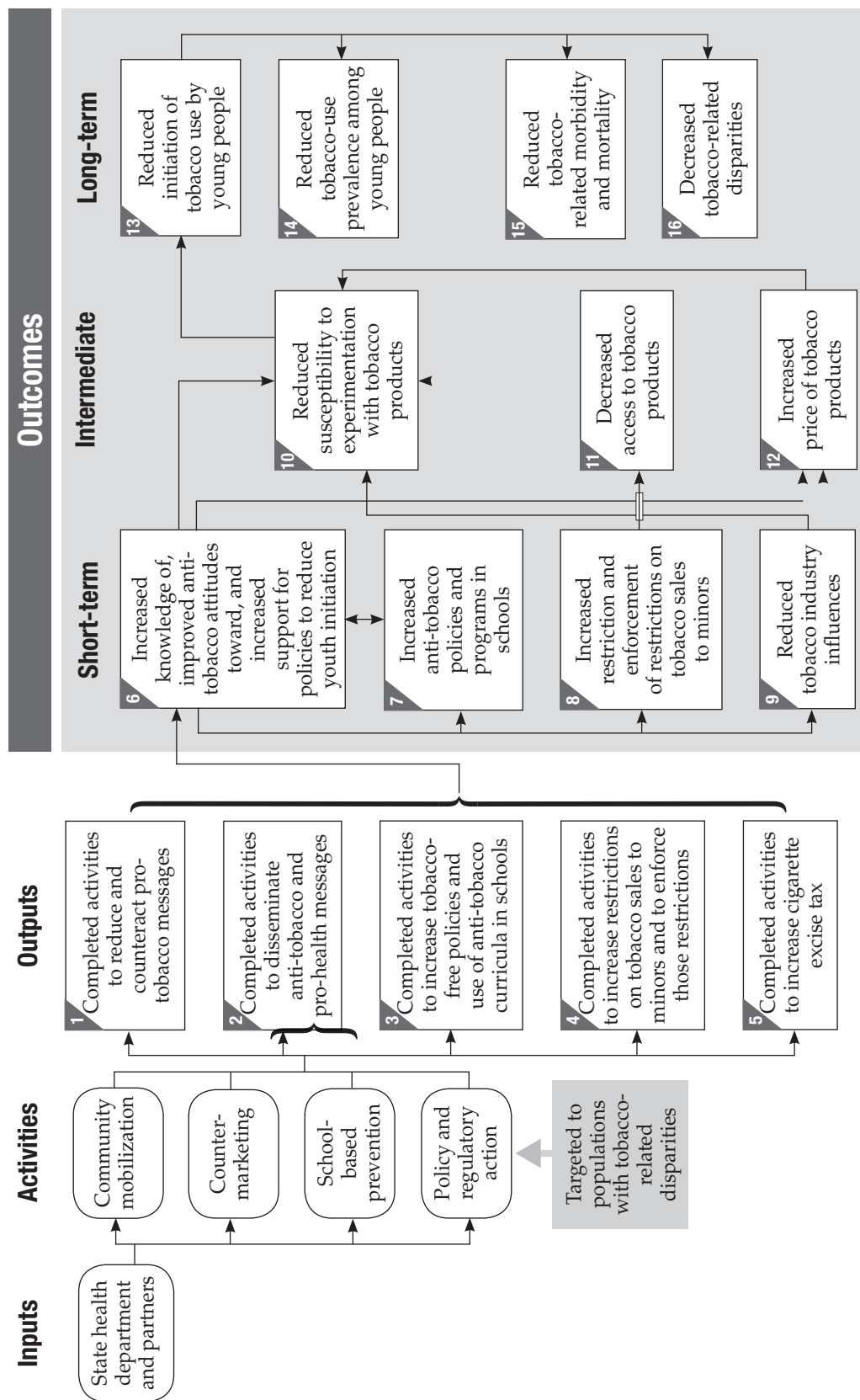
This document contains excerpts from:

Starr G, Rogers T, Schooley M, Porter S, Wiesen E, Jamison N. *Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs*. Atlanta, GA: Centers for Disease Control and Prevention; 2005.

Note: Only a small portion of the references and citations from the complete document are included in these excerpts.

Goal Area 1

Preventing Initiation of Tobacco Use Among Young People



Preventing Initiation of Tobacco Use Among Young People □

Short-term Outcomes

■ □ **Outcome 6: Increased knowledge of, improved anti-tobacco attitudes toward, and increased support for policies to reduce youth initiation**

- ▶ 1.6.1 □ Level of confirmed awareness of anti-tobacco media messages
- ▶ 1.6.2 □ Level of receptivity to anti-tobacco media messages
- ▶ 1.6.3 □ Proportion of students who would ever wear or use something with a tobacco company name or picture
- ▶ 1.6.4 □ Level of support for policies, and enforcement of policies, to decrease young people's access to tobacco
- ▶ 1.6.5 □ Level of support for increasing excise tax on tobacco products
- ▶ 1.6.6 □ Level of awareness among parents about the importance of discussing tobacco use with their children
- ▶ 1.6.7^{NR} □ Level of support for creating policies in schools
- ▶ 1.6.8^{NR} Proportion of young people who think that the cigarette companies try to get young people to smoke

