

2016 U.S. SURGEON GENERAL'S REPORT ON E-CIGARETTE USE AMONG YOUTH AND YOUNG ADULTS



Chapter 1

Introduction, Conclusions,
and Historical Background
Relative to E-cigarettes

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CHAPTER 1

Introduction, Conclusions, and Historical Background Relative to E-cigarettes

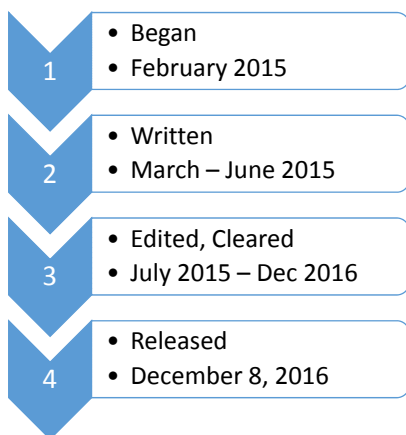
This chapter provides a brief introduction to the report and includes its major conclusions; the conclusions of each chapter; the historical background of e-cigarettes; descriptions of e-cigarette products; and current FDA regulations.



REPORT DEVELOPMENT

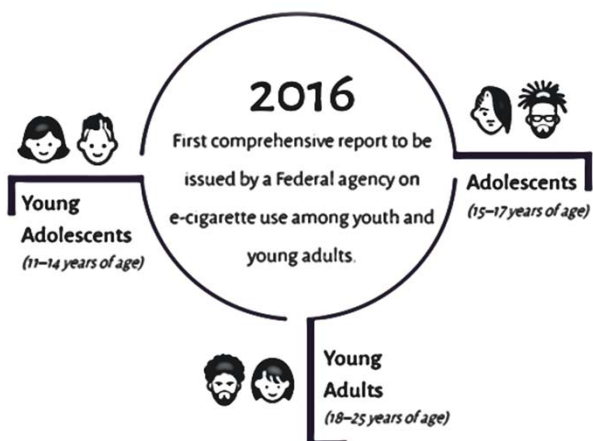
- Preparation of the Report
 - Prepared by > 150 experts
 - Scientific researchers
 - Public health professionals
 - Federal agencies' staff
 - CDC, HHS, FDA, DOJ, others

TIMELINE



Youth and Young Adults

Report Focuses on 3 Distinct Population Groups



REPORT OVERVIEW

www.surgeongeneral.gov

- Executive Summary: Key Findings and Conclusions
- Chapter 1: Introduces the report, summarizes its conclusions, provides background, & describes current status of FDA regulation
- Chapter 2: Outlines patterns of use among youth & young adults, including across population groups
- Chapter 3: Documents evidence related to health effects of use & exposure to aerosol
- Chapter 4: Describes industry influences on use, including aspects of manufacturing, marketing, & promotion
- Chapter 5: Discusses implications for public health policy & practice at the local, state, & federal levels.
- A Call to Action: Outlines potential actions for policymakers, public health practitioners, researchers, & the general public to prevent harms from use



Major Conclusion

#1



"E-cigarettes are a **rapidly emerging** and **diversified product class**. These devices typically deliver nicotine, flavorings, and other additives to users via an inhaled aerosol. These devices are referred to by a variety of names, including "e-cigs," "e-hookahs," "mods," "vape pens," "vapes," and "tank systems."

E-Cigarette Use Among Youth and Young Adults
A Report of the Surgeon General



U.S. Department of Health and Human Services

Major Conclusion

#2

“E-cigarette use among youth and young adults has become a public health concern. In 2014, current use of e-cigarettes by young adults 18-24 years of age surpassed that of adults 25 years of age and older.”

E-Cigarette Use Among Youth and Young Adults
A Report of the Surgeon General



U.S. Department of Health and Human Services

Major Conclusion

#3

“E-cigarettes are now the most commonly used tobacco product among youth, surpassing conventional cigarettes in 2014. E-cigarette use is strongly associated with the use of other tobacco products among youth and young adults, including combustible tobacco products.”

E-Cigarette Use Among Youth and Young Adults
A Report of the Surgeon General



U.S. Department of Health and Human Services

Major Conclusion

#4

Until about age 25, the brain is still growing.

