

Ensuring the protection of children from the interference of the tobacco industry

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ABSTRACT

Children are particularly vulnerable to the tactics used by the tobacco industry, highlighting the need for strong protective measures from public health officials, educators, parents, and policymakers. The developing brains of children demonstrate significant susceptibility to nicotine addiction, increasing the likelihood of lasting dependence. Tobacco companies employ targeted marketing strategies to engage youth through the use of attractive flavours, packaging, and social media campaigns. The early onset of tobacco use is associated with a heightened risk of chronic diseases in adulthood, including cancer, respiratory disorders, and cardiovascular conditions. Additionally, children often demonstrate a lack of critical awareness concerning manipulative advertising and industry strategies. Reducing children's exposure to tobacco can significantly lower future public health issues and healthcare costs linked to tobacco-related illnesses. International frameworks, such as the WHO Framework Convention on Tobacco Control, emphasize the necessity of safeguarding youth from tobacco industry interference. Early prevention initiatives can decrease the likelihood of tobacco experimentation and the progression to regular use among adolescents.

Keywords: World No Tobacco Day; tobacco consumption; tobacco dependence; smoking-related diseases; preventable cause.

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INTRODUCTION

May 31, 2024, signifies 'World No Tobacco Day', a worldwide movement spearheaded by the World Health Organisation and several global agencies. The day is devoted to promoting awareness of the harmful consequences of tobacco consumption and confronting the tobacco industry. The industry, frequently aimed at children and early teenagers, significantly contributes to the elevated tobacco consumption within these demographics. The theme for this year is 'Safeguarding youngsters from tobacco industry interference'.

Tobacco consumption, identified as the foremost preventable cause of illness and death, is a considerable public health issue.

The critical term is 'preventable'. Studies reveal that 80% to 90% of adults began their habits in adolescence, with two-thirds becoming habitual smokers by age 19. This troubling tendency categorises tobacco use as a childhood illness. In the United States, over 1.4 million minors under 18 initiate smoking annually, resulting in premature fatalities from smoking-related diseases. Adolescents frequently display indicators of tobacco dependence early in their smoking experience, even prior to becoming daily smokers. The imperative to tackle this significant issue is highlighted by the markedly elevated prevalence of tobacco smoking among teenagers and young adults in contrast to older adult demographics.¹

BRIEF REVIEW

TOBACCO MISUSE

Tobacco products have nicotine, an addictive substance, in addition to many hazardous compounds, many of which are recognised carcinogens. There exists no secure method, degree, frequency, or duration for the use or exposure to tobacco.² The consumption of tobacco in any form can result in addiction, considerable health complications, and untimely mortality. It is imperative to acknowledge that smokeless tobacco, frequently perceived as a safer substitute for cigarette smoking, is equally detrimental. Tobacco can be ingested through multiple modalities, encompassing smokeless varieties such as chewing tobacco and snuff, alongside smoked products including hookah, water pipes, cigars (comprising large cigars, cigarillos, and little cigars), bidis, kreteks, and cigarettes.³ Nicotine, present in tobacco, is a potent addictive agent that exerts diverse physiological and psychological effects. It activates the brain's reward system, which engages during pleasurable activities such as eating and sexual intercourse.⁴ Ceasing tobacco use can be exceedingly difficult due to the withdrawal symptoms that several individuals have, which can be distressing and erratic. Typical withdrawal symptoms encompass anxiety, irritability, impaired concentration, restlessness, impatience, heightened hunger, tremors, tachycardia, perspiration, dizziness, nicotine cravings, insomnia, somnolence, headaches, gastrointestinal disturbances, and depression. This underscores the significance of support and comprehension for individuals attempting to quit.⁵ The interplay of nicotine's addictive properties and withdrawal symptoms renders dependence a chronic, recurring condition.

An adverse correlation was observed between cigarette smoking rates and both socioeconomic position and educational attainment among youth and adults.¹ There exists a robust association between nicotine dependency and mental health disorders,

substantiated by comprehensive research in the domain. Nicotine dependence is more common in adults with mental health disorders, including schizophrenia, depression, and anxiety disorders.⁶ Research indicates that enforcing a smoking ban in inpatient psychiatric facilities resulted in heightened staff satisfaction and a notable decrease in violence and behavioural problems linked to smoking habits.⁷

Comprehending the commencement of tobacco consumption and the emergence of addiction necessitates the evaluation of multiple components. Biological factors, particularly genetics, significantly influence outcomes. These factors can affect a person's vulnerability to addiction. Socio-environmental factors, such as advertising, media impact, peer pressure, parental supervision, and ethnic and gender considerations, also play a role. Psychological aspects, including child development and weight-related anxieties, contribute to the intricate scenario.⁸

Parents, especially smokers, greatly impact their children's behaviour. The probability of a teenager initiating smoking doubles if at least one parent smokes, highlighting the critical impact of parental influence on smoking onset. This emphasises the obligation of parents to deter their children from smoking.⁹

Environmental factors significantly influence smoking behaviour. The availability of tobacco products at home, the witnessing of smoking by parents or friends, and the potential effects of prenatal nicotine exposure or second-hand smoke postnatally can increase a teenager's vulnerability to smoking. This highlights the necessity for vigilance and awareness within the household and community.