■ **Outcome 7: Increased anti-tobacco policies and programs in schools** □

- ▶ 1.7.1 □ Proportion of schools or school districts reporting the implementation of 100% tobacco-free policies
- ▶ 1.7.2 □ Proportion of schools or school districts that provide instruction on tobacco-use prevention that meets CDC guidelines
- ▶ 1.7.3 □ Proportion of schools or school districts that provide tobacco-use prevention education in grades K–12
- ▶ 1.7.4 □ Proportion of schools or school districts that provide program-specific training for teachers
- ▶ 1.7.5 □ Proportion of schools or school districts that involve families in support of school-based programs
- ▶ 1.7.6 □ Proportion of schools or school districts that support cessation interventions for students and staff who use tobacco
- ▶ 1.7.7 □ Proportion of schools or school districts that assess their tobacco-use prevention program at regular intervals
- ▶ 1.7.8 □ Proportion of students who participate in tobacco-use prevention activities

- ▶ **1.7.9** Level of reported exposure to school-based tobacco-use prevention curricula that meet CDC guidelines
- ▶ **1.7.10** Perceived compliance with tobacco-free policies in schools
- ▶ **1.7.11** Proportion of schools or school districts with policies that regulate display of tobacco industry promotional items

■ **Outcome 8: Increased restriction and enforcement of restrictions on tobacco sales to minors**

- ▶ **1.8.1** □ Proportion of jurisdictions with policies that ban tobacco vending machine sales in places accessible to young people
- ▶ **1.8.2** □ Proportion of jurisdictions with policies that require retail licenses to sell tobacco products
- ▶ **1.8.3** □ Proportion of jurisdictions with policies that control the location, number, and density of retail outlets
- ▶ **1.8.4** □ Proportion of jurisdictions with policies that control self-service tobacco sales
- ▶ **1.8.5** □ Number of compliance checks conducted by enforcement agencies
- ▶ **1.8.6** □ Number of warnings, citations, and fines issued for infractions of public policies against young people's access to tobacco products
- ▶ **1.8.7** □ Changes in state tobacco control laws that preempt stronger local tobacco control laws

■ **Outcome 9: Reduced tobacco industry influences** □

- ▶ **1.9.1** □ Extent and type of retail tobacco advertising and promotions
- ▶ **1.9.2** □ Proportion of jurisdictions with policies that regulate the extent and type of retail tobacco advertising and promotions
- ▶ **1.9.3** □ Extent of tobacco advertising outside of stores
- ▶ **1.9.4** □ Proportion of jurisdictions with policies that regulate the extent of tobacco advertising outside of stores
- ▶ **1.9.5** □ Extent of tobacco industry sponsorship of public and private events
- ▶ **1.9.6** □ Proportion of jurisdictions with policies that regulate tobacco industry sponsorship of public events
- ▶ **1.9.7** □ Extent of tobacco advertising on school property, at school events, and near schools
- ▶ **1.9.8** □ Extent of tobacco advertising in print media

- ▶ **1.9.9** □ Amount and quality of news media stories about tobacco industry practices and political lobbying
- ▶ **1.9.10** □ Number and type of Master Settlement Agreement violations by tobacco companies
- ▶ **1.9.11** □ Extent of tobacco industry contributions to institutions and groups
- ▶ **1.9.12** □ Amount of tobacco industry campaign contributions to local and state politicians

Intermediate Outcomes

■ □ Outcome 10: Reduced susceptibility to experimentation with tobacco products

- ▶ **1.10.1** □ Proportion of young people who think that smoking is cool and helps them fit in
- ▶ **1.10.2** □ Proportion of young people who think that young people who smoke have more friends
- ▶ **1.10.3** □ Proportion of young people who report that their parents have discussed not smoking with them
- ▶ **1.10.4** □ Proportion of parents who report that they have discussed not smoking with their children
- ▶ **1.10.5** □ Proportion of young people who are susceptible never-smokers

■ Outcome 11: Decreased access to tobacco products

- ▶ **1.11.1** □ Proportion of successful attempts to purchase tobacco products by young people
- ▶ **1.11.2** □ Proportion of young people reporting that they have been sold tobacco products by a retailer
- ▶ **1.11.3** □ Proportion of young people reporting that they have been unsuccessful in purchasing tobacco products from a retailer
- ▶ **1.11.4** □ Proportion of young people reporting that they have received tobacco products from a social source
- ▶ **1.11.5** □ Proportion of young people reporting that they purchased cigarettes from a vending machine
- ▶ **1.11.6^{NR}** □ Proportion of young people who believe that it is easy to obtain tobacco products

■ Outcome 12: Increased price of tobacco products □

- ▶ **1.12.1** □ Amount of tobacco product excise tax

Long-term Outcomes

■ Outcome 13: Reduced initiation of tobacco use by young people

- ▶ 1.13.1 Average age at which young people first smoked a whole cigarette
- ▶ 1.13.2 Proportion of young people who report never having tried a cigarette