“The use of products containing nicotine poses dangers to youth, pregnant women, and fetuses. **The use of products containing nicotine in any form among youth, including in e-cigarettes, is unsafe.**”

E-Cigarette Use Among Youth and Young Adults
A Report of the Surgeon General



U.S. Department of Health and Human Services

Major Conclusion

#5

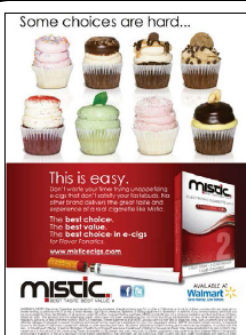
E-cigarettes contain nicotine, ultrafine particles, heavy metals, and volatile organic compounds.

“E-cigarette aerosol is **not harmless**. It can contain harmful and potentially harmful constituents, including nicotine. **Nicotine exposure during adolescence can cause addiction and can harm the developing adolescent brain.**”



Major Conclusion

#6



Source: Soap Opera Digest (2013).

“E-cigarettes are marketed by **promoting flavors** and using a **wide variety of media channels** and approaches that have been used in the past for marketing conventional tobacco products to youth and young adults.”



Major Conclusion

#7



“Action can be taken at the national, state, local, tribal, and territorial levels to address e-cigarette use among youth and young adults. Actions could include incorporating **e-cigarettes into smoke-free policies**, **preventing access** to e-cigarettes by youth, **price and tax policies**, **retail licensure**, **regulation of e-cigarette marketing likely to attract youth**, and **educational initiatives** targeting youth and young adults.”

E-CIGARETTE REGULATION

- **FDA “Deeming Rule” 2016**

- Required disclosure of ingredients
- Required registration of manufacturers
- Minimum age restrictions > 18 years old
- Prohibitions on vending machine sales

- **Future Regulatory Options**

- Product standards, including flavor restrictions
- Restrictions on marketing, promotion, advertising

CHAPTER 2

Patterns of E-cigarette Use Among U.S. Youth and Young Adults

This chapter documents patterns and trends in e-cigarettes, including use behaviors and perceptions about these products, for youth and young adults.



DATA SOURCES

- **Youth (MS and HS students)**
 - National Youth Tobacco Survey (NYTS)
 - Monitoring the Future Study (MTF)
- **Young adults (18-24 years old)**
 - National Adult Tobacco Survey (NATS)
 - Styles (“Health Styles” consumer survey)
- **Other scientific literature**
 - Regional, cross-sectional
 - Longitudinal studies (n=5)

CHAPTER 2

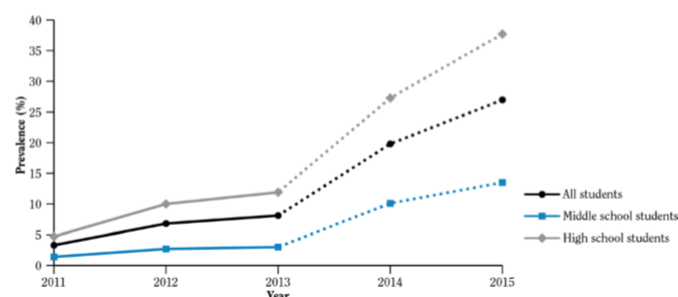
Conclusion 1

Among middle and high school students, both ever and past-30-day e-cigarette use have more than tripled since 2011. Among young adults, ever e-cigarette use more than doubled from 2013 to 2014.



Figure 2.1. Trends in Ever E-Cigarette Use Among U.S. Middle and High School Students; NYTS 2011-2015

Figure 2.1 Trends in ever e-cigarette use^a among U.S. middle and high school students; National Youth Tobacco Survey (NYTS) 2011-2015



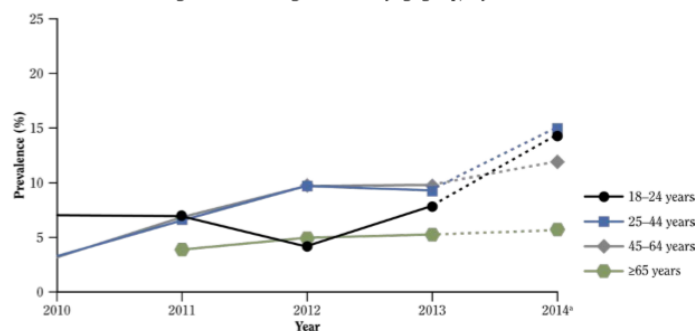
Source: Centers for Disease Control and Prevention 2013a, 2014b; unpublished data (data: NYTS 2015).

