



**RAISING THE MINIMUM AGE FOR LEGAL PURCHASE OF TOBACCO PRODUCTS:
SUMMARY OF THE SCIENTIFIC EVIDENCE**

May 2015

Summary:

- Given that almost all smokers start smoking before the age of 26, preventing youth and young adults from trying their first cigarette, and reducing the number of youth and young adults that transition to become regular, daily smokers into adulthood, are two key components to ending the tobacco epidemic.
- Youth and young adults are especially vulnerable to the deadly chemicals in tobacco, nicotine addiction, and the heavy marketing used to sell tobacco.^{1,2}
- Although the evidence is still developing, raising the minimum purchase age for tobacco products appears to be a promising and important tobacco prevention and control practice.
- It also has the shorter-term benefit of reducing young people's exposure to the harmful, addictive effects of nicotine—especially during this vulnerable period of brain development.

The Problem of Tobacco Use Initiation:

- According to the Surgeon General, “if smoking persists at the current rate among young adults in this country, 5.6 million of today’s Americans younger than 18 years of age are projected to die prematurely from a smoking-related illness.”¹
- Every day, more than 3,200 youth younger than 18 years of age smoke their first cigarette.³
- Another 2,100 youth and young adults who are occasional smokers go on to become daily smokers.³
- Most smokers had their first cigarette before the age of 18 (86.9%); in fact, almost no smokers began smoking (<1.5%) or transitioned to daily smoking after age 25 (<4.3%).¹
- In 2014, the Surgeon General found that, “due to the slow decline in the prevalence of current smoking and initiation among youth and young adults, the annual burden of smoking-attributable mortality can be expected to remain at high levels for decades into the future.”¹

Use of Multiple Tobacco Products in Youth and Young Adults:

- The use of multiple tobacco products is also quite common, especially among youth and young adults.¹
- Switching between combusted tobacco products or reducing smoking does not reduce the health risks associated with tobacco use.¹ Youth may be switching between products for a number of different reasons, including pricing, marketing or because users may perceive them to be less harmful.¹ However, switching between combusted tobacco products, using noncombusted products while continuing to smoke, or cutting down smoking does not reduce the health risks associated with tobacco use unless it leads to quitting smoking completely; and nicotine exposure during adolescence, a critical window for brain development, might have lasting adverse

consequences for brain development (1), causes addiction (3), and might lead to sustained tobacco use.¹

- In 2014, 12.7% of high school students reported current use of two or more tobacco products.⁴
- The dual use of smokeless tobacco products, including emerging products such as electronic nicotine delivery systems (including e-cigarettes) is also on the rise, especially among youth.¹
- Furthermore, the latest data indicate that high school and middle school use of e-cigarettes and hookah has increased substantially in recent years:
 - From 2011 to 2014, past 30 day use of e-cigarettes increased among high school students from 1.5% to 13.4%.
 - From 2011 to 2014, past 30 day use of hookahs among high school students also increased from 4.1% to 9.4%.
 - In 2014, e-cigarette use surpassed cigarettes and became the most commonly used tobacco product among middle and high school students.

Youth Vulnerability to Tobacco Marketing:

- Adolescents are highly vulnerable to tobacco industry marketing, smoking imagery in movies, and peer influence, and are not able to fully appreciate the health risks they face in the future.²
- The tobacco industry has also explicitly targeted youth and young adults.¹ Internal tobacco industry documents emphasize their desire to increase consumption within these target markets in order to obtain “replacement smokers,” and thus, remain profitable.²
- In 2006, U.S. District Court Judge Gladys Kessler concluded that, regarding the tobacco industry’s marketing practices, “from the 1950s to the present, different defendants, at different times and using different methods, have intentionally marketed to young people under the age of twenty-one in order to recruit ‘replacement smokers’ to ensure the economic future of the tobacco industry.”⁵
- In 2014, the Surgeon General stated that “the root cause of the smoking epidemic is also evident: the tobacco industry aggressively markets and promotes lethal and addictive products, and continues to recruit youth and young adult as new consumers of these products.”¹

Youth and Young Adult Vulnerability to the Harms of Tobacco Use:

- Adolescents are also especially vulnerable to the addictive effects of nicotine, and nicotine has been shown to harm adolescent brain development.^{1,6}
 - Human brain development, including areas involved in higher cognitive function, continues throughout adolescent and into the 20s.⁶
 - Nicotine exposure during certain periods of development can impair the development of brain circuits and neurons, changing the way the brain works.^{1,6,7}
 - Evidence suggests that adolescent smokers are more likely than adult smokers to become dependent on nicotine.⁶
 - The evidence is also suggestive that nicotine exposure during adolescence may have lasting adverse consequences for brain development, including cognitive maturation and effects on working memory and attention.^{6,7,8,9,10}
 - Because of these risks, the age of legal sale of electronic cigarettes and other nicotine-containing products should reflect the developmental stages during which adolescents/young adults are more vulnerable to the adverse effects of nicotine.⁶
- The Surgeon General has reported that “earlier age of onset of smoking marks the beginning of the exposure to the many harmful components of smoking. This is during an age range when

growth is not complete and susceptibility to the damaging effects of tobacco smoke may be enhanced.”²

