Policy on Tobacco Use

Latest Revision

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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 developed by the Council on Clinical Affairs and adopted in 2000.[1] This document is an update of the previous version, revised in 2015.[2] This policy revision is based upon a review of current dental, medical, and public health literature related to tobacco use which included a search of the PubMed®/MEDLINE database using the terms: child and adolescent tobacco use, smokeless tobacco and oral disease, adolescent pregnancy and tobacco, secondhand smoke, and caries and smoking; fields: all; limits: within the last 10 years, humans, English, clinical studies, meta-analysis, systematic reviews, birth through age 18. The search returned 525 articles that matched the criteria. The articles were evaluated by title and/or abstract. Forty-nine articles were chosen from this method and from references within selected articles. 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 United States 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 more than eight million people a year.[3] Tobacco use is considered one of the largest public health threats the world has ever faced.[3,4] More than 1.2 million deaths are the result of non-smokers being exposed to second-hand smoke.[3] Up to half of current users eventually will die of a tobacco-related disease.[3] In the United States (**U.S.**), the Surgeon General's report states that smoking is the single greatest avoidable cause of death.[4] 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."[4]

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 through 2019 as part of the Healthy People 2010 and 2020 objectives on tobacco use.[5] 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. Data show that:

- smoking and smokeless tobacco use are initiated and established primarily during adolescence.[4] Nearly nine out of 10 smokers started smoking by age 18, and 98 percent started by age 26.[6]
- each day in the U.S., about 2000 people younger than 18 years of age smoke their first cigarette, and more than 300 youth under 18 years of age become daily cigarette smokers.[7]
- 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.[4] This represents about one in every 13 Americans aged 17 years or younger alive today.[4]
- in 2017, 5.6 percent of middle school and 19.6 percent of high school students currently used tobacco products, including cigarettes, cigars, smokeless tobacco, pipe tobacco, bidis (unfiltered cigarettes from India), and electronic cigarettes.[8]
- from 2011 to 2019, current use of smokeless tobacco decreased among middle and high school students.[9] Nearly two of every 100 middle school students (1.8 percent) reported in 2019 that they had used smokeless tobacco in the last 30 days, a decrease from 2.2 percent in 2011.[9] Nearly six out of every 100 high school students (5.9 percent) reported in 2019 that they used smokeless tobacco in the last 30 days, a decrease from 7.9 percent in 2011.[9] Smokeless tobacco use remains a mostly male behavior,[9] being seen in 7.5 percent of male high school students and 1.8 percent of females.[9]

ABBREVIATIONS

AAPD: American Academy of Pediatric Dentistry. **CDC:** Centers for Disease Control and Prevention. **ETS:** Environmental tobacco smoke. **NYTS:** National Youth Tobacco Survey. **U.S.:** United States.

Reports show that most people who use cigarettes begin smoking as a teen.[4,6] Aggressive marketing of tobacco products by manufacturers,[6,10-13] smoking by parents,[10,13,14] peer influence,[6,10,13] a functional belief in the benefits and normalcy of tobacco,[10,13,15] availability and price of tobacco products,[10,13] low socioeconomic status,[10] low academic achievement,[6,10] lower self-image,[10] and a lack of behavioral skills to resist tobacco offers[10] all contribute to the initiation of tobacco use during childhood and adolescence. Teens who use tobacco are more likely to use alcohol and other drugs[10] and engage in high risk sexual behaviors.[16,17]

If youth can be discouraged from starting smoking, it is less likely that they will start smoking as an adult. The 2012 Report of the 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.[6] Oral health professionals can have success with tobacco cessation by counseling patients during the oral examination component of dental visits.[18]

Consequences of tobacco use

Smoking increases the risk for: coronary heart disease by 2-4 times, stroke by 2-4 times, men developing lung cancer by 25 times, and women developing lung cancer 25.7 times.[19] Smoking causes diminished overall health, increased absenteeism from work, and increased health care utilization and cost.[6,20] Other catastrophic health outcomes are cardiovascular disease; reproductive effects; pulmonary disease; leukemia; cataracts; and cancers of the cervix, kidney, pancreas, stomach, lung, larynx, bladder, oropharynx, and esophagus.[19]

Environmental tobacco smoke ([**ETS**]; secondhand or passive smoke) imposes significant risks as well. Secondhand exposure results in the death of 41,000 nonsmoking adults and 400 infants each year.[21] The Surgeon General reported a 25 to 30 percent increased risk for coronary heart disease for nonsmokers exposed to secondhand smoke and a 20 to 30 percent increased risk for lung cancer for those living with a smoker.[22] Infants and children who are exposed to smoke are at risk for sudden infant death syndrome (SIDS)[3,19,22,23], acute respiratory infections[23], middle ear infections[23], bronchitis[23], pneumonia[23], asthma[23-25], allergies[26,27], and infections during infancy.[28] In addition, caries in the primary dentition is related to secondhand smoke exposure.[29-31] Enamel hypoplasia in both the primary and permanent dentition may be related to secondhand cigarette smoke exposure during childhood.[32] Prenatal exposure to secondhand smoke has been associated with cognitive deficits[23] (e.g., reasoning abilities) and deficits in reading, mathematics, and visuospatial relationships.[33]