Note: In 2014, modifications were made to the e-cigarette measure to enhance its accuracy, which may limit the comparability of this estimate to those collected in previous years. The dotted lines from 2013 to 2015 represent these differences.

^aIncludes those who responded "1 or more" to the following question: *During the last 30 days, on how many days did you use electronic cigarettes or e-cigarettes?*

Figure 2.3. Trends in Ever E-Cigarette Use among U.S. adults by age group; Styles 2010-2014

Figure 2.3 Trends in ever e-cigarette use^a among U.S. adults by age group; Styles 2010-2014



Source: King et al. (2015) (data: HealthStyles 2010-2013); Centers for Disease Control and Prevention, unpublished data (data: HealthStyles 2014).

Note: In 2014, modifications were made to the e-cigarette measure to enhance its accuracy, which may limit the comparability of this estimate to those collected in previous years. The dotted lines from 2013 to 2014 represent these differences.

^aIncludes those who responded "electronic cigarettes or e-cigarettes" to the following question, "Have you ever tried any of the following products, even just one time? Electronic cigarettes or e-cigarettes, such as Ruyan or NJOY?"

CHAPTER 2

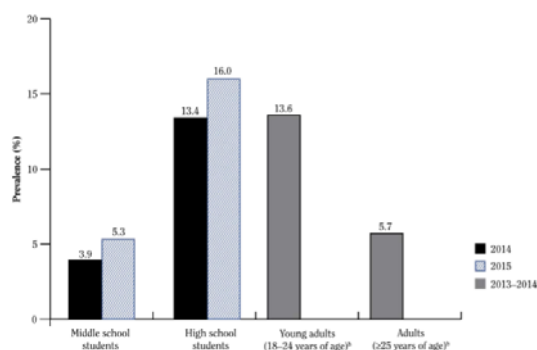
Conclusion 2

The most recent data available show that the prevalence of past-30-day use of e-cigarettes is similar among high school students and young adults, and higher than middle school students and older adults.



Figure 5. Percentage of Middle School Students, High School Students, Young Adults (18-24 yr), and Adults (≥ 25 yr) who Currently Use E-cigarettes; NYTS 2014, 2015 & NATS 2013-14

Figure 5 Percentage of middle school students, high school students, young adults (18–24 years of age), and adults (≥ 25 years of age) who currently^a use e-cigarettes



Source: Centers for Disease Control and Prevention, unpublished data (NYTS 2014, 2015; data: NATS 2013–2014).

^aFor middle school and high school students (NYTS 2014, 2015), current use included those who reported using e-cigarettes on 1 or more days in the past 30 days. For young adults and adults (NATS 2013–2014), current use included those who reported they had heard of, tried, and used e-cigarettes every day, some days, or rarely at the time of the interview.

^b2013–2014 NATS data for young adults and adults were the latest data available when this Surgeon General's report was prepared.

CHAPTER 2

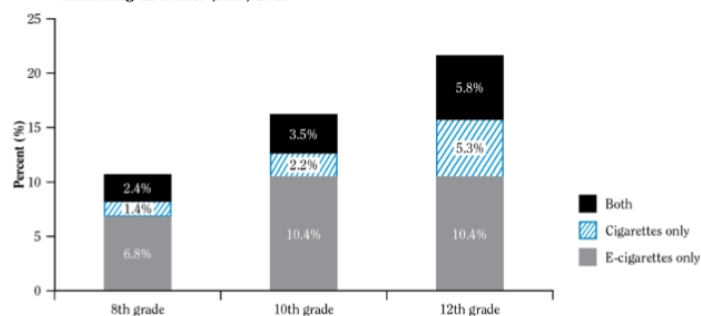
Conclusion 3

Exclusive, past-30-day use of e-cigarettes by 8th, 10th, and 12th graders exceeded exclusive, past-30-day use of conventional cigarettes in 2015.