Studies on twins have demonstrated that hereditary influences significantly impact smoking behaviour. These genetic factors are crucial for comprehending smoking start, maintenance, and cessation capabilities. The heritability of smoking initiation is approximately 50%, whereas for smoking persistence, it is roughly 70%. This highlights

the intricacy of adolescent smoking and the necessity for comprehensive preventive methods.¹⁰

The impact of smoking peers is a significant determinant in the onset of tobacco consumption among adolescents. Individuals with a more extensive network of smoking acquaintances are more inclined to initiate smoking themselves. This underscores the potential influence of comprehending and utilising social dynamics in smoking prevention. By acknowledging the impact of peer groups, we can formulate more efficacious prevention programmes. Moreover, adolescents who exaggerate the prevalence of smoking among their peers and view it as a fashionable behavior within successful or elite social groups are at an increased risk of initiating smoking.¹¹

Studies have repeatedly demonstrated a robust correlation between body weight and smoking in adolescent females. Females with elevated body weight or weight-related worries exhibit a greater propensity to smoke, underscoring the intricate connection between body image and smoking behaviours. This highlights the significance of comprehending this intricate link, enhancing the audience's insight and maintaining engagement.¹²

ORIGINS OF TOBACCO CONSUMPTION AMONG ADOLESCENTS

Non-commercial sources of tobacco for adolescents, such as peers, siblings, parents, relatives, and babysitters, are disturbingly widespread.¹³ Young individuals frequently get their initial cigarettes from friends or siblings, although pilfering from parents is rather rare. Following their initial cigarette, individuals who persist in smoking predominantly depend on peers of similar age as their main source.¹⁴ The practice of sharing cigarettes among friends is not merely common; it is prevalent, underscoring the social dimension of adolescent smoking. A survey revealed that an extraordinary 99% of teenage smokers indicated they had acquired tobacco via friends at some stage, highlighting the dominance of this source.¹³

MITIGATING TOBACCO AS A PRECURSOR TO SUBSTANCE MISUSE

Tobacco, sometimes seen as a gateway drug, markedly elevates the probability of adolescents engaging in the use of further narcotics. Individuals who smoke are threefold more likely to consume alcohol, eightfold more likely to use marijuana, and an astonishing twentyfold more likely to use cocaine.^{1,16}

Smoking elevates not just health risks but also behavioural issues, as it is associated with other high-risk activities. This association highlights the necessity for thorough preventative methods. Healthcare professionals, lawmakers, educators, and engaged community members are essential in advocating for and executing these initiatives.¹⁷ Their collaborative efforts are vital in tackling the issue. The correlation between tobacco use and youth violence highlights the necessity for tailored interventions, which should be prioritised in our initiatives.

CONSEQUENCES OF TOBACCO CONSUMPTION

Smoking, a modifiable behaviour, causes significant damage to nearly all bodily organs, resulting in severe health complications and diseases for both smokers and anyone exposed to second-hand smoke.¹ In the United States, the preventable health consequences of smoking account for around 438,000 fatalities annually. Notwithstanding the widely recognised hazards linked to tobacco consumption, both adults and adolescents persist in experiencing its repercussions. This highlights the need to adopt healthy choices and circumvent the preventable diseases associated with smoking. Smoking hinders lung development, diminishes lung function, and dramatically affects physical endurance. Smokers have, on average, a resting heart rate of 2 to 3 beats per minute higher than non-smokers. Smokers are predisposed to recurrent coughing and significant respiratory ailments over time. They often exhibit diminished physical endurance and may experience dyspnea with moderate exercise, substantially affecting their everyday

activities. Moreover, nicotine can discolour teeth, serving as a conspicuous indicator of tobacco consumption. Smokeless tobacco consumption is associated with numerous oral health complications, such as periodontal disease, gum recession, leukoplakia, and oral cavity malignancies.¹⁸

