

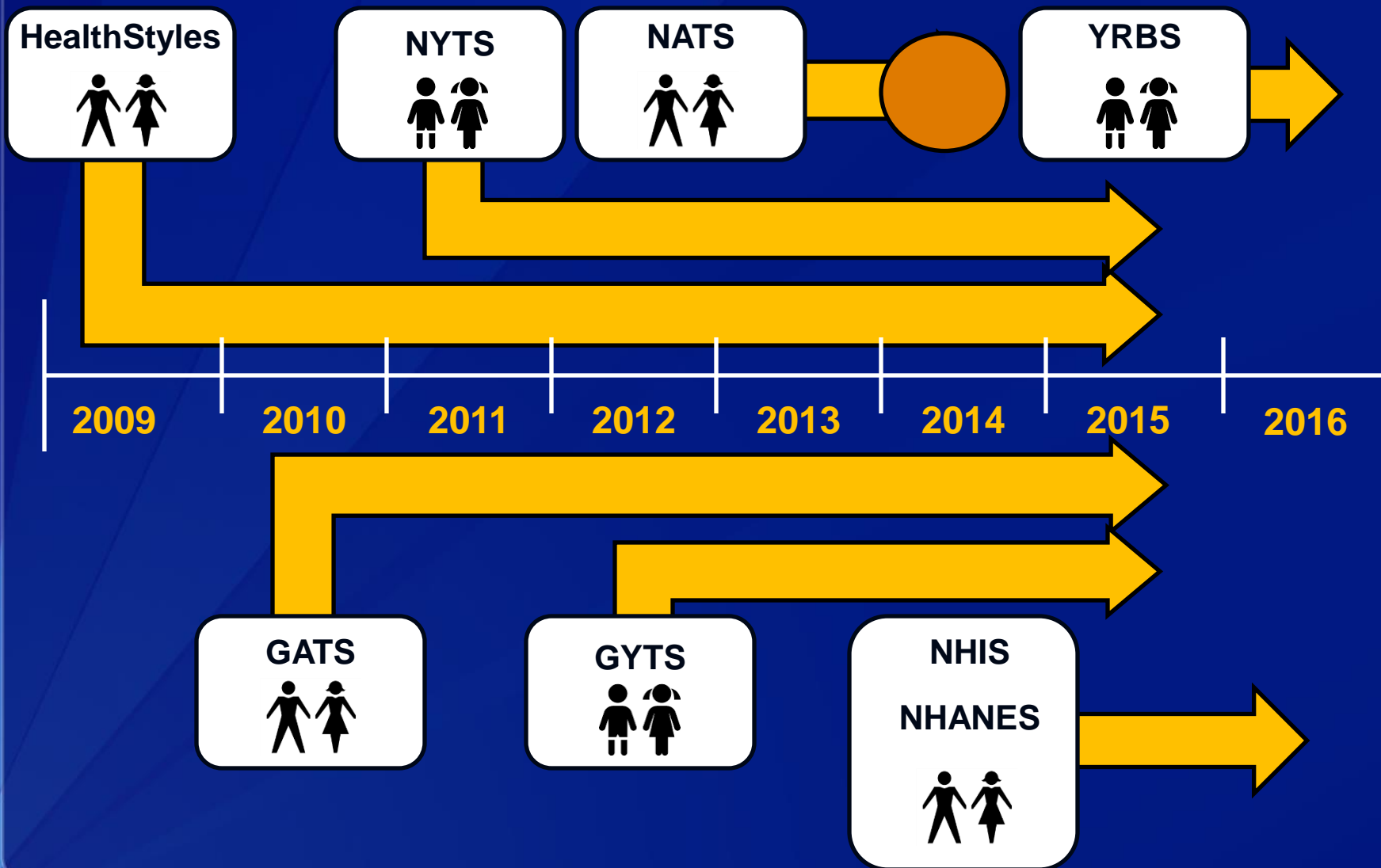
Electronic Nicotine Delivery System (ENDS) Surveillance in the United States