Figure 2.4. Percentage of Students in Grades 8, 10, and 12 who Used E-cigarettes and Cigarettes in the Past-30-days, Monitoring the Future 2015

Figure 2.4 Percentage of students in grades 8, 10, and 12 who used e-cigarettes and cigarettes in the past 30 days; Monitoring the Future (MTF) 2015



Source: University of Michigan, Institute for Social Research, unpublished data (data: MTF 2015).

Note: Questions on e-cigarette use were asked on four of six questionnaire forms. Data presented here are based on those four forms only.

CHAPTER 2

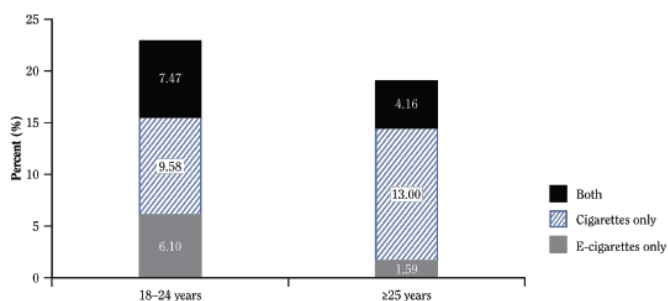
Conclusion 3

Exclusive past-30-day use of conventional cigarettes among young adults exceeded exclusive past-30-day use of e-cigarettes.



Figure 2.8. Percentage of Young Adults who Currently Use E-cigarettes and Conventional Cigarettes, National Adult Tobacco Survey 2013-14

Figure 2.8 Percentage of young adults who currently use e-cigarettes^a and conventional cigarettes; National Adult Tobacco Survey (NATS) 2013-2014



Source: Centers for Disease Control and Prevention, unpublished data (data: NATS 2013-2014).

^aCurrent e-cigarette use was defined as those who reported they had heard of e-cigarettes and had tried e-cigarettes, and reported using e-cigarettes every day, some days, or rarely at the time of the interview.

**CHAPTER
2****Conclusion 4**

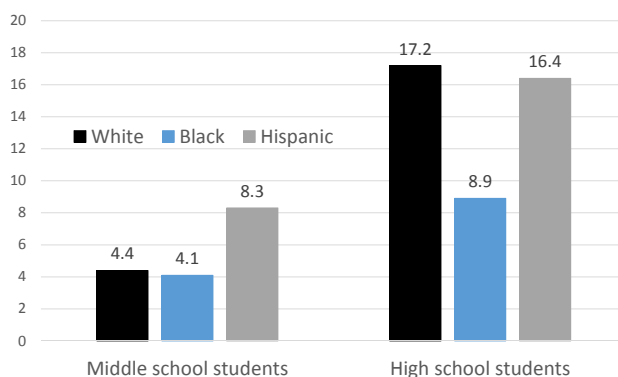
E-cigarette use is strongly associated with the use of other tobacco products among youth and young adults, particularly combustible ones.

**CHAPTER
2****Conclusion 5**

Among youth, older students, Hispanics, and Whites are more likely to use e-cigarettes; for young adults, males, Hispanics, Whites, and those with lower levels of education use more.



Table 2.2. Percentage of Middle School Students and High School Students who Used E-cigarettes in the Past-30-days; NYTS, 2015



Source: Centers for Disease Control and Prevention, unpublished data (data: NYTS 2011–2015).

Notes: CI = confidence interval; SE = standard error. An em dash (—) indicates that data are statistically unstable because of a relative standard error >40%. Wording of questions used to measure e-cigarette use varied from 2011 to 2015.

^a Includes those who reported using e-cigarettes on 1 or more of the past 30 days. This is also considered "current use" in this survey.

^b Includes non-Hispanic Asian, non-Hispanic Native Hawaiian/Other Pacific Islander, and non-Hispanic American Indian/Alaska Native.

CHAPTER 2

Conclusion 6

The most commonly cited reasons for using e-cigarettes among both youth and young adults are curiosity, flavoring/taste, and low perceived harm compared to other tobacco products.

The use of e-cigarettes as an aid to quit conventional cigarettes is not reported as a primary reason for use among young people.



