Centers for Disease Control and Prevention
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Tobacco Control Interventions

What are effective statewide tobacco interventions?

Selected Resources

- CDC: Best Practices for Comprehensive Tobacco Control Programs—2014 (https://www.cdc.gov/tobacco/stateandcommunity/best_practices/)
- CDC Office on Smoking and Health (https://www.cdc.gov/tobacco/about/index.htm)
- CDC Media Campaign Resource Center (MCRC) (https://nccd.cdc.gov/MCRC/index.aspx)
- Community Health Advisor: Large tobacco tax increase (http://www.communityhealthadvisor.org/cha3/summary)

Effective population-based tobacco control interventions include tobacco price increases, high-impact anti-tobacco mass media campaigns, and comprehensive smoke-free policies. The evidence shows that implementing and enforcing these strategies, both individually and as part of a comprehensive tobacco prevention and control effort, can reduce smoking initiation and use among adults and youths. Comprehensive tobacco prevention and control efforts involve the coordinated implementation of population-based interventions to prevent tobacco initiation among youth and young adults, promote quitting among adults and youth, eliminate exposure to secondhand smoke, and identify and eliminate tobacco-related disparities among population groups.[1] Tobacco products include cigarettes, cigars, pipes, hookah, smokeless tobacco, and others. Programs combine and integrate multiple evidence-based strategies, including educational, regulatory, economic, and social strategies at local, state, or national levels.[1]

Evidence-based interventions that are key components of a comprehensive tobacco prevention and

control effort include

- Mass-reach health communications campaigns that use multiple-media formats; include hard-hitting or graphic images; are intended to change knowledge, beliefs, attitudes, and behaviors affecting tobacco use; and provide tobacco users with information on resources on how to quit.[2]
- Increases in the unit price for tobacco products, which will decrease the number of people using tobacco, reduce the amount of tobacco consumed, and prevent young people from starting to use tobacco.[3]
- Comprehensive smoke-free policies that prohibit smoking in all indoor areas of workplaces and public places, including restaurants and bars, to prevent involuntary exposure to secondhand smoke.[4]

What is the public health issue?

Tobacco use is the single most preventable cause of disease, disability, and death in the United States. Cigarette smoking harms nearly all organs of the body; it has been linked to heart disease, multiple cancers, lung diseases, among others. Smoking during pregnancy also causes harm to the fetus.[5] In addition to adverse effects on individual- and population-level health, smoking imposes an immense financial burden on society, with over 480,000 premature deaths, over $170 billion in lost productivity costs, and at least $133 billion in direct medical care expenditures in the United States each year.[6] The use of smokeless tobacco, cigars, and pipes can also have deadly consequences, including lung, larynx, esophageal, and oral cancers.[7-9] Moreover, the effects of tobacco use are not limited to the user. Secondhand smoke exposure can cause death and many serious diseases, including lung cancer, heart disease, and stroke among adults and respiratory illness, ear infections, asthma attacks, and sudden infant death syndrome among children and infants.[5] An estimated 1 in 4 nonsmokers (58 million people), including about 2 in 5 children, are exposed to secondhand smoke.[10]

What is the evidence of the health impact and cost effectiveness?[1-4]

A systematic review of proven population-based tobacco control interventions found that these programs were associated with

- Reductions in the prevalence of tobacco use among adults and young people
- Reductions in tobacco product consumption
- Increased quitting.

States that have made larger investments in comprehensive tobacco control efforts have seen larger declines in cigarettes sales than the United States as a whole, and the prevalence of cigarette smoking among adults and youth has declined faster as spending for tobacco control programs has increased. [11] Comprehensive tobacco control efforts have also contributed to reductions in tobacco-related diseases and deaths, and were effective across diverse racial, ethnic, educational, and socioeconomic groups. The review also found that these programs were cost-effective and that healthcare savings were greater than the cost of the intervention.

Additional systematic reviews examining the impact of single interventions that may be implemented individually or included as part of a comprehensive tobacco control program, such as mass-media campaigns, price increases, and smoke-free policies, also found strong evidence of their efficacy and cost-effectiveness.

Mass-reach Communications Campaigns

Mass-media campaigns were associated with lower prevalence of tobacco use, increased cessation and use of available cessation services, and decreased initiation of tobacco use among young people:

- Median decrease of 5.0 percentage points in the prevalence of tobacco use among adults
- Median decrease of 3.4 percentage points in the prevalence of tobacco use among young people (11 to 24 years of age)
- Median increase of 3.5 percentage points in cessation of tobacco use
- Median relative increase of 132 percent in the number of calls to quitlines
- Decrease of 6.7 percentage points in tobacco use initiation among young people (11 to 24 years of age).[2]

An economic review of the evidence found the benefit-to-cost ratio for mass-reach health communications campaigns ranged from 7:1 to 74:1, with an estimated cost of $213 (2011 dollars) per life year saved.[2]

Increasing the price of tobacco products

Increases in the price of tobacco products reduce demand for tobacco, thereby prompting quit attempts, reducing consumption among those who do not quit, and preventing youth from starting. [5, 12] Increasing the unit price of tobacco by 20 percent was found to be associated with the following reductions:

- 7.4 percent reduction in demand among adults ages 30 and older
- 14.8 percent reduction in demand among young people ages 13-29
- 3.6 percent reduction in the proportion of adults ages 30 and older who use tobacco
- 7.2 percent reduction in the proportion of young adults ages 19-29 who use tobacco
- 8.6 percent reduction in tobacco use initiation among young people ages 13-29
- 6.5 percent increase in quitting among adults ages 30 and older

- 18.6 percent increase in quitting among young people ages 13-29.[3]

An economic review of the evidence estimated that healthcare cost savings from a 20 percent price increase for tobacco products ranged from -$0.14 to $90.02 per person per year (2011 dollars) in addition to averted productivity losses.[3]

Comprehensive smoke-free policies

Comprehensive smoke-free policies have been shown to substantially improve indoor air quality, reduce secondhand smoke exposure, change social norms regarding the acceptability of smoking, prevent smoking initiation by youth and young adults, help smokers quit and reduce heart attack and asthma hospitalizations among nonsmokers.[5, 8, 12] Comprehensive smoke-free policies were associated with

- Decreased exposure to secondhand smoke (50 percent reduction in biomarkers)
- Decreased prevalence of tobacco smoking (absolute reduction of 2.7 percentage points)
- Decreased tobacco consumption (absolute reduction of 1.2 cigarettes per day)
- Fewer cardiovascular events (5.1 percent reduction in hospital admissions)
- Decreased asthma morbidity (20.1 percent reduction in hospital admissions).[4]

An economic review of the evidence estimated that net savings resulting from a nationwide U.S. smoke-free policy would range from $700 to $1,297 per person not currently covered by a smoke-free policy (2011 dollars).[4] It also found that smoke-free policies did not have an adverse economic impact on the business activity of restaurants, bars, or establishments catering to tourists; some studies found a small positive effect of these policies.[4]

For questions or additional information, email healthpolicynews@cdc.gov (mailto:healthpolicynews@cdc.gov).

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