■ Outcome 14: Reduced tobacco-use prevalence among young people

- ▶ 1.14.1 Prevalence of tobacco use among young people
- ▶ 1.14.2 Proportion of established young smokers

Outcome 6

Increased Knowledge of, Improved Anti-tobacco Attitudes Toward, and Increased Support for Policies to Reduce Youth Initiation

The theory of change associated with preventing young people from starting to use tobacco begins with increasing their knowledge of the dangers of tobacco use, changing their attitudes toward tobacco use, and increasing public support for policies that reduce the likelihood that young people will use tobacco. The tobacco industry spends more than \$12.5 billion per year on marketing.¹ Adolescents are bombarded with pro-tobacco messages in and around retail stores, in magazines, in movies, and by smokers around them. Evidence shows that anti-tobacco media campaigns, when combined with other interventions, are effective in reducing tobacco use by adolescents.² 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.³ After one 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.³

In addition to changing young people’s attitudes toward tobacco use, it is necessary to increase adult support for implementing and enforcing policies that reduce the likelihood that young people will begin smoking. Such policies include increasing tobacco excise taxes, passing and enforcing strong laws that decrease young people’s access to tobacco, and implementing tobacco-free school policies. Policies such as these eventually create an environment that supports a smoke-free lifestyle among young people.

Listed below are the indicators associated with this outcome:

- 1.6.1 ☐ Level of confirmed awareness of anti-tobacco media messages
- 1.6.2 ☐ Level of receptivity to anti-tobacco media messages
- 1.6.3 ☐ Proportion of students who would ever wear or use something with a tobacco company name or picture
- 1.6.4 ☐ Level of support for policies, and enforcement of policies, to decrease young people’s access to tobacco
- 1.6.5 ☐ Level of support for increasing excise tax on tobacco products
- 1.6.6 ☐ Level of awareness among parents about the importance of discussing tobacco use with their children
- 1.6.7^{NR} ☐ Level of support for creating policies in schools
- 1.6.8^{NR} Proportion of young people who think that the cigarette companies try to get young people to smoke

Outcome 6

Increased Knowledge of, Improved Anti-tobacco Attitudes Toward, and Increased Support for Policies to Reduce Youth Initiation

Indicator Rating
 ← ○ ● → better

Number	Indicator	Overall quality low → high	Resources needed	Strength of evidence	Utility	Face validity	Accepted practice
1.6.1	Level of confirmed awareness of anti-tobacco media messages		\$\$	●	●	●	●
1.6.2	Level of receptivity to anti-tobacco media messages		\$\$	●	●	●	●
1.6.3	Proportion of students who would ever wear or use something with a tobacco company name or picture		\$\$	●	●	●	●
1.6.4	Level of support for policies, and enforcement of policies, to decrease young people's access to tobacco		\$\$	⊘	●	●	●
1.6.5	Level of support for increasing excise tax on tobacco products		\$\$ ⁺	⊘	●	●	●
1.6.6	Level of awareness among parents about the importance of discussing tobacco use with their children		\$\$	●	○	○ ⁺	○
1.6.7 ^{NR}	Level of support for creating policies in schools		⊘	⊘	⊘	⊘	⊘
1.6.8 ^{NR}	Proportion of young people who think that the cigarette companies try to get young people to smoke		⊘	⊘	⊘	⊘	⊘

⁺ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

⊘ Denotes no data.

^{NR} Denotes an indicator that is not rated (see Appendix B for an explanation).

Outcome 7

Increased Anti-tobacco Policies and Programs in Schools

To prevent and reduce tobacco use by young people, schools should implement comprehensive anti-tobacco policies and programs that reinforce tobacco-free norms. Young people spend much of their time in school and are influenced by school policies and programs and by the actions of their peers and of adults.¹ Evidence shows that education programs that include instruction on the short- and long-term physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms, and life skills can prevent or reduce tobacco use among students.^{2,3} School-based interventions that are combined with mass media campaigns and additional community-wide educational anti-tobacco activities show evidence of effectiveness in reducing tobacco use among young people.³ The Community Guide to Preventive Services Task Force, however, states that insufficient evidence is available to indicate that either school-based education programs (e.g., classroom programs) or student-delivered community education (e.g., Students Working Against Tobacco [SWAT]) are effective when implemented alone, without other community activities to supplement or reinforce them.³

The demand for effective tobacco-use cessation interventions for young people has been growing.⁴ As with all public health programs, such interventions must be based on evidence that proves that they work. Unfortunately, few rigorous scientific studies exist on which to base recommendations that would help young smokers quit.⁴

CDC provides guidelines for school health programs to prevent tobacco use and addiction.² The guidelines include recommendations on policies, curricula and instruction, teacher training, parental involvement, tobacco-use cessation, and evaluation. The guidelines are based on research, scientific theory, and practice.