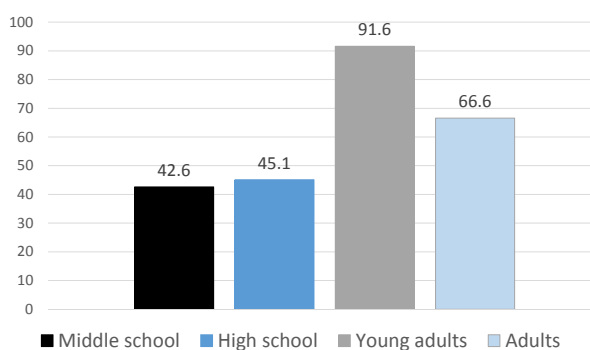
CHAPTER 2

Conclusion 7

Flavored e-cigarette use among young adult users exceeds that of older adult users. Moreover, among youth who have ever tried an e-cigarette, a majority used a flavored product the first time they tried an e-cigarette.



Table 2.9. Percentage of Youth, Young Adults, and Adults Users who Used Flavored E-cigarettes in the Past-30-days; NYTS, 2015 and NATS 2013-2014



Source: Centers for Disease Control and Prevention, unpublished data (data: NYTS 2015; NATS 2013-2014).

Note: CI = confidence interval; SE = standard error.

*Flavored e-cigarette product use in NYTS was determined by the response to the question, "Which of the following tobacco products that you used in the past 30 days were flavored to taste like menthol (mint), alcohol (wine, cognac), candy, fruit, chocolate, or other flavors?" Participants could select from a list of options to designate the flavored tobacco product(s) they used. (Among those who reported any use of e-cigarettes in the preceding 30 days.) Those who selected e-cigarettes were coded as "yes" for flavored e-cigarettes. Those who did not select e-cigarettes were categorized as "no" for flavored e-cigarettes. Excludes 82 current e-cigarette users whose answers were missing for all flavored tobacco response options.

*Flavored e-cigarette product use in NATS was determined by the response to the question, "Were any of the electronic cigarettes that you used in the past 30 days flavored to taste like menthol, mint, clove, spice, candy, fruit, chocolate, or other flavors?" (Among those who reported using e-cigarettes every day or some days.) Those who selected "yes" were categorized as "yes" for flavored e-cigarettes. Those who selected "no" were categorized as "no" for flavored e-cigarettes. Excludes five every-day or some-day users who reported not using any noncigarette tobacco product in the past 30 days.

**CHAPTER
2**

Conclusion 8

E-cigarette products can be used as a delivery system for cannabinoids and other illicit drugs. More specific surveillance measures are needed to assess the use of drugs other than nicotine in e-cigarettes.

**CHAPTER 3**

Health Effects of Electronic Cigarette Use

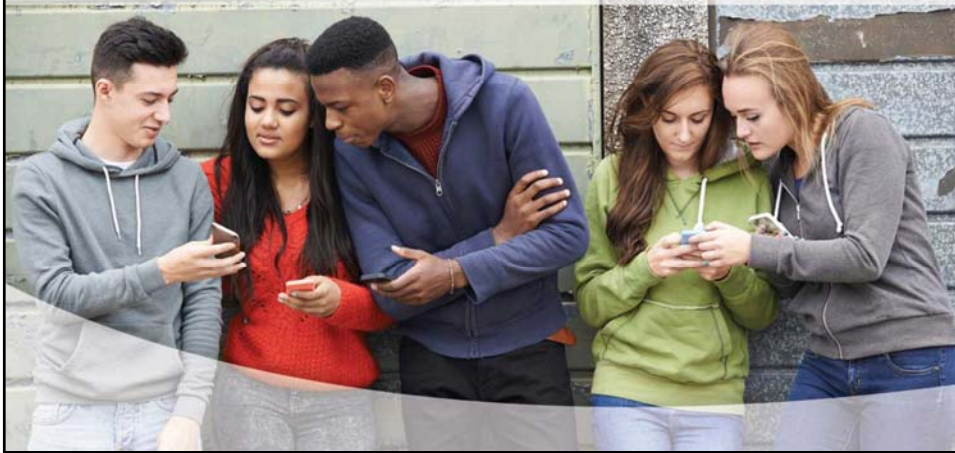
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Most e-cigarettes contain **Nicotine**, which causes **Addiction**, can harm brain development, and could lead to continued tobacco product use among youth.