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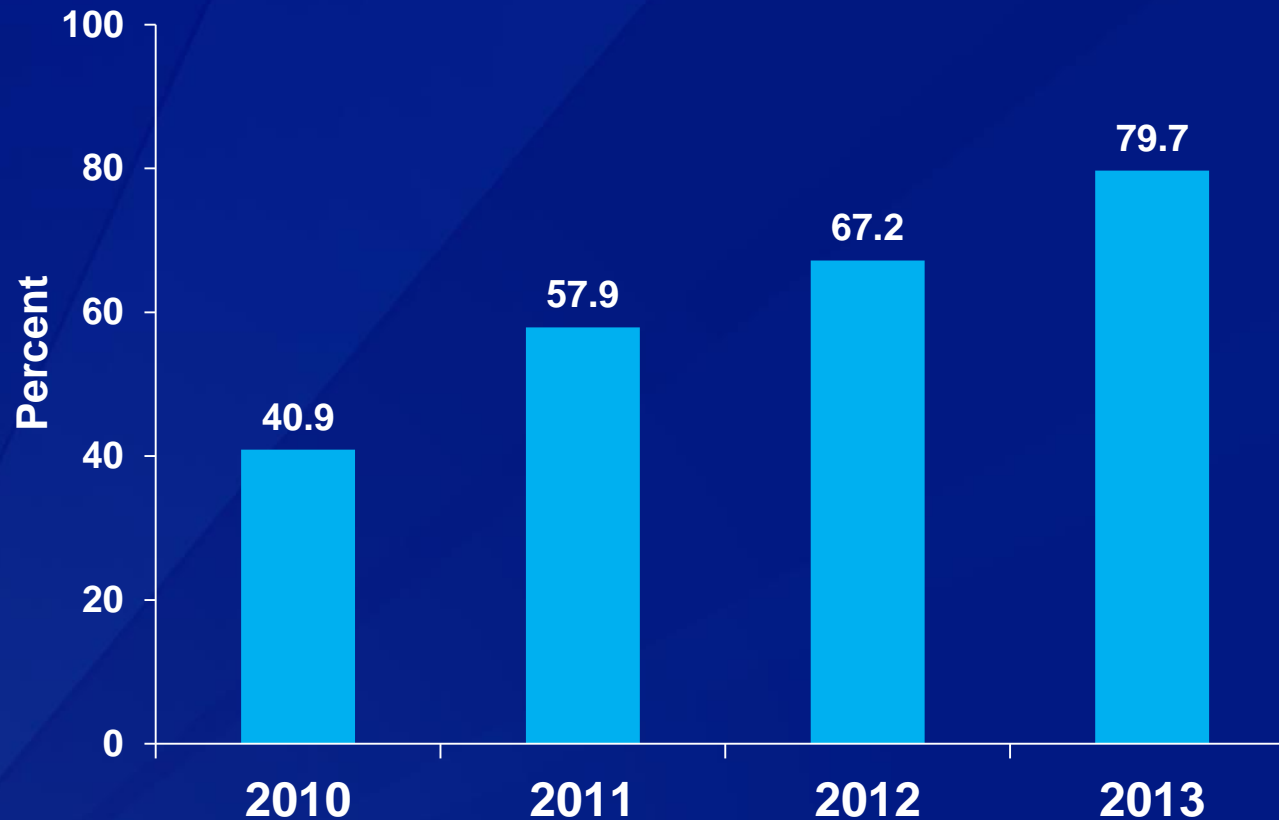
American Association for Cancer Research (AACR) Congressional Briefing
Washington, DC • May 14, 2015