Listed below are the indicators associated with this outcome:

- **1.7.1** □ Proportion of schools or school districts reporting the implementation of 100% tobacco-free policies
- **1.7.2** □ Proportion of schools or school districts that provide instruction on tobacco-use prevention that meets CDC guidelines
- **1.7.3** □ Proportion of schools or school districts that provide tobacco-use prevention education in grades K–12
- **1.7.4** □ Proportion of schools or school districts that provide program-specific training for teachers
- **1.7.5** □ Proportion of schools or school districts that involve families in support of school-based programs
- **1.7.6** □ Proportion of schools or school districts that support cessation interventions for students and staff who use tobacco
- **1.7.7** □ Proportion of schools or school districts that assess their tobacco-use prevention program at regular intervals

- ▶ **1.7.8** □ Proportion of students who participate in tobacco-use prevention □ activities □
- ▶ **1.7.9** □ Level of reported exposure to school-based tobacco-use prevention □ curricula that meet CDC guidelines □
- ▶ **1.7.10** □ Perceived compliance with tobacco-free policies in schools
- ▶ **1.7.11** □ Proportion of schools or school districts with policies that regulate □ display of tobacco industry promotional items □

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1. □ U.S. Department of Health and Human Services. *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 1994.
2. □ Centers for Disease Control and Prevention. Guidelines for school health programs to prevent tobacco use and addiction. *Morbidity and Mortality Weekly Report Recommendations and Reports*. 1994;43(RR-2):1–18. Available from: <http://www.cdc.gov/mmwr/PDF/RR/RR4302.pdf>. Accessed March 2005.
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Outcome 7

Increased Anti-tobacco Policies and Programs in Schools**Indicator Rating**

← ○ ● ● → better

Number	Indicator	Overall quality low ← → high	Resources evaluation needed	Strength of evidence	Utility	Face validity	Accepted practice
1.7.1	Proportion of schools or school districts reporting the implementation of 100% tobacco-free policies		\$\$	●	●	●	●
1.7.2	Proportion of schools or school districts that provide instruction on tobacco-use prevention that meets CDC guidelines		\$\$	●	○	● [†]	●
1.7.3	Proportion of schools or school districts that provide tobacco-use prevention education in grades K–12		\$\$	●	●	●	● [†]
1.7.4	Proportion of schools or school districts that provide program-specific training for teachers		\$\$	○	○	●	●
1.7.5	Proportion of schools or school districts that involve families in support of school-based programs		\$\$	○	○	●	●
1.7.6	Proportion of schools or school districts that support cessation interventions for students and staff who use tobacco		\$\$	○	○	●	●
1.7.7	Proportion of schools or school districts that assess their tobacco-use prevention program at regular intervals		\$\$\$	○	●	● [†]	○
1.7.8	Proportion of students who participate in tobacco-use prevention activities		\$\$	●	●	●	●
1.7.9	Level of reported exposure to school-based tobacco-use prevention curricula that meet CDC guidelines		\$\$	●	●	●	●
1.7.10	Perceived compliance with tobacco-free policies in schools		\$\$	⊘	●	●	●
1.7.11	Proportion of schools or school districts with policies that regulate display of tobacco industry promotional items		\$\$	●	●	●	●

† □ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

⊘ Denotes no data.

Outcome 8

Increased Restriction and Enforcement of Restrictions on Tobacco Sales to Minors

Activities to decrease young people's access to tobacco products are recognized components of a comprehensive approach to reducing the number of young people who start smoking. Efforts to reduce young people's access to tobacco products are based on the rationale that making it more difficult for young people to obtain tobacco products will discourage them from beginning or continuing to use tobacco and thus reduce the prevalence of tobacco use. One strategy is to attempt to reduce retail tobacco sales to minors through activities such as (1) passing laws that restrict young people's access to tobacco (including laws barring the sale of tobacco products to minors, bans on self-service displays of tobacco products, and bans or restrictions on tobacco vending machines), (2) educating merchants about these laws, (3) enforcing compliance with these laws, (4) educating the community and the media about the value of these laws, and (5) mobilizing the community to support these laws.

Experience shows that adoption and sustained enforcement of strong laws are prerequisites for reducing young people's access to tobacco. Although this approach is necessary for success, it is not sufficient. Compliance checks show that laws against selling tobacco products to young people, when accompanied by retailer education and enforcement, can reduce the proportion of retailers who are willing to sell these products to minors. But, these reductions do not automatically translate into reductions in young people's self-reported or perceived access to tobacco products, or into reductions in their tobacco use—the ultimate goal of youth access interventions.¹ Some studies suggest that even if only a few retail outlets in a community sell tobacco to minors, young people who use tobacco are likely to know of these outlets and to frequent them.²

According to the *Guide to Community Preventive Services*, the most effective approach to preventing young people 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—most importantly—community mobilization to generate community support for efforts to reduce youth access to tobacco products.³ As with other aspects of tobacco control, community mobilization may play a particularly important role because of its ability to change social norms—in this case, norms regarding the social acceptability of selling or otherwise providing tobacco products to minors. The *Guide to Community Preventive Services* indicates that none of the interventions listed above have been shown to be effective when implemented in isolation, in particular when implemented without a strong link to community mobilization initiatives.³

Moreover, even if illegal sales to minors were eliminated completely, young people could still acquire tobacco products through other, noncommercial or social sources, including shoplifting, stealing from parents and other relatives, borrowing from friends and relatives, and asking older friends or strangers to buy tobacco products for them. In fact, younger children (who have less success than older children in

purchasing tobacco products at retail outlets) often rely on these alternative sources to obtain tobacco products. Thus, even interventions that are successful in reducing young people's self-reported or perceived access to tobacco products through commercial sources will not necessarily reduce their overall access to or use of these products. Accordingly, as rates of retail sales to minors decline, interventions to address these other sources of access will become increasingly important.