Conclusions From Previous Surgeon General's Reports



SGR 1988, 2010, 2012

- Nicotine is the drug in tobacco that causes addiction.
- The powerful addicting effects of commercial tobacco products are mediated by diverse actions of nicotine at **multiple types of nicotinic receptors in the brain.**
- Prevention efforts must focus adolescents and young adults. Among adults who become daily smokers:
 - Nearly all first cigarettes use occurs by age 18 (88%), with 99% by age 26.

SGR 2014: The Evidence is **Sufficient** to Infer that:

- Nicotine adversely affects maternal and fetal health during pregnancy; including **preterm delivery, stillbirth. and altered brain development.**
- Nicotine adversely activates **multiple biological pathways** for diseases.
- Nicotine, in high-enough doses, has acute toxicity.

SGR 2014: The Evidence is **Suggestive** to Infer that:

- Nicotine exposure during adolescence, a critical window for brain development, **may** have lasting adverse consequences for brain development.

Chapter 3: Standing on the Shoulders of Giants



Chapter 3

Conclusion 1

Nicotine exposure during adolescence can cause addiction and can harm the developing brain.



Kids Different than Adults?

Strong Evidence from Preclinical and Human Studies

Nicotine influences:

- **Acetylcholine receptors**, which have action on:
 - **Cholinergic areas**: which control
 - Muscle movement, Breathing, Heart rate, Memory, Motivation
- **Neurotransmitters and hormones**, such as:
 - Acetylcholine, Norepinephrine, **Dopamine**, Serotonin, Vasopressin, Beta-endorphin and Adrenocorticotrophic hormone (ACTH).
 - **Dopamine**, produces feelings of pleasure and reward. It is the same neurotransmitter involved in addiction to cocaine and heroin.

Strong Biologic Plausibility: Reduced impulse control, deficits in attention and cognition, and mood disorders.

Chapter 3

Conclusion 2

Nicotine can cross the **placenta** and has known effects on fetal and postnatal development.

Therefore, nicotine delivered by e-cigarettes during pregnancy can result in multiple adverse consequences, including **sudden infant death syndrome**, and could result in altered corpus callosum, deficits in **auditory processing**, and obesity.



Nicotinic Acetylcholine Receptors (nAChRs): are widely expressed throughout fetal brain and negatively affected by prenatal **cigarette smoking and **nicotine exposure**.**

- Both human genetic studies and preclinical animal studies implicate a neurotoxic effect of fetal nicotine exposure.
- Maternal smoking and infant exposure to secondhand smoke have been:
 - **Causally associated** with SIDS
 - **Associated with:**
 - Structural brain changes
 - Auditory processing deficits, affecting language dev.
 - Altered corpus callosum
 - Affects on appetitive behavior
 - Obesity
 - Attention, cognition, and mood disorders.

No data on health effects of nicotine from exposure E-cigarettes.

Chapter 3

Conclusion 3

E-cigarettes can expose users to several chemicals, including nicotine, carbonyl compounds, and volatile organic compounds, known to have adverse health effects. The health effects and potentially harmful doses of heated and aerosolized constituents of e-cigarette liquids, including solvents, flavorants, and toxicants, are not completely understood.



Health Effects of Heated and Aerosolized Constituents of E-Liquids, (Solvents, Flavorings, Toxicants): **Not Well Understood**

- E-juice contains flavorants, most of which contain **diacetyl** and acetyl propionyl, and have been approved as safe when ingested.
 - However, inhalation is associated with decline in respiratory function and the development of bronchiolitis obliterans (popcorn lung).
 - In addition, two cinnamon flavorants chemicals have been found cytotoxic at doses found in the refill fluids.
- E-cigarettes expose users to carbonyl compounds, volatile organic compounds, polyaromatic hydrocarbons, tobacco-specific nitrosamines, heavy metals, and glycols.
- E-cigarette liquids, when heated and aerosolized, produce chemical reactions that may result in formation of new harmful compounds.
 - Formaldehyde, acetaldehyde, and acrolein levels have been detected at levels related to cancer and cardiovascular disease.