Smoking is the predominant cause of lung cancer, exceeding breast cancer as the foremost contributor to cancer-related mortality among women and girls. Female smokers encounter an elevated risk of many malignancies, including those of the oral cavity, pharynx, larynx, oesophagus, pancreas, kidney, bladder, and uterine cervix. Moreover, female smokers face a twofold increase in the risk of coronary heart disease and a tenfold increase in mortality from chronic obstructive pulmonary disease. Additionally, cigarette smoking elevates the risks of infertility, preterm delivery, stillbirth, low birth weight, and sudden infant death syndrome.¹

PREVENTIVE STRATEGIES

Public health strategies, such as limiting tobacco advertising in public areas and enforcing regulations against sales to minors, are essential. As experts, policymakers, and activists for tobacco control, you are instrumental in executing these methods and elevating tobacco prices via taxation.¹⁹

The societal acceptance of tobacco requires substantial transformation, and you, as policymakers, health activists, and educators, are pivotal in this endeavour. This can be accomplished through the implementation of school smoking prohibitions, the provision of health education, the enforcement of family smoking limits, and the limitation of smoking in public areas.²⁰

Preventive measures must encompass the prohibition of the promotion, marketing, and advertising of tobacco products, especially those targeting children and teenagers.²¹ Furthermore, sponsorship of activities such as racing and the portrayal of smoking in films should be forbidden.

Paediatricians should employ anticipatory counsel to establish and advocate for personalised programmes that inform patients and their families about the prevention of tobacco use and exposure. Children ought to be assessed for smoking risks beginning at the age of five. Each therapeutic interaction must incorporate enquiries on tobacco consumption and exposure to second-hand smoke, accompanied by precise documentation of this data in the patient's medical record. It is essential to educate children and adolescents about the detrimental consequences of tobacco and the concerning accessibility that might facilitate experimenting, perhaps resulting in addiction and habitual usage. This should evoke a sense of apprehension and alertness in your practice.^{22,23} Given that children with smoking parents are more predisposed to smoking and typically commence at a younger age, screening for parental tobacco use is an essential preventive strategy.²⁴ As paediatricians, you advocate for parents to uphold smoke-free environments in homes and vehicles. Parents can substantially affect their children's smoking behaviour by explicitly communicating their expectations for them to remain smoke-free, regardless of their smoking habits. This proactive strategy can substantially impact the health of your young patients.²⁵

RESPONSIBILITIES OF CLINICIANS IN REDUCING TOBACCO CONSUMPTION

Studies reveal that a considerable proportion of teenage and young adult smokers demonstrate a profound intention to quit and engage in earnest efforts to achieve cessation. Although the present success rate is low, it is crucial to acknowledge the possibility of an increased success rate with appropriate support and interventions. It is troubling that a limited number of these adolescents pursue medical aid.²⁶ Several factors may elucidate this phenomenon. This encompasses an absence of effective smoking cessation treatments for kids, underscoring the pressing necessity for more research and development in this domain. The conviction among youth that cessation does not

necessitate professional assistance, a desire for confidentiality, and the insufficiency of existing cessation programs in addressing the specific challenges pertinent to young tobacco users.

Paediatricians must comply with confidentiality requirements set by professional organisations in paediatric and adolescent medicine and applicable state legislation when delivering medical care concerning tobacco use. This dedication to anonymity is essential for fostering trust and respect with adolescent patients.²⁷

REQUIREMENT FOR ADDITIONAL RESEARCH

Substantial deficiencies exist in the scientific understanding required to underpin tobacco control guidelines. Critical areas necessitating additional research encompass comprehending the motivations for tobacco cessation attempts, evaluating the safety and efficacy of tobacco cessation medications for adolescents, assessing the utilisation and effectiveness of telephone quit lines, and investigating web-based strategies for engaging youth in tobacco cessation initiatives.

CONCLUSIONS

Medical practitioners are essential to mitigating tobacco addiction and passive exposure in the paediatric population. Their involvement is essential, involving educating patients and their families regarding tobacco use prevention, providing quitting assistance, offering guidance, conducting screenings, and delivering counselling and referrals as necessary.

Coordinated efforts are essential to enhance policies, raise public awareness, and enable communities to safeguard children from the tobacco industry's influence. Involve parents, carers, and youth as key players in tobacco control advocacy and peer education initiatives.