Listed below are the indicators associated with this outcome:

- ▶ **1.8.1** □ Proportion of jurisdictions with policies that ban tobacco vending machine sales in places accessible to young people □
- ▶ **1.8.2** □ Proportion of jurisdictions with policies that require retail licenses to sell tobacco products □
- ▶ **1.8.3** □ Proportion of jurisdictions with policies that control the location, number, and density of retail outlets □
- ▶ **1.8.4** □ Proportion of jurisdictions with policies that control self-service tobacco sales □
- ▶ **1.8.5** □ Number of compliance checks conducted by enforcement agencies
- ▶ **1.8.6** □ Number of warnings, citations, and fines issued for infractions of public policies against young people's access to tobacco products □
- ▶ **1.8.7** □ Changes in state tobacco control laws that preempt stronger local tobacco control laws □

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1. □ Rigotti NA, DiFranza JR, Chang Y, Tisdale T, Kemp B, Singer DE. The effect of enforcing tobacco-sales laws on adolescents' access to tobacco and smoking behavior. *New England Journal of Medicine*. 1997;337:1044–51.
2. □ DiFranza JR, Coleman M. Source of tobacco for youths in communities with strong enforcement of youth access laws. *Tobacco Control*. 2001;10(4):323–8.
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Celebucki CC, Diskin K. A longitudinal study of externally visible cigarette advertising on retail storefronts in Massachusetts before and after the Master Settlement Agreement. *Tobacco Control*. 2002;11(Suppl 2):ii47–53.

Outcome 8

Increased Restriction and Enforcement of Restrictions on Tobacco Sales to Minors

Indicator Rating
 ← ○ ● → better

Number	Indicator	Overall quality low ← → high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
1.8.1	Proportion of jurisdictions with policies that ban tobacco vending machine sales in places accessible to young people		\$\$\$	●	○	●	● [†]
1.8.2	Proportion of jurisdictions with policies that require retail licenses to sell tobacco products		\$\$\$	●	●	●	●
1.8.3	Proportion of jurisdictions with policies that control the location, number, and density of retail outlets		\$\$\$	○	○*	○	○*
1.8.4	Proportion of jurisdictions with policies that control self-service tobacco sales		\$\$\$	●	●	●	●
1.8.5	Number of compliance checks conducted by enforcement agencies		\$\$\$	●	●	●	●
1.8.6	Number of warnings, citations, and fines issued for infractions of public policies against young people's access to tobacco products		\$\$\$	●	●	●	●
1.8.7	Changes in state tobacco control laws that preempt stronger local tobacco control laws		\$	⊘	●	●	●

* ○ Denotes low reviewer response: that is, greater than 75% of the experts either did not rate the indicator, or gave the criterion an invalid rating (see Appendix B for an explanation).

† ○ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

⊘ Denotes no data.

Reduced Tobacco Industry Influences

According to the most recent Federal Trade Commission tobacco report, the U.S. tobacco industry spent almost \$12.5 billion in 2002 to advertise and promote its products.¹ 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.² Moreover, researchers have found that receptivity to tobacco industry marketing is associated with susceptibility towards tobacco use, that teenagers are three times more sensitive to cigarette advertising than adults, and that young people who approve of tobacco advertising and identify with the images portrayed in the advertisements are more likely than non-approving young people to start smoking.²⁻⁸ In addition, tobacco advertising can distort young people's perceptions of tobacco use.^{2, 6-8} An indirect result of heavy tobacco industry advertising is the dampening effect it has on the number and quality of media stories about the health risks of smoking.² By promoting smoking, the tobacco industry undermines the ability of parents to prevent adolescents from starting to smoke.⁹

Many of the tobacco industry's advertising expenditures are in retail stores.¹ Retail stores are saturated with pro-tobacco signage, branded objects, and tobacco displays. Many of these objects are clustered around the cash registers, making it virtually impossible for anyone, including children, not to be exposed to pro-tobacco messages. 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 tobacco industry also spends considerable resources to sponsor or support public events, the arts, and other worthy causes.¹ It is clear that the tobacco industry influences policy makers through contributions and lobbying, which results in a more favorable, pro-tobacco policy environment.¹¹

Listed below are the indicators associated with this outcome:

- ▶ **1.9.1** Extent and type of retail tobacco advertising and promotions
- ▶ **1.9.2** Proportion of jurisdictions with policies that regulate the extent and type of retail tobacco advertising and promotions
- ▶ **1.9.3** Extent of tobacco advertising outside of stores
- ▶ **1.9.4** Proportion of jurisdictions with policies that regulate the extent of tobacco advertising outside of stores
- ▶ **1.9.5** Extent of tobacco industry sponsorship of public and private events
- ▶ **1.9.6** Proportion of jurisdictions with policies that regulate tobacco industry sponsorship of public events
- ▶ **1.9.7** Extent of tobacco advertising on school property, at school events, and near schools

- 1.9.8 □ Extent of tobacco advertising in print media
- 1.9.9 □ Amount and quality of news media stories about tobacco industry practices and political lobbying
- 1.9.10 □ Number and type of Master Settlement Agreement violations by tobacco companies
- 1.9.11 □ Extent of tobacco industry contributions to institutions and groups
- 1.9.12 □ Amount of tobacco industry campaign contributions to local and state politicians

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Outcome 9

Reduced Tobacco Industry Influences □**Indicator Rating**

← ○ ● → better

Number	Indicator	Overall quality low ← → high	Resources needed	Strength of evidence	Utility	Face validity	Accepted practice
1.9.1	Extent and type of retail tobacco advertising and promotions		\$\$\$\$ [◇]	○	●	●	●
1.9.2	Proportion of jurisdictions with policies that regulate the extent and type of retail tobacco advertising and promotions		\$\$\$	●	●	●	●
1.9.3	Extent of tobacco advertising outside of stores		\$\$\$\$ [◇]	●	●	●	●
1.9.4	Proportion of jurisdictions with policies that regulate the extent of tobacco advertising outside of stores		\$\$\$ ⁺	●	●	●	●
1.9.5	Extent of tobacco industry sponsorship of public and private events		\$\$\$\$ [◇]	●	●	●	●
1.9.6	Proportion of jurisdictions with policies that regulate tobacco industry sponsorship of public events		\$\$\$ ⁺	●	●	●	●
1.9.7	Extent of tobacco advertising on school property, at school events, and near schools		\$\$\$	⊘	●	●	●
1.9.8	Extent of tobacco advertising in print media		\$\$\$	●	●	●	●
1.9.9	Amount and quality of news media stories about tobacco industry practices and political lobbying		\$\$\$	⊘	●	●	●
1.9.10	Number and type of Master Settlement Agreement violations by tobacco companies		\$\$\$\$ [◇]	○	●	●	●
1.9.11	Extent of tobacco industry contributions to institutions and groups		\$ [◇]	⊘	○	● ⁺	●
1.9.12	Amount of tobacco industry campaign contributions to local and state politicians		\$ [◇]	⊘	●	●	●

⁺ □ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

[◇] □ Denotes that the experts' rating was modified (see Appendix B for an explanation).

⊘ Denotes no data.

Outcome 10

Reduced Susceptibility to Experimentation with Tobacco Products

Susceptibility to smoking is defined as the intention to smoke or the absence of a strong intention not to smoke.¹ Studies show that susceptibility to experimentation is a valid and reliable predictor of future smoking behavior.¹ Studies also 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 Furthermore, recent evidence suggests that even low levels of smoking experimentation (two to four cigarettes smoked by age 10 years) substantially increase the likelihood of daily smoking in late adolescence.² To reduce the percentage of young people who take up smoking, it is therefore necessary to prevent young people from becoming susceptible to experimenting with tobacco.³ In addition to tobacco industry influences, tobacco use by peers is strongly associated with early tobacco experimentation among children.⁴ Parental involvement in young people's decision making about tobacco use is also an important contributor to reduced susceptibility to tobacco use.⁵⁻⁷

Listed below are the indicators associated with this outcome:

- **1.10.1** □ Proportion of young people who think that smoking is cool and helps them fit in
- **1.10.2** □ Proportion of young people who think that young people who smoke have more friends
- **1.10.3** □ Proportion of young people who report that their parents have discussed not smoking with them
- **1.10.4** □ Proportion of parents who report that they have discussed not smoking with their children
- **1.10.5** □ Proportion of young people who are susceptible never-smokers

References

1. □ Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Merritt RK. Validation of susceptibility as a predictor of which adolescents take up smoking in the United States. *Health Psychology*. 1996;15(5):355–361.
2. □ Jackson C, Dickinson D. Cigarette consumption during childhood and persistence of smoking through adolescence. *Archives of Pediatrics & Adolescent Medicine*. 2004;158:1050–1056.
3. □ U.S. Department of Health and Human Services. *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 1994.
4. □ Jackson C. Initial and experimental stages of tobacco and alcohol use during late childhood: relation to peer, parent, and personal risk factors. *Addictive Behaviors*. 1997;22(5):685–98.