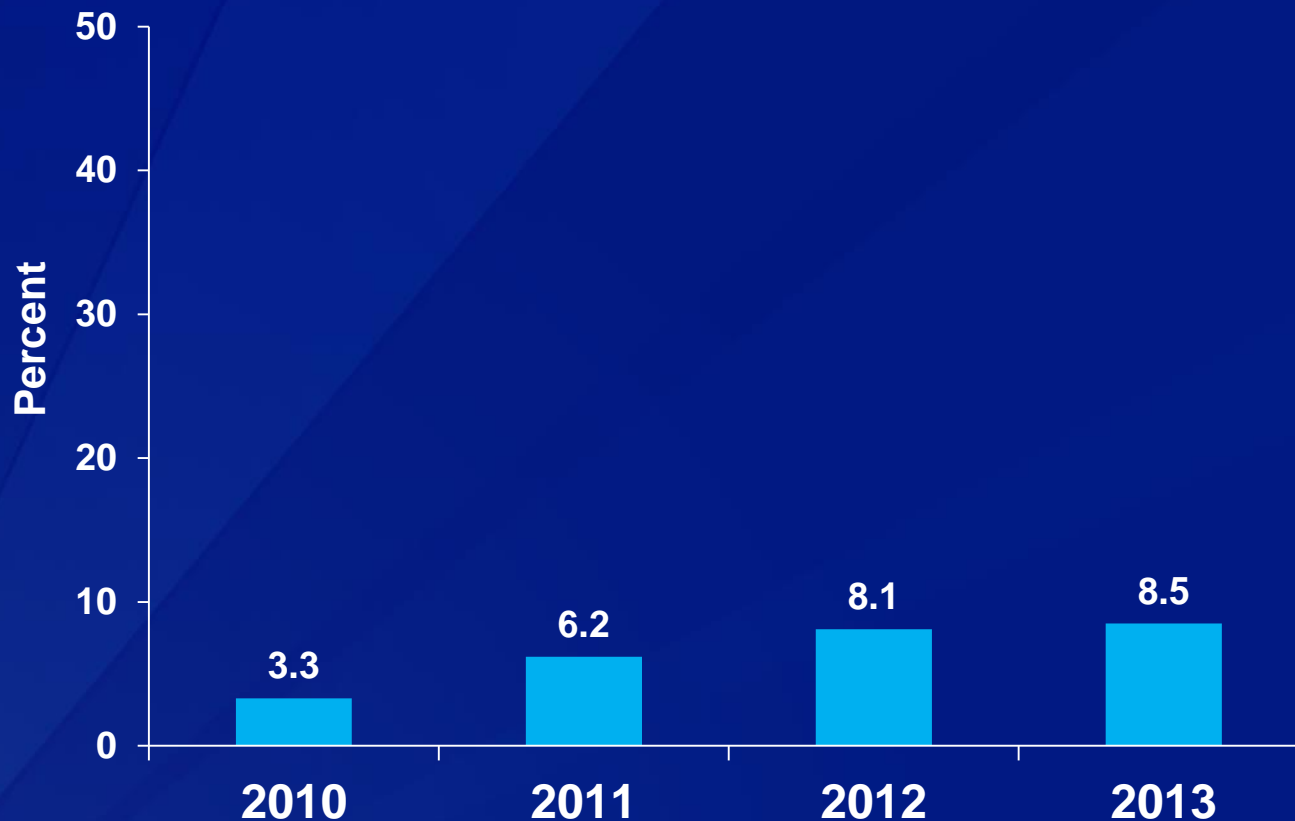
Timeline of CDC ENDS Surveillance Activities



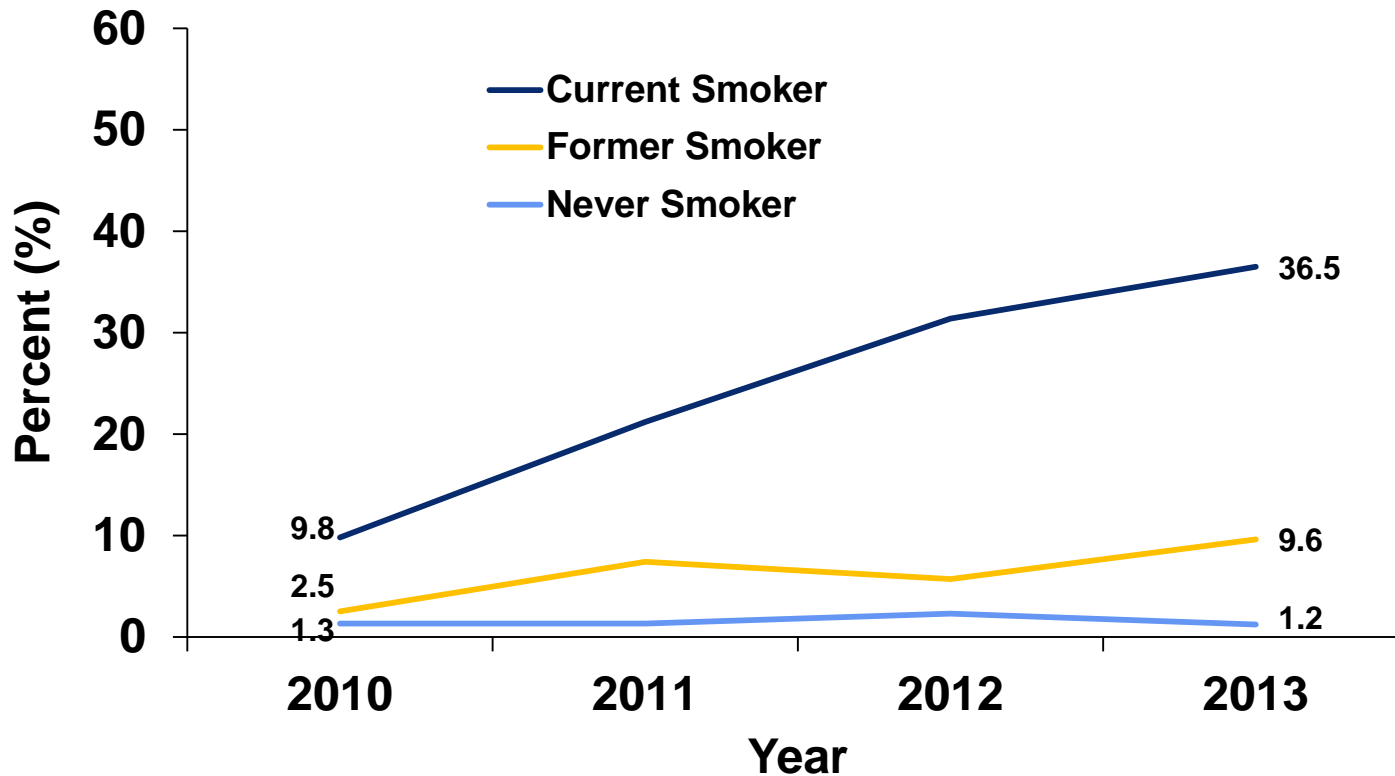
Awareness of electronic cigarettes among U.S. adults – *Styles*, 2010-2013