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REFERENCES

1. Tammy HS. Tobacco as a substance of abuse. *Pediatrics*. 2009;124(5):e1045-e1053.
2. US Public Health Service, Office of the Surgeon General, US Office on Smoking and Health. The health consequences of smoking: a report of the surgeon general. Rockville, MD: US Department of Health and Human Services, Public Health Service; 2004.
3. American Academy of Pediatrics, Committee on Environmental Health, Committee on Substance Abuse, Committee on Adolescence, and Committee on Native American Child Health. Tobacco use: a pediatric disease. *Pediatrics*. 2009;124(5):1473-1486.
4. Tomkins DM, Sellers EM. Addiction and the brain: the role of neurotransmitters in the cause and treatment of drug dependence. *CMAJ*. 2001;164(6):817-821.
5. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed (DSM-IV). Washington, DC: American Psychiatric Association; 1994.
6. Heiligenstein E, Smith SS. Smoking and mental health problems in treatment-seeking university students. *Nicotine Tob Res*. 2006;8(4):519-523.
7. Monihan KM, Schacht LM, Parks J. A comparative analysis of smoking policies and practices among state psychiatric hospitals. Alexandria, VA: National Association of State Mental Health Program Directors Research Institute Inc; 2006.
8. Hill KG, Hawkins JD, Catalano RF, Abbott RD, Guo J. Family influences the risk of daily smoking initiation. *J Adolesc Health*. 2005;37(3):202-210.
9. den Exter Blokland EA, Engels RC, Hale WW 3rd, Meeus W, Willemsen MC. Lifetime parental smoking history and cessation and early adolescent smoking behavior. *Prev Med*. 2004;38(3):359-368.

10. Munafo` M, Clark T, Johnstone E, Murphy M, Walton R. The genetic basis for smoking behavior: a systematic review and meta-analysis. *Nicotine Tob Res.* 2004;6(4):583-597.
11. Primack BA, Switzer GE, Dalton MA. Improving measurement of normative beliefs involving smoking among adolescents. *Arch Pediatr Adolesc Med.* 2007;161(5):434-439.
12. Potter BK, Pederson LL, Chan SS, Aubut JA, Koval JJ. Does a relationship exist between body weight, concerns about weight, and smoking among adolescents? An integration of the literature with an emphasis on gender. *Nicotine Tob Res.* 2004;6(3):397-425.
13. DiFranza J, Eddy J, Brown L, Ryan J, Bogojavlensky A. Tobacco acquisition and cigarette brand selection among youth. *Tob Control.* 1994;3(4):334-448.
14. Centers for Disease Control and Prevention. Usual sources of cigarettes for middle and high school students: Texas, 1998 -1999. *MMWR Morb Mortal Wkly Rep.* 2002;51(40):900-901.
16. Henningfield JE, Clayton R, Pollin W. Involvement of tobacco in alcoholism and illicit drug use. *Br J Addict.* 1990;85(2):279-291.
17. Resnick MD, Ireland M, Borowsky I. Youth violence perpetration: what protects? What predicts? Findings from the national longitudinal study of adolescent health. *J Adolesc Health.* 2004;35(5):424.e1- 424.e10.
18. International Agency for Research on Cancer. Summaries and evaluations: tobacco products, smokeless (group 1). [cited 2024 December 31]. Available at: www.inchem.org/documents/iarc/suppl7/tobaccosmokeless.html.
19. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs: 2007. Atlanta, GA: US 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; 2007.
20. Wakefield MA, Chaloupka FJ, Kaufman NJ, Orleans CT, Barker DC, Ruel EE. Effect of restrictions on smoking at home, at school, and in public places on teenage smoking: cross-sectional study. *BMJ.* 2000;321(7257):333-337
21. National Association of Attorneys General. The Tobacco Master Settlement Agreement. [cited 2024 December 24]. Available from: URL: www.naag.org/tobacco.php.
22. DiFranza JR, Rigotti NA, McNeill AD, et al. Initial symptoms of nicotine dependence in adolescents. *Tob Control.* 2000;9(3):313-319.
23. DiFranza JR, Savageau JA, Fletcher K, et al. Symptoms of tobacco dependence after brief intermittent use: the Development and Assessment of Nicotine Dependence in Youth-2 study. *Arch Pediatr Adolesc Med.* 2007;161(7):704-710.
24. Bauman KE, Foshee VA, Linzer MA, Koch GG. Effect of parental smoking classification on the association between parental and adolescent smoking. *Addict Behav.* 1990;15(5): 413-422.
25. Jackson C, Dickinson D. Enabling parents who smoke to prevent their children from initiating smoking: results from a 3-year intervention evaluation. *Arch Pediatr Adolesc Med.* 2006;160(1):56-62.
26. Grimshaw G, Stanton A, Blackburn C, et al. Patterns of smoking, quit attempts and services for a cohort of 15- to 19-year-olds. *Child Care Health Dev.* 2003;29(6):457-464.
27. American Academy of Pediatrics, Committee on Adolescence. Achieving quality health services for adolescents. *Pediatrics.* 2008;121(6):1263-1270.

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