

# Policy on Tobacco Use

## Review Council

Council on Clinical Affairs

## Latest Revision

2015

### Purpose

The American Academy of Pediatric Dentistry (AAPD), in order to reduce pain, disability, and death caused by nicotine addiction, recommends routine screening for tobacco use, treating tobacco dependence, preventing tobacco use among children and adolescents, and educating the public on the enormous health and societal costs of tobacco.

### Methods

This policy was originally developed by the Council on Clinical Affairs and adopted in 2000. This document is an update of the previous version, revised in 2010. This policy revision is based upon a review of current dental, medical, and public health literature related to tobacco use which included a systematic literature search of the PubMed® electronic database. This search was conducted using the terms: tobacco, teen tobacco use, tobacco use in children, smoking, smokeless tobacco, smokeless tobacco and oral disease, pregnancy and tobacco, secondhand smoke, and caries and smoking; fields: all; limits: within the last 10 years, humans, English, clinical trials, birth through age 19. Websites for the American Lung Association, American Cancer Society, Centers for Disease Control and Prevention (CDC), Environmental Protection Agency, Campaign for Tobacco Free Kids, and U.S. Department of Health and Human Services also were reviewed.

### Background

Tobacco is a risk factor for six of the eight leading causes of deaths in the world, and it kills nearly six million people a year.<sup>1</sup> Tobacco use is considered one of the largest public health threats the world has ever faced.<sup>2</sup> More than 600,000 deaths are the result of non-smokers being exposed to secondhand smoke. Approximately one person dies every six seconds due to tobacco, accounting for one in 10 adult deaths. Up to half of current users eventually will die of a tobacco related disease.<sup>1</sup> In the US, the Surgeon General's report states that smoking is the single greatest avoidable cause of death.<sup>2</sup> According to the report, "The epidemic of smoking-caused disease in the twentieth century ranks amongst the greatest public catastrophes of the century, while the decline of smoking consequent to tobacco control is one of public health's greatest successes."<sup>2</sup>

### Youth Use of Tobacco

The CDC has conducted a National Youth Tobacco Survey (NYTS) for the years 1999, 2000, 2002, 2004, 2006, 2009, 2011, and 2012 as part of the Healthy People 2010 and 2020 objectives on tobacco use.<sup>3</sup> The NYTS also serves as a baseline for comparing progress toward meeting select Healthy People 2020 goals for reducing tobacco use among youth, especially in adolescents in grades 6-12. The NYTS data shows that:

- "Smoking and smokeless tobacco use are initiated and established primarily during adolescence.<sup>4-6</sup> Nearly nine out of 10 smokers started smoking by age 18, and 99 percent started by age 26.<sup>2,4-6</sup>
- Each day in the U.S., more than 3,200 people younger than 18 years of age smoke their first cigarette, and an estimated 2,100 youth and young adults who have been occasional smokers become daily cigarette smokers.<sup>7,8</sup>
- If smoking persists at the current rate among youth in this country, 5.6 million of today's population younger than 18 years of age are projected to die prematurely from a smoking-related illness. This represents about one in every 13 Americans aged 17 years or younger alive today.<sup>2</sup>
- In 2012, 6.7 percent of middle school and 23.3 percent of high school students currently used tobacco products, including cigarettes, cigars, hookahs, snus, smokeless tobacco, pipes, bidis and kreteks (unfiltered cigarettes from India), dissolvable tobacco, and electronic cigarettes.<sup>9,10</sup>
- From 2011–2012, electronic cigarette use doubled among middle and high school students, and hookah use increased among high school students.<sup>9</sup>
- Current use of smokeless tobacco is about half of what it was in the mid-1990s. However, only a modest decline has occurred since 2010 and no change occurred between 2012 and 2013. Smokeless tobacco use remains a mostly male behavior,<sup>11</sup> being seen in 13.4 percent of male high school students and 2.3 percent of females.<sup>7,12</sup>
- Concurrent use of multiple tobacco products is prevalent among youth. Among high school students who report currently using tobacco, almost one-third of females and one-half of males report using more than one tobacco product in the past 30 days.<sup>5</sup>

Most studies show that people who do not use tobacco as a teen never use it.<sup>13</sup> Aggressive marketing of tobacco products by manufacturers,<sup>14,15</sup> smoking by parents,<sup>16</sup> peer influence,

a functional belief in the benefits and normalcy of tobacco,<sup>17</sup> availability and price of tobacco products, low socioeconomic status, low academic achievement, lower self-image, and a lack of behavioral skills to resist tobacco offers all contribute to the initiation of tobacco use during childhood and adolescence.<sup>11</sup> Teens who use tobacco are more likely to use alcohol and other drugs and engage in high risk sexual behaviors.<sup>18</sup>

If youth can be discouraged to start smoking, it is less likely that they will start smoking as an adult. The 2012 Surgeon General's Report concluded that there is a large evidence base for effective strategies to prevent and minimize tobacco use by children and young adults by decreasing the number of children who initiate tobacco use and by increasing the current users who quit.<sup>5,19</sup> Oral health professionals can have success for tobacco cessation by counseling patients during the oral examination component of dental visits.<sup>20</sup>

### Consequences of Tobacco Use

Significant health consequences for tobacco use include 440,000 deaths per year from secondhand smoke, of which 28 percent were children.<sup>7,12</sup> Smoking increases the risk for: coronary heart disease by 2-4 times,<sup>6,11</sup> stroke by 2-4 times,<sup>6</sup> men developing lung cancer by 25 times,<sup>6</sup> and women developing lung cancer 25.7 times.<sup>6</sup> Smoking causes diminished overall health, increased absenteeism from work, and increased health care utilization and cost.<sup>4</sup> Other catastrophic health outcomes are cardiovascular disease; reproductive effects; pulmonary disease; cancers of the cervix, kidney, pancreas, stomach, lung, larynx, bladder and esophagus; leukemia; cataracts; abdominal aortic aneurysm; bronchitis; and other lung diseases including pneumonia.<sup>8,21</sup>