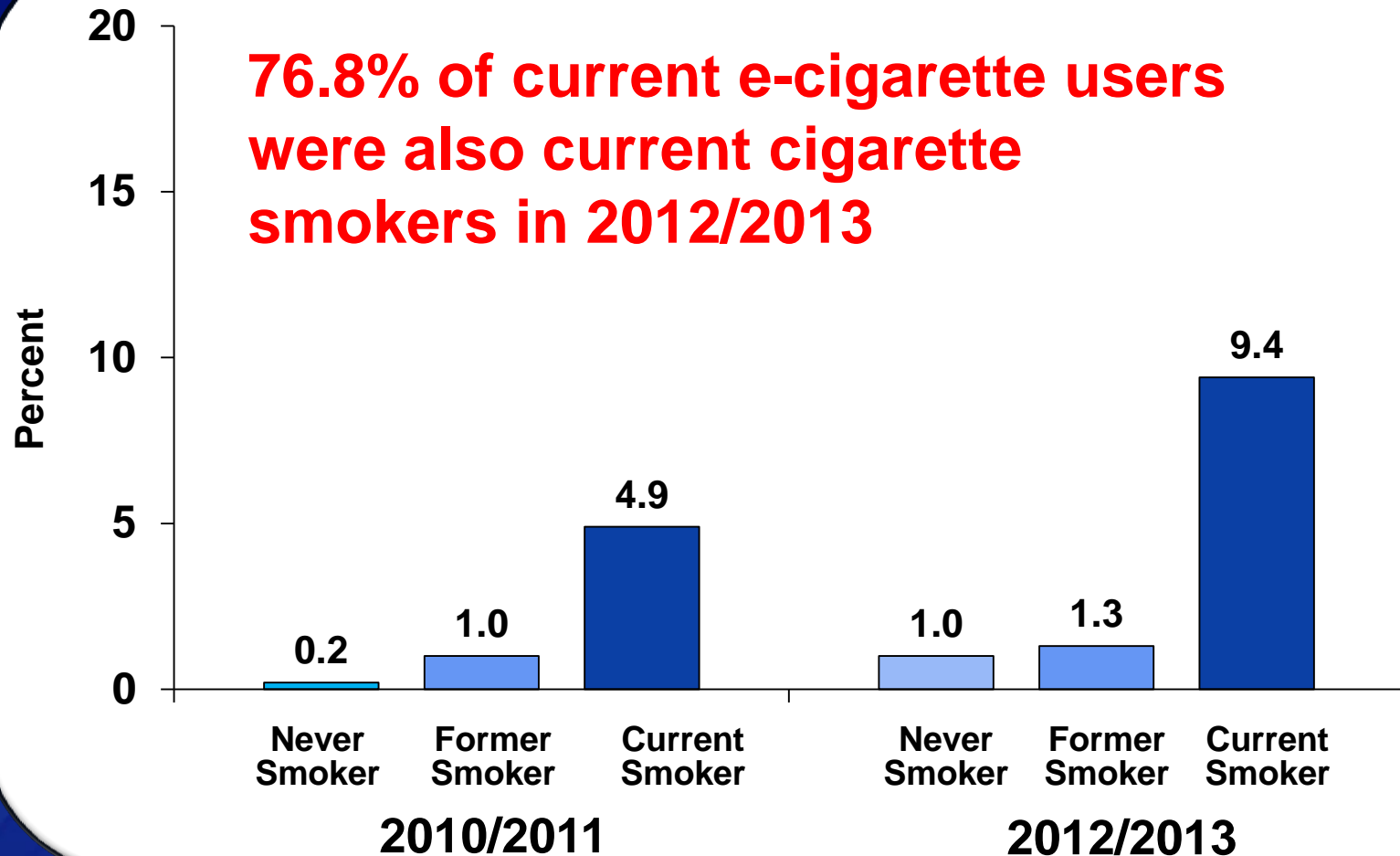
Ever use of electronic cigarettes among U.S. adults – *Styles*, 2010-2013