- In addition, an earlier age of initiation extends the potential duration of smoking throughout the lifespan. For the major chronic diseases caused by smoking, the epidemiologic evidence indicates that risk rises progressively with increasing duration of smoking; indeed, for lung cancer, the risk rises more steeply with duration of smoking than with number of cigarettes smoked per day.²

Potential Public Health Impact of Raising the Minimum Purchase Age:

- In March 2015, the Institute of Medicine issued a report, *Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products*. The report modeled the likely public health outcomes of raising the minimum legal age to 19 years, 21 years, and 25 years.¹¹ Highlighted findings of that report include:¹¹
 - Overall, increasing the minimum legal age will likely prevent or delay initiation of tobacco use by adolescents and young adults.
 - The age group most impacted by this prevention and delay of initiation will be those age 15 to 17 years.
 - The committee concluded that the impact of raising the legal age of purchase to 21 will likely be substantially higher than raising it to 19, but the added effect of raising the age from 21 to 25 will likely be considerably less.
 - Delaying initiation rates will likely decrease the prevalence of tobacco users in the U.S. For instance, if the minimum legal age were raised now across the U.S., by the time today’s teenagers were adults, there would be:
 - A 3% decrease in tobacco use prevalence if raised to 19 years,
 - A 12% decrease in tobacco use prevalence if raised to 21 years, and
 - A 16% decrease in tobacco use prevalence if raised to 25.
 - Furthermore, if the minimum legal age were raised now across the U.S. to 21 years of age, there would be approximately:
 - 223,000 fewer premature deaths,
 - 50,000 fewer deaths from lung cancer, and
 - 4.2 million fewer years of life lost for those born between 2000 and 2019.
- A comprehensive strategy to prevent youth smoking includes restricting the supply of cigarettes to minors, which includes both commercial (e.g., from stores or vending machines) and social supply chains (e.g., borrowing, buying, or stealing from other youth or adults).¹
- Addressing the commercial supply requires taking appropriate steps to prevent illegal sales in the retail environment, educating merchants, and actively enforcing youth access laws.¹
- However, raising the minimum purchase age could also help eliminate the social supply—especially in high schools, where 18-year-old seniors are often a supply source for tobacco for their younger counterparts.¹²
 - Older youth are also more likely to succeed in purchasing tobacco products, and thus raising the purchase age to 21 could reduce the likelihood that youth can access tobacco and provide it to younger peers.¹³
- A recent study also modeled how raising the minimum purchase age for tobacco products to 21 years of age would impact national retail tobacco sales.¹⁴
 - The study found that the maximum immediate loss of sales if such a policy were implemented nationwide would be just 2% of the total cigarette sales in the United States. As the lower tobacco-use cohort aged, small businesses would be able to adjust to the resulting changed market conditions. Furthermore, “retailers are already required under federal rules to check the ID of anyone who appears to be younger than 27 years seeking

to purchase tobacco, so an age-21 requirement would place no additional compliance” burden on retail staff.

- Overall, the potential of this approach to reduce smoking and prevent disease outweighs the temporary cost of lost sales.¹⁴
- In addition, setting the age for minimum purchase of tobacco products to 21 will harmonize tobacco and alcohol sales.

Parallel Scientific Evidence to Consider:

- In considering these approaches, we should also study parallel public health issues, such as the science related to alcohol and legal purchasing age.
- Overall, the scientific literature related to alcohol indicates that higher minimum legal purchasing ages improves health outcomes—especially in preventing youth and young adult use.¹⁵
 - Specifically, the Task Force on Community Preventive Services recommends implementing and maintaining an age 21 minimum legal drinking age based on strong evidence of their effectiveness.¹⁶
 - Evidence indicates that age 21 minimum legal drinking age laws result in lower levels of alcohol consumption—both among young adults 21 years of age and older, as well as those less than 21 years of age— and reduce alcohol-attributable harms, including motor vehicle crashes.¹⁷
 - The Task Force also recommends enhanced enforcement of these laws.¹⁸

What States and Localities Have Done:

- In 2015, Hawaii became the first state to raise the minimum purchase age for tobacco to 21.
- Four states have raised the minimum purchase age for tobacco to 19 (Alabama, Alaska, New Jersey, and Utah).¹⁹
- A number of localities have also raised the minimum purchase age, including several—such as Hawaii county (the Big Island), a number of townships outside of Boston, and New York City—to 21 years of age.²⁰
- The impact of recently enacted local policies that raise the minimum legal age for tobacco sales is still being evaluated. However, there are some initial data.
 - In 2005, Needham, Massachusetts was the first town in the country to raise the minimum purchase age to 21 years.¹⁴ Surveillance data reveal a 47% reduction in the Needham high-school smoking rate over four years after implementation, likely attributable, in part, to this local policy approach (2006 to 2010).²¹
 - Additionally, no tobacco retailers have gone out of business in Needham since the policy was implemented.¹⁴

¹ U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

² U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, Georgia: 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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