Outcome 10

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
1.10.1	Proportion of young people who think that smoking is cool and helps them fit in		\$\$ [†]	●	●	●	●
1.10.2	Proportion of young people who think that young people who smoke have more friends		\$\$	●	◐	●	●
1.10.3	Proportion of young people who report that their parents have discussed not smoking with them		\$\$	●	●	●	●
1.10.4	Proportion of parents who report that they have discussed not smoking with their children		\$\$\$	⊘	●	●	●
1.10.5	Proportion of young people who are susceptible never-smokers		\$\$ [†]	●	●	●	●

†◻ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

⊘ Denotes no data.

Decreased Access to Tobacco Products

As noted in the discussion of logic model component 8 (increased restriction and increased enforcement of restrictions on tobacco sales to minors), adopting and enforcing strong laws that restrict young people's access to tobacco can reduce the proportion of retailers that illegally sell tobacco products to minors. As also noted in that discussion, reductions in illegal sales to minors may not automatically translate into reductions in minors' self-reported access to tobacco products through commercial sources. In addition, reductions in illegal sales to young people would not be expected to affect minors' access to tobacco products through noncommercial (social) sources. More importantly, it is unclear whether reductions in retail tobacco sales to minors result in reductions in the actual rate of tobacco use by young people. Although some studies indicate that this is the case, other studies fail to support such a link.¹⁻³ The data suggest that to be successful in reducing young people's tobacco use, efforts to reduce commercial access must achieve high levels of retailer compliance (perhaps as high as 90% or more).² In practice, these levels may not always be attainable.

According to the *Guide to Community Preventive Services*, the most effective approach to preventing young people from gaining access to tobacco (as measured by minors' self-reported tobacco purchase or use behaviors) includes a combination of strong local and state laws, vigorous and sustained enforcement of these laws, retailer education, and—most importantly—community mobilization to generate community support for efforts to reduce youth access to tobacco products.⁴ The *Guide to Community Preventive Services* notes that none of these interventions has been shown to be effective when implemented in isolation, in particular when implemented without a strong link to community mobilization initiatives.^{4,5}

The *Guide to Community Preventive Services* and *Reducing Tobacco Use: A Report of the Surgeon General* also underscore the importance of taking a comprehensive approach to reducing tobacco use among young people.^{4,5} Such an approach includes interventions to reduce the appeal of, and demand for, tobacco products among young people, as well as to restrict their access to these products. In addition, because young people are influenced by the social norms and environmental cues that they observe in adult society, efforts to reduce their tobacco use should be integrated into the broader framework of a comprehensive tobacco control program that also addresses tobacco use by adults.

Listed below are the indicators associated with this outcome:

- ▶ **1.11.1** Proportion of successful attempts to purchase tobacco products by young people
- ▶ **1.11.2** Proportion of young people reporting that they have been sold tobacco products by a retailer
- ▶ **1.11.3** Proportion of young people reporting that they have been unsuccessful in purchasing tobacco products from a retailer
- ▶ **1.11.4** Proportion of young people reporting that they have received tobacco products from a social source

- **1.11.5** □ Proportion of young people reporting that they purchased cigarettes from a vending machine
- **1.11.6^{NR}** Proportion of young people who believe that it is easy to obtain tobacco products

References

1. □ Rigotti NA, DiFranza JR, Chang Y, Tisdale T, Kemp B, Singer DE. The effect of enforcing tobacco-sales laws on adolescents' access to tobacco and smoking behavior. *New England Journal of Medicine*. 1997;337:1044–51.
2. □ National Cancer Institute. Smoking and Tobacco Control Monograph, No. 14. *Changing adolescent smoking prevalence: where it is and why*. Bethesda, MD: National Cancer Institute; 2001. NIH Publication No. 02–5086.
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4. □ U.S. Department of Health and Human Services. *Reducing tobacco use: a report of the Surgeon General*. 2000.
5. □ Fielding JE, Briss PA, Carande-Kulis VG, Hopkins DP, Husten CG, Pechacek TF, et al. Tobacco. In: Briss PA, Zaza S, Harris KW, editors. *The guide to community preventive services*. New York: Oxford University Press: [In press] 2005.

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Outcome 11

Decreased Access to Tobacco Products**Indicator Rating**

◀ ○ ● ▶ better

Number	Indicator	Overall quality low ← → high	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
1.11.1	Proportion of successful attempts to purchase tobacco products by young people		\$\$\$ [†]	●	●	●	● [†]
1.11.2	Proportion of young people reporting that they have been sold tobacco products by a retailer		\$\$	●	●	●	●
1.11.3	Proportion of young people reporting that they have been unsuccessful in purchasing tobacco products from a retailer		\$\$	⊘	● [†]	●	●
1.11.4	Proportion of young people reporting that they have received tobacco products from a social source		\$\$	●	●	●	●
1.11.5	Proportion of young people reporting that they purchased cigarettes from a vending machine		\$\$	⊘	○	○	●
1.11.6 ^{NR}	Proportion of young people who believe that it is easy to obtain tobacco products		⊘	⊘	⊘	⊘	⊘

[†]□ Denotes low agreement among reviewers: that is, fewer than 75% of the valid ratings for this indicator were within one point of each other (see Appendix B for an explanation).