Ever Use of E-cigarettes among U.S. Adults, by Cigarette Smoking Status, Styles, 2010-2013



Past 30 day use of e-cigarettes among U.S. adults, by cigarette smoking status – Styles, 2010/2011 & 2012/2013



“Cutting Back” is Not Enough Even a Few Cigarettes Per Day is Dangerous

Risks for dual users of cigarettes and e-cigarettes:

- ❑ Smoking just five cigarettes a day doubles the risk of dying from heart disease.
- ❑ Heavy smokers who reduce their cigarette use by half still have a very high risk for early death.

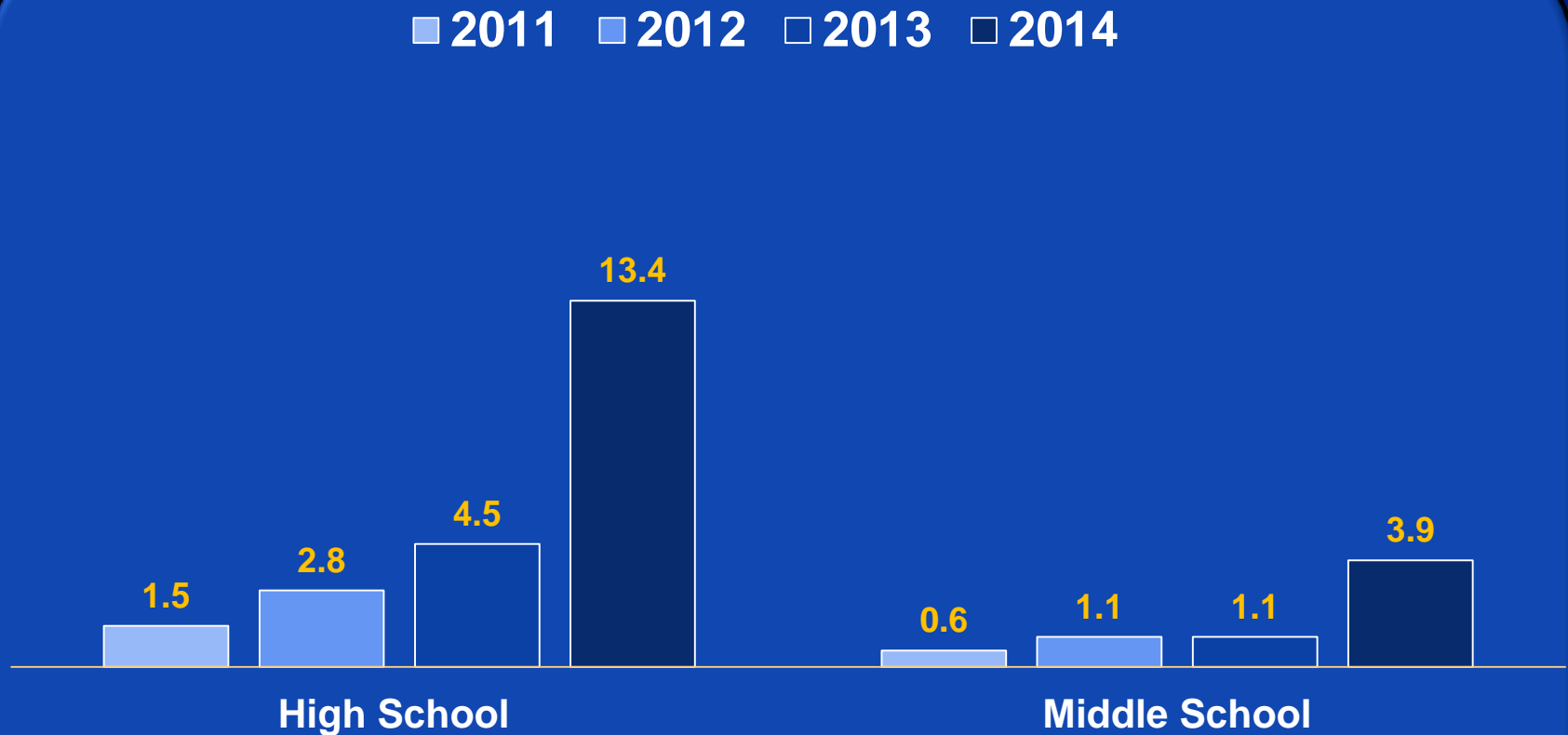
Benefits of quitting smoking completely:

