AAP policy cites harms of e-cigarettes; urges screening

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Pediatricians should screen families and counsel them on the health risks of electronic nicotine delivery systems (ENDS), which include electronic cigarettes (e-cigarettes), according to a new AAP policy statement.

Electronic Nicotine Delivery Systems addresses pediatricians’ and pediatric health care providers’ questions about these products

Common questions from pediatricians

How many children and adolescents are using electronic nicotine delivery systems (ENDS)?

Surveys of youths show an 890% increase in ENDS use over the past four years. In 2013, as many as 29% of high school students had tried (ever used) e-cigarettes, with use in the past month (current use) of 18%. In contrast, 8.5% of U.S. adults reported having tried an e-cigarette in 2013.

Why am I seeing ENDS commercials on television?

Unlike conventional cigarettes, there are no current regulations on ENDS advertisements on television, print media or point-of-sale (advertisements where ENDS are sold). ENDS are being marketed heavily; in 2013, 80% of U.S. youths ages 12-17 years were exposed to 13 television advertisements for ENDS.

What is in the ENDS solution (also known as e-juice or e-liquid)?

ENDS solutions are advertised to contain concentrated nicotine, flavoring chemicals and propylene glycol and/or glycerin. There are 7,760 flavors of ENDS solutions advertised, many of which are candy and dessert flavored and appealing to children. In addition to what is advertised, however, ENDS solution has been shown to contain numerous toxicants and carcinogens. The ENDS refillable cartridges also allow for addition of other substances to the solution, including marijuana.

What should I say when someone asks if I recommend ENDS?

ENDS have been shown to pose harms for users and non-users and are not approved by the Food and Drug Administration (FDA) as smoking cessation devices. ENDS should not be recommended to youths or their parents/caregivers. Parents and youths who are interested in tobacco dependence treatment should be directed to evidence-based smoking cessation counseling and FDA-approved tobacco dependence treatments (See resources.).

and the harms to youths. It is available at www.pediatrics.org/cgi/doi/10.1542/peds.2015-3222 and will be published in the November issue of Pediatrics.

ENDS are handheld devices that produce an aerosol from a solution typically containing nicotine, flavoring chemicals and propylene glycol and/or glycerin to be inhaled by the user. ENDS include the wide range of products that are known as electronic cigarettes, e-cigs, e-hookah, vaping devices, vape pens and mechanical mods.

In 2014, more youths reported using ENDS than any other tobacco product. The Academy is calling on pediatricians to ask about use of ENDS when screening for tobacco use and exposure. Pediatricians should counsel youths and parents on the following:

• Harms for users. In addition to nicotine, ENDS solution has been shown to contain numerous toxicants and carcinogens harmful to human health. Nicotine is highly addictive and a known toxicant. Adolescents are more likely to become addicted even with sporadic use of tobacco. Use of nicotine-containing ENDS solution may lead adolescents to start smoking conventional cigarettes and other tobacco products.

• Non-user exposure. ENDS secondhand aerosol and third-hand aerosol (also known as vapor) have been shown to contain nicotine, toxicants, metal and silicate particles, and carcinogens that can pose harm to non-users.

• Unintentional exposure. The ENDS solution can contain very concentrated nicotine, which can be lethal when ingested even in small quantities. There has been an astronomical increase in calls to poison control centers from ENDS exposures, and one child died after ingesting concentrated nicotine solution.

• Renormalization of smoking behaviors. The increasing use of ENDS among youths and adults and lack of regulation threaten public health gains of successfully deglamorizing and restricting use and exposure of tobacco products.

Recommendations for pediatricians

• Incorporate screening for ENDS use and exposure when screening for tobacco use and exposure. Provide prevention counseling in clinical practice.

• Counsel youths, parents and caregivers about the harms of ENDS use and exposure, and the importance of never using nicotine-containing products. Parents should be advised to institute smoking bans that include ENDS (i.e., no ENDS use in home and cars) to avoid secondhand and thirdhand aerosol exposure and modeling of smoking behavior.

• Counsel parents that children should avoid contact with ENDS and ENDS solution to avoid accidental poisonings.

• Parents and teens who use ENDS should be offered or re-
ferred for tobacco-cessation counseling and tobacco dependence pharmacotherapies approved by the Food and Drug Administration.
• Become familiar with symptoms of acute nicotine poisoning.

Public policy recommendations
• The sale of ENDS and ENDS solution to individuals younger than 21 years should be banned (the Academy recommends 21 years as the minimum legal age of purchase for all tobacco products), along with Internet sales of ENDS and ENDS solutions.
• ENDS should be included in tobacco and smoke-free policies to reduce youth ENDS use and exposure.
• To reduce accidental poisonings, ENDS solution should be dispensed in child-resistant packaging in amounts that would not be lethal to a young child. Ban all flavors in ENDS, as well as advertising of ENDS in media and point-of-sale settings that can be viewed by youths. Restrict depictions of ENDS in movies, TV shows and video games.
• Local, state and federal regulation is needed to protect youths and others from secondhand and thirdhand aerosol exposure, as well as unintentional nicotine exposure and poisonings.

Dr. Walley is a lead author of the AAP policy statement.

RESOURCES
• Educational resources on electronic nicotine delivery systems (ENDS) are available on the Julius B. Richmond Center for Excellence website, http://www2.aap.org/richmondcenter/ENDS.html.
• The AAP policy statement Clinical Practice Policy to Protect Children from Tobacco, Nicotine and Tobacco Smoke lists tobacco dependence treatments and resources.
• For information on joining the AAP Section on Tobacco Control, go to www2.aap.org/sotco.
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