Policy Statement

Secondhand Smoke Exposure and Children

International Pediatric Association Committee on Environmental Health

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Tobacco use, well known to be the cause of the epidemic of lung cancer and heart disease around the world, is also causing an enormous burden of disease among children. Indeed, secondhand smoke is causing an epidemic of preventable diseases among children.

The affected children do not themselves smoke. The most significant source of secondhand smoke exposure of children is smoking by an adult living with the child.¹ Secondhand smoke contains more than 50 carcinogens, including polycyclic aromatic hydrocarbons, *N*-nitrosamines, aromatic amines, aldehydes, and other organic (benzene and others) and inorganic (heavy metals, polonium-210) compounds.²

The adverse health effects of exposing children to secondhand smoke are well established. Many researchers suggest that children are more susceptible to these health effects than adults.² Short-term effects are primarily respiratory and include increased incidence and severity of upper and lower respiratory infections, otitis media with effusion, sudden infant death syndrome (SIDS), and asthma exacerbations.^{2,3}

Unfortunately, secondhand smoke exposure occurs all over the world.⁴ There is a growing body of evidence indicating long-term effects of secondhand smoke exposure during childhood, especially early childhood, including decreased lung function, increased incidence of asthma, including asthma as an adult, and increased incidence of cancers.^{2,3,5} Children exposed to secondhand smoke are more likely to have respiratory complications when undergoing general anesthesia.⁶ Secondhand smoke exposure is also associated with childhood dental caries.⁷ Among children aged 4 to 16 years, secondhand smoke exposure is significantly associated with 6 or more days of school absence in the past year.⁸ Children living in households with smokers are at greater risk for injury and death due to fires.⁹ Playing with cigarette lighters or matches by children age <10 years causes thousands of fires and child deaths each year.¹⁰

Living in a home with a smoking parent also increases a child's risk of becoming a smoker. Most tobacco use begins before age 18 years,¹¹ influenced by exposure to tobacco use by parents or peers, glamorous depictions in movies and other media, advertising that targets children and adolescents, and other environmental, social, and cultural factors.^{11,12}

Research with children has demonstrated an association between exposure to smoking in movies and increased positive attitudes about smoking and tobacco use,^{13, 14} overestimation of the prevalence of smoking,¹⁴ and greater intentions to smoke.¹³ The US National Cancer Institute has concluded that smoking in the movies causes adolescent smoking,¹⁵ a conclusion endorsed by the World Health Organization.¹⁶ More needs to be done to ensure that smoking in movies does not lure children to become addicted.

The IPA promotes effective techniques to reduce initiation of tobacco use. These include 1) increasing the unit price for tobacco products, 2) mass media education campaigns, and 3)

community mobilization to restrict children's access to tobacco products. Strategies to reduce tobacco use initiation should be part of a large, nation-wide program of tobacco control. Successful programs include:¹⁷

- 1. *National interventions* that support, implement, and unite organizations, systems, and networks that encourage and support tobacco free behavior choices.
- 2. *Health communication interventions* that deliver messages supporting tobacco-free behavior choices through many venues and to many groups.
- 3. *Cessation interventions* based in, but not limited to, the healthcare system, that ensure all patients are screened for tobacco use, receive brief cessation interventions, and are offered more intensive help in quitting.
- 4. *Surveillance and evaluation* of tobacco-related attitudes, behaviors, and health outcomes at regular intervals.
- 5. *Administration and management* that provides funding for the skilled staff, effective managers, and strong leaders needed to implement these programs.

The International Pediatric Association has committed to work together with National Pediatric societies, Ministries of Health, professional organizations, non-governmental organizations and civil society to ensure that children are protected from the harmful effects of breathing other people's smoke. It is an important step in assuring that the next generation is healthier.

References

- 1. Schwab M, McDermott A, Spengler J. Using longitudinal data to understand children's activity patterns in an exposure context: data from the Kanawha County Health Study. *Environ Int.* 1992;18:173-189.
- 2. US 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, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006.
- 3. California Environmental Protection Agency, Air Resources Board, Office of Environmental Health Hazard Assessment. *Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant.* 2005.
- 4. The GTSS Collaborative Group. A cross country comparison of exposure to secondhand smoke among youth. *Tob Control.* 2006;15 Suppl 2:ii4-19.
- 5. US Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. Washington, DC: US Environmental Protection Agency, Office of Research and Development, Office of Air and Radiation; 1992.
- 6. Drongowski RA, Lee D, Reynolds PI, et al. Increased respiratory symptoms following surgery in children exposed to environmental tobacco smoke. *Paediatr Anaesth.* 2003;13(4):304-310.
- 7. Aligne CA, Moss ME, Auinger P, Weitzman M. Association of pediatric dental caries with passive smoking. *JAMA*. 2003;289(10):1258-1264.
- 8. Mannino DM, Moorman JE, Kingsley B, Rose D, Repace J. Health effects related to environmental tobacco smoke exposure in children in the United States: data from the Third National Health and Nutrition Examination Survey. *Arch Pediatr Adolesc Med.* 2001;155(1):36-41.
- 9. Leistikow BN, Martin DC, Milano CE. Fire injuries, disasters, and costs from cigarettes and cigarette lights: a global overview. *Prev Med.* 2000;31(2 Pt 1):91-99.
- 10. Leistikow BN, Martin DC, Jacobs J, Rocke DM, Noderer K. Smoking as a risk factor for accident death: a meta-analysis of cohort studies. *Accid Anal Prev.* May 2000;32(3):397-405.
- 11. Centers for Disease Control and Prevention. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Atlanta, Georgia: US Department of Health and Human Services,

Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 1994.

- 12. Wellman RJ, Sugarman DB, DiFranza JR, Winickoff JP. The extent to which tobacco marketing and tobacco use in films contribute to children's use of tobacco: A meta-analysis. *Arch Pediatr Adolesc Med.* 2006;160(12):1285-1296.
- 13. Pechmann C, Shih C. Smoking scenes in movies and anti-smoking advertisements before movies: effects on youth. J Marketing 1999;63:1-13.
- 14. Sargent JD, Dalton MA, Beach ML et al. Viewing tobacco use in movies: does it shape attitudes that mediate adolescent smoking? Am J Prev Med 2002;22:137-45.
- 15. National Cancer Institute. Tobacco control monograph 19: The role of the media in promoting and reducing tobacco use. Bethesda, MD: U.S. National Cancer Institute, 2008.
- 16. WHO. Smokefree movies: from evidence to action. Geneva: WHO, 2009. www.who.int/smoke_free_movies/en/.
- 17. Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs - 2007.* 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; 2007.

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