Secondhand exposure to tobacco smoke imposes significant risks as well. Cardiovascular disease and lung cancer are increased by 25 to 30 percent in nonsmokers who are exposed to and inhale secondhand smoke.<sup>22</sup> Infants and children who are exposed to smoke are at risk for sudden infant death syndrome (SIDS), acute respiratory infections, middle ear infections, bronchitis, pneumonia, asthma,<sup>23,24</sup> allergies,<sup>25,26</sup> and infections during infancy.<sup>27</sup> Caries in the primary dentition also is related to secondhand smoke exposure.<sup>28-30</sup> Enamel hypoplasia in both the primary and permanent dentition also is related to children exposed to cigarette smoke.<sup>31</sup> Prenatal exposure to secondhand smoke has been associated with cognitive deficits (e.g., reasoning abilities) and deficits in reading, math, and visuospatial relationships.<sup>32</sup>

A new term, thirdhand smoke, has been proposed to describe the particulate residual toxins that are deposited in layers all over the home after a cigarette has been extinguished.<sup>33</sup> These volatile compounds are deposited and off gas into the air over months.<sup>34,35</sup> Since children inhabit these low-lying contaminated areas and because the dust ingestion rate in infants is more than twice that of an adult, they are even more susceptible to thirdhand smoke. Studies have shown that these children have associated cognitive deficits in addition to the other associated risks of secondhand smoke exposure.<sup>32</sup>

Tobacco use can result in oral disease. Oral cancer,<sup>22</sup> periodontitis,<sup>36-39</sup> compromised wound healing, a reduction in the ability to smell and taste, smoker's palate (red inflammation turning to harder white thickened tissues), and melanosis (dark pigmentation of the oral tissues), coated tongue, staining of teeth and restorations, implant failure, and leukoplakia<sup>40,41</sup> are all seen in tobacco users. Smokeless tobacco is a risk factor for periodontal conditions,<sup>42-44</sup> oral cancer,<sup>45</sup> caries, and tooth abrasion.<sup>46,47</sup>

The monetary costs of this addiction and resultant morbidity and mortality are staggering. Annually, cigarette smoking costs the U.S. \$289 billion, based on lost productivity (more than \$156 billion) and health care expenditures (more than \$133 billion).<sup>8</sup> The health care cost from the exposure to secondhand smoke is about \$10 billion annually.<sup>8</sup> Contrast this with tobacco industry expenditures on advertising and political influence of \$8.6 billion in 2011 in the U.S. alone.<sup>8</sup>

Current trends indicate that tobacco use will cause more than eight million deaths a year by 2030.<sup>1</sup> It is incumbent on the healthcare community to reduce the burden of tobacco-related morbidity and mortality by supporting preventive measures, educating the public about the risks of tobacco, and screening for tobacco use and nicotine dependence.

### Policy statement

The AAPD opposes the use of all forms of tobacco including cigarettes, pipes, cigars, bidis, kreteks, and smokeless tobacco and alternative nicotine delivery systems, such as tobacco lozenges, nicotine water, nicotine lollipops, or heated tobacco-cigarette substitutes (electronic cigarettes). The AAPD supports national, state, and local legislation that eliminates tobacco advertising and promotions that appeal to or influence children, adolescents, or special groups. The AAPD supports prevention efforts through merchant education and enforcement of state and local laws prohibiting tobacco sales to minors. As environmental tobacco smoke (ETS) is a known human carcinogen and there is no evidence to date of a safe exposure level to ETS (secondhand or passive smoke),<sup>22</sup> the AAPD also supports the enactment and enforcement of state and local clean indoor air and/or smoke-free policies or ordinances prohibiting smoking in public places.

Furthermore, the AAPD encourages oral health professionals to:

- Determine and document tobacco use by patients and the smoking status of their parents, guardians, and caregivers.
- Promote and establish policies that ensure dental offices, clinics, and/or health care facilities, including property grounds, are tobacco free.
- Support tobacco-free school laws and policies.
- Serve as role models by not using tobacco and urging staff members who use tobacco to stop.
- Routinely examine patients for oral signs of and changes associated with tobacco use.

- Educate patients, parents, and guardians on the serious health consequences of tobacco use and exposure to ETS in the home.
- Provide both prevention and cessation services using evidence-based interventions identified as best practice for treating tobacco use and nicotine addiction.
- Work to ensure all third-party payors include best practice tobacco cessation counseling and pharmacotherapeutic treatments as benefits in health packages.
- Work with school boards to increase tobacco-free environments for all school facilities, property, vehicles, and school events.
- Work on the national level and within their state and community to organize and support anti-tobacco campaigns and to prevent the initiation of tobacco use among children and adolescents, eliminate cigarette sales from vending machines, and increase excise tax on tobacco products to reduce demand.
- Work with legislators, community leaders, and health care organizations to ban tobacco advertising, promotion, and sponsorships.
- Organize and support efforts to pass national, state, and local legislation prohibiting smoking in businesses such as day-care centers where children routinely visit and other establishments where adolescents frequently are employed.
- Establish and support education/training activities and prevention/cessation services throughout the community.
- Recognize the U.S. Public Health Service Clinical Practice Guideline “Treating Tobacco Use and Dependence”<sup>48</sup> as a valuable resource.

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