- ❑ Heart disease risk is cut in half 1 year after quitting and continues to drop over time.
- ❑ Even quitting at age 50 cuts your risk in half for early death from a smoking-related disease.

Sources: Bjartveit K, Tverdal A. [Health Consequences of Smoking 1-4 Cigarettes per Day](#). Tobacco Control 2005; 14(5):315-20.

Tverdal A, Bjartveit K. [Health Consequences of Reduced Daily Cigarette Consumption](#). Tobacco Control. 2006; 15(6): 472–80.

Current (Past 30 Day) Use of E-cigarettes among U.S. Middle and High School Students, 2011-2014



Source: Centers for Disease Control and Prevention & U.S. Food and Drug Administration. National Youth Tobacco Survey.

E-cigarettes and Nonsmoking Youth

- ❑ From 2011-2013, the number of never smoking youth who used an e-cigarette increased three-fold
- ❑ In 2013, over ¼ of a million never smoking youth used e-cigarettes
- ❑ Intention to smoke cigarettes was higher among e-cigarette users

ENDS Surveillance Gaps

- **Frequency of Use**
- **Type of Product Use**
- **Reasons for Use**
- **Temporality of Use**
- **Purchase Location**
- **Advertising Exposure**
- **Brand**
- **Attitudes/Knowledge/Beliefs**



What We Know: 2014 Surgeon General's Report

❑ Toxicity and Health Effects

“The evidence is already sufficient to provide appropriately cautious messages to pregnant women and women of reproductive age as well as adolescents about the use of nicotine-containing products such as smokeless tobacco and electronic cigarettes, and newer forms of nicotine-containing tobacco products, as alternatives to smoking”