Thirdhand smoke refers to the particulate residual toxins that are deposited in layers all over the home after a cigarette has been extinguished.[34] These volatile compounds are deposited and emit gas into the air over months.[35,36] 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.[34]

Tobacco use can result in oral disease. Oral cancer,[3,4,19] periodontitis,[4,23,37-41] compromised wound healing, a reduction in the ability to smell and taste[23], smoker's palate (red inflammation turning to harder white thickened tissues), and melanosis (dark pigmenting of the oral tissues), coated tongue, staining of teeth[23] and restorations[23,41], implant failure[4], and leukoplakia[41,42] are all seen in tobacco users.[42,43] Use of smokeless tobacco is a risk factor for oral cancer, leukoplakia, and erythroplakia, loss of periodontal support, and staining of teeth and composite restorations.[41]

The monetary costs of this addiction and resultant morbidity and mortality are staggering. Annually, cigarette smoking costs the U.S. $300 billion, based on lost productivity (more than $156 billion) and health care expenditures (nearly $170 billion).[44] Lost productivity due to exposure to secondhand smoke is about $5.6 billion annually.[44] Contrast this with tobacco industry expenditures on advertising and political promotional expenses of $8.4 billion in 2018 in the U.S. alone.[44]

Current trends indicate that tobacco use will cause more than eight million deaths a year by 2030.[3] 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 ETS is a known human carcinogen and there is no evidence to date of a safe exposure level to ETS,[23] 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*[45] as a valuable resource.

References

1. American Academy of Pediatric Dentistry. Policy on tobacco use. Pediatr Dent 2000;22(suppl iss):39.
2. American Academy of Pediatric Dentistry. Tobacco use. Pediatr Dent 2015;37(special issue):61-5.
3. World Health Organization. Tobacco key facts. Available at: "http://www.who.int/mediacentre/factsheets/fs339/en/". Accessed August 7, 2020.
4. U.S. Department of Health and Human Services. The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General. Rockville, Md.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center of Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Available at: "https://www.ncbi.nlm.nih.gov/books/NBK179276/pdf/Bookshelf_NBK179276.pdf". Accessed August 7, 2020.
5. U.S. Department of Health and Human Services. Healthy people 2020: Tobacco use and healthy people 2020 objectives-Tobacco priority area. Washington, D.C., 2014 Available at: "https://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use". Accessed August 7, 2020.
6. 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, Office on Smoking and Health; 2012. Available at: "https://www.ncbi.nlm.nih.gov/books/NBK99237/". Accessed August 7, 2020.
7. Centers for Disease Control and Prevention. Smoking and Tobacco Use: Fast Facts. Available at: "https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm#beginning". Accessed August 7, 2020.
8. Wang, TW, Gentzke A, Sharapova S, Cullen KA, Ambrose BK, Jamal A. Tobacco product use among middle and high school students-United States, 2011-2017. MMWR Morb Mortal Wkly Rep 2018;67:629-33. Available at: "https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5991815/". Accessed November 11, 2020.
9. Centers for Disease Control and Prevention. Youth and Tobacco Use. Available at: "https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm". Accessed November 11, 2020.
10. Elders MJ, Perry CL, Eriksen MP, Giovino GA. The report of the Surgeon General: Preventing tobacco use among young people. Am J Public Health 1994;84(4):543-7. Available at: "https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1614776/". Accessed August 7, 2020.
11. Centers for Disease Control and Prevention. Cigarette brand preference among middle and high school students who are established smokers – United States, 2004 and 2006. MMWR Morb Mortal Wkly Rep 2009;58(5):112-5.
12. Lavoto C, Linn G, Stead LF, Best A. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. Cochrane Database Syst Rev 2003;(4):CD003439.
13. American Lung Association. Why kids start smoking. March 19, 2020. Available at: "https://www.lung.org/quit-smoking/helping-teens-quit/why-kids-start-smoking". Accessed August 7, 2020.
14. Gilman SE, Rende R, Boergers J, et al. Parental smoking and adolescent smoking initiation: An intergenerational perspective on tobacco control. Pediatrics 2009;123(2):e274-81.
15. Song AV, Morrell HE, Cornell JL, et al. Perceptions of smoking-related risks and benefits as predictors of adolescent smoking initiation. Am J Public Health 2009;99(3):487-92.

References continued on the next page.

16. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Programs-2014. 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; 2014. Available at: "https://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf". Accessed August 7, 2020.
17. American Cancer Society. Health Risks of Smoking Tobacco. November 15, 2018. Available at: "https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/health-risks-of-smoking-tobacco.html". Accessed August 7, 2020.
18. Carr AB, Ebbert J. Interventions for tobacco cessation in the dental setting. Cochrane Database Syst Rev 2012; 6:CD005084.
19. Centers for Disease Control and Prevention. Smoking and tobacco use: Health effects of cigarette smoking. April 28, 2020. Available at: "https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm". Accessed August 7, 2020.
20. Campaign for Tobacco Free Kids. The daily toll of tobacco use in the USA. October 23, 2019. Available at: "https://www.tobaccofreekids.org/assets/factsheets/0300.pdf". Accessed August 7, 2020.
21. Centers for Disease Control and Prevention. Smoking and Tobacco: Secondhand smoke. Available at: "https://www.cdc.gov/tobacco/basic_information/secondhand_smoke". Accessed August 7, 2020.
22. U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: 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; 2006. Available at: "https://www.ncbi.nlm.nih.gov/books/NBK44324/pdf/Bookshelf_NBK44324.pdf". Accessed August 7, 2020.
23. Campaign for Tobacco-Free Kids. Tobacco harm to kids. December 6, 2019. Available at: "https://www.tobaccofreekids.org/assets/factsheets/0077.pdf". Accessed August 7, 2020.
24. Burke H, Leonardi-Bee J, Hashim A, et al. Prenatal and passive smoke exposure and incidence of asthma and wheeze: Systematic review and meta-analysis. Pediatrics 2012;129(4):735-44.
25. Goodwin RD, Cowles RA. Household smoking and childhood asthma in the United States: A state-level analysis. J Asthma 2008;45(7):607-10.
26. Dietert RR, Zelikoff JT. Early-life environment, developmental immunotoxicology, and the risk of pediatric allergic disease including asthma. Birth Defects Res B Dev Reprod Toxicol 2008;83(6):547-60.
27. Lannerö E, Wickman M, van Hage M, Bergström A, Pershagen G, Nordvall L. Exposure to environmental tobacco smoke and sensitisation in children. Thorax 2008;63(2):172-6.
28. Ladomenou F, Kafatos A, Galanakis E. Environmental tobacco smoke exposure as a risk factor for infections in infancy. Acta Paediatr 2009;98(7):1137-41.
29. Leroy R, Hoppenbrouwers K, Jara A, Declerck D. Parental smoking behavior and caries experience in preschool children. Community Dent Oral Epidemiol 2008;36(3): 249-57.
30. Hanioka T, Nakamura E, Ojima M, Tanaka K, Aoyama H. Dental caries in 3-year-old children and smoking status of parents. Paediatr Perinat Epidemiol 2008;22(6): 546-50.
31. Hanioka T, Ojima M, Tanaka K, Yamamoto M. Does secondhand smoke affect the development of dental caries in children? A systematic review. Int J Environ Res Public Health 2011;8(5):1503-19.
32. Ford D, Seow WK, Kazoullis S, Holcombe T, Newman B. A controlled study of risk factors for enamel hypoplasia in the permanent dentition. Pediatr Dent 2009;31(5): 382-8.
33. Yolton K, Dietrich K, Auinger P, Lanphear BP, Hornung R. Exposure to environmental tobacco smoke and cognitive abilities among U.S. children and adolescents. Environ Health Perspect 2005;113(1):98-103.
34. Winickoff JP, Friebely J, Tanski SE, et al. Beliefs about the health effects of "thirdhand" smoke and home smoking bans. Pediatrics 2009;123(1):e74-9.
35. Matt GE, Quintana PJ, Hovell MF, et al. Households contaminated by environmental tobacco smoke: Sources of infant exposures. Tob Control 2004;13(1):29-37.
36. Singer BC, Hodgson AT, Guevarra KS, Hawley EL, Nazaroff WW. Gas-phase organics in environmental tobacco smoke. 1. Effects of smoking rate, ventilation, and furnishing level on emission factors. Environ Sci Technol 2002;36(5):846-53.
37. Johnson GK, Hill M. Cigarette smoking and the periodontal patient. J Periodontol 2004;75(2):196-209.
38. Bergström J, Eliasson S, Dock J. A 10-year prospective study of tobacco smoking and periodontal health. J Periodontol 2000;71(8):1338-47.
39. Albandar JM, Streckfus CF, Adesanya MR, Winn DM. Cigar, pipe, and cigarette smoking as risk factors for periodontal disease and tooth loss. J Periodontol 2000; 71(2):1874-81.
40. Johnson GK, Slach NA. Impact of tobacco use on periodontal status. J Dent Educ 2001;65(4):313-21.
41. Muthukrishnan A, Warnakulasuri S. Oral health consequences of smokeless tobacco use. Indian J Med Res 2018;148(1):35-40. Available at: "https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6172921/". Accessed August 7, 2020.

42. Vellappally S, Fiala Z, Smejkalová J, Jacob V, Somanathan R. Smoking related systemic and oral diseases. Acta Medica 2007;50(3):161-6.
43. Reibel J. Tobacco and oral diseases. Update on the evidence, with recommendations. Med Princ Pract 2003;12(Suppl 1):22-32. Available at: "https://www.karger.com/Article/Pdf/69845". Accessed August 7, 2020.
44. Centers for Disease Control and Prevention. Smoking and Tobacco Use: Economic trends in tobacco. May 18, 2020. Available at: "https://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/index.htm". Accessed August 7, 2020.
45. Tobacco Use and Dependence Guideline Panel. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, Md.: U.S. Department of Health and Human Services. Public Health Service; 2008. Available at: "https://www.ncbi.nlm.nih.gov/books/NBK63952/". Accessed August 7, 2020.