⊘ Denotes no data.□

^{NR} Denotes an indicator that is not rated (see Appendix B for an explanation).□

Increased Price of Tobacco Products

Studies show an inverse relationship between cigarette price and smoking prevalence by young people and adults. Increasing state or local excise taxes on cigarettes is an effective method of increasing the real price of cigarettes. However, maintaining higher real prices requires further tax increases to offset the effects of inflation and industry practices designed to control retail product prices.^{1,2} Recent efforts to offset industry pricing practices have focused on supporting minimum retail pricing laws.³ Econometric studies show price elasticity for tobacco use among adolescents of -0.76 , which means that a 10% increase in price would result in a 7.6% decrease in tobacco use.⁴ In addition, to directly motivate people to quit or not start tobacco use, price increases can indirectly reduce tobacco use if a portion of the excise tax revenue is dedicated to the state's tobacco control program.⁴

Although young people usually start using tobacco by first experimenting with cigarettes, some begin by experimenting with other tobacco products such as spit tobacco (smokeless), bidis, small cigars, and loose tobacco (roll-your-own). All tobacco products are taxed. To prevent tobacco users from shifting to cheaper tobacco products, increasing taxes on all tobacco products is important.⁵ Tax increases on tobacco products increase the real price of tobacco products and thus reduce young people's demand for such products.

Listed below is the indicator associated with this outcome:

- **1.12.1** Amount of tobacco product excise tax


References

1. □ U.S. Department of Health and Human Services. *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 1994.
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5. □ U.S. Department of Health and Human Services. *Reducing tobacco use: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 2000.

Outcome 12 ☐

Increased Price of Tobacco Products

Indicator Rating
 ← ○ ◐ ● → better

Number	Indicator	Overall quality	Resources needed	Strength of evaluation evidence	Utility	Face validity	Accepted practice
		low ← → high					
1.12.1	Amount of tobacco product excise tax		\$	●	●	●	●

Reduced Initiation of Tobacco Use by Young People

Tobacco use begins primarily during adolescence, decades earlier than when the death and disability associated with tobacco use are likely to occur. Few people begin to use tobacco as adults; almost 90% of adult smokers began by age 18 years.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.^{1,2} Both the duration and amount of tobacco use are related to eventual chronic health problems, with duration posing the stronger risk.^{3,4} The processes of nicotine addiction further ensure that many of today's adolescent smokers will use tobacco regularly when they are adults.¹

Listed below are the indicators associated with this outcome:

- ▶ **1.13.1** Average age at which young people first smoked a whole cigarette
- ▶ **1.13.2** Proportion of young people who report never having tried a cigarette

References

1. □ U.S. Department of Health and Human Services. *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 1994.
2. □ Jackson C, Dickinson D. Cigarette consumption during childhood and persistence of smoking through adolescence. *Archives of Pediatrics & Adolescent Medicine*. 2004;158:1050–6.
3. □ Doll R, Peto R. Cigarette smoking and lung cancer: dose and time relationships among regular smokers and lifelong non-smokers. *Journal of Epidemiology and Community Health*. 1978;32(4):303–13.
4. □ Flanders DW, Lally CA, Ahu BP, Henley J, Thun MJ. Lung cancer mortality in relation to age, duration of smoking, and daily cigarette consumption: results from Cancer Prevention Study II. *Cancer Research*. 2003;63:6556–62.

Outcome 13

Reduced Initiation of Tobacco Use by Young People**Indicator Rating**

◀ ○ ◐ ◑ ◒ ▶ better

Number	Indicator	Overall quality	Resources needed	Strength of evidence	Utility	Face validity	Accepted practice
		low ← → high					
1.13.1	Average age at which young people first smoked a whole cigarette		\$\$	◑	◐	◐	◑
1.13.2	Proportion of young people who report never having tried a cigarette		\$\$	◑	◑	◑	◑

Reduced Tobacco-use Prevalence Among Young People

Smoking by young people is associated with serious health problems, such as reduced lung capacity and physical fitness.¹ Smoking by young people also increases the likelihood that they will continue to smoke through adulthood, increasing their risk of tobacco-related diseases such as lung and other cancers, heart disease, and emphysema.^{2,3}

Because the number of years of cigarette smoking produces a greater risk of disease than the number of cigarettes smoked per day, it is critically important to work on both preventing young people from starting to smoke and increasing the number and percentage of young smokers who quit.^{4,5}

Listed below are the indicators associated with this outcome:

- ▶ **1.14.1** Prevalence of tobacco use among young people
- ▶ **1.14.2** Proportion of established young smokers

References

1. □ U.S. Department of Health and Human Services. *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention; 1994.
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4. □ Doll R, Peto R. Cigarette smoking and lung cancer: dose and time relationships among regular smokers and lifelong non-smokers. *Journal of Epidemiology and Community Health*. 1978;32(4):303–13.
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Outcome 14

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
1.14.1	Prevalence of tobacco use among young people		\$\$	◑	◑	◑	◑
1.14.2	Proportion of established young smokers		\$\$	◑	◑	◑	◑