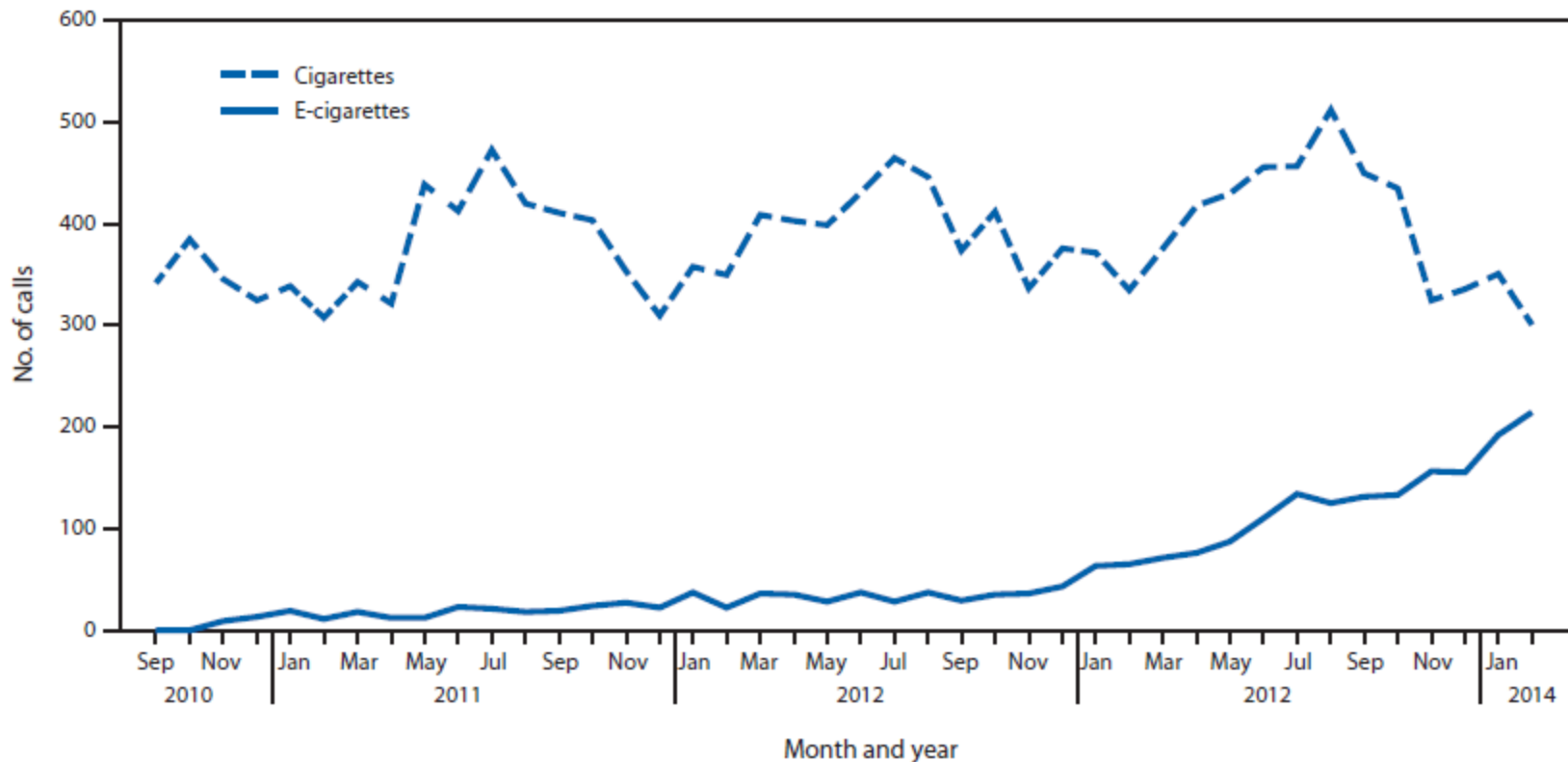
Chapter 5, page 126



Nicotine Poses Unique Dangers to the Developing Human

- ❑ Nicotine is highly addictive
- ❑ Nicotine is toxic to developing fetuses and impairs fetal brain and lung development
- ❑ Nicotine exposure during adolescence may produce lasting adverse consequences for brain development
- ❑ Poisonings have resulted among users and non-users due to ingestion of nicotine liquid, absorption through the skin, and inhalation

Number of calls to poison centers for cigarette or e-cigarette exposures, by month – U.S., September 2010–February 2014



Source: Centers for Disease Control and Prevention. *Notes from the Field: Calls to Poison Centers for Exposures to Electronic Cigarettes — United States, September 2010–February 2014. Morbidity & Mortality Weekly Report.* 2014;63:292-293.

Key Takeaways

- ❑ ENDS are not yet regulated as tobacco products* and are not an FDA-approved quit aid.
- ❑ Youth and adult e-cigarette use are rising rapidly.
- ❑ Most adult e-cigarette users smoke cigarettes.
 - Even light cigarette smoking is dangerous
- ❑ Youth use of tobacco in any form is unsafe.
 - Nicotine adversely affects the developing fetus and adolescent brain development
- ❑ CDC is advancing:
 - Surveillance -- future surveys will address frequency of use, reasons for use, and other gaps
 - Evidence-based tobacco control measures to address the diversity of tobacco products

* FDA issued a proposed rule in 2014 to regulate e-cigarettes as tobacco products