Chapter 3**Conclusion 4**

E-cigarette aerosol is not harmless “water vapor,” although it generally contains fewer toxicants than combustible tobacco products.

**Chapter 3****Conclusion 5**

Ingestion of e-cigarette liquids containing nicotine can cause acute toxicity and possibly death if the contents of refill cartridges or bottles containing nicotine are consumed.



CHAPTER 4

Activities of the E-Cigarette Companies

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CHAPTER 4

Activities of the E-Cigarette Companies

This chapter explores the dynamic changes of e-cigarette companies, including the manufacturing and price, marketing and promotional activities, the retail environments for e-cigarette products, and effects of marketing activities on consumer behavior.



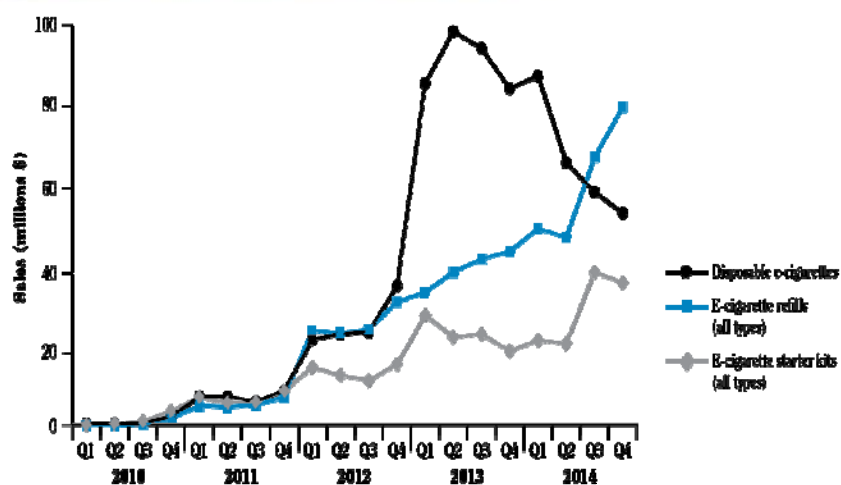
Chapter 4

Conclusion 1

The e-cigarette market has grown and changed rapidly, with notable increases in total sales of e-cigarette products, types of products, consolidation of companies, marketing expenses, and sales channels.

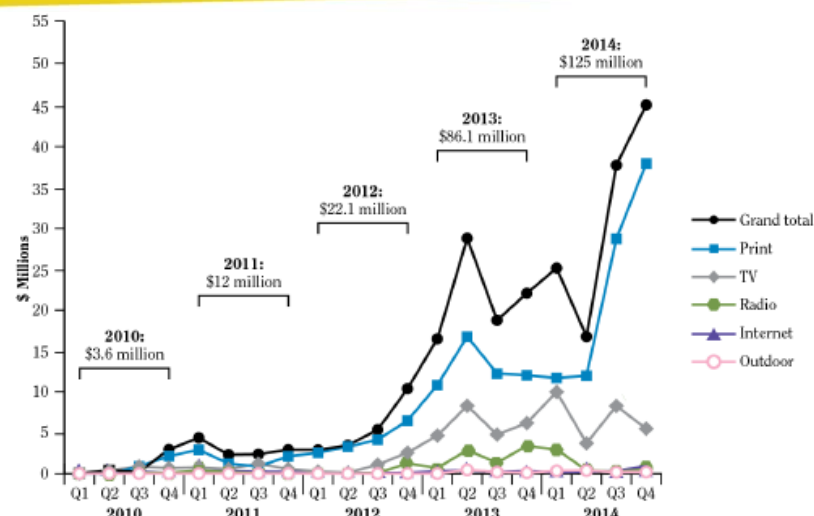


Figure 4.2 E-Cigarette sales in tracked channels by product type, 2010-2014



Source: Huang and Chaloupka (in press)

Figure 4.5 Quarterly promotional spending for e-cigarettes, 2010-2014



Source: Data for 2010–2013 (Q2) from Kornfield and colleagues (2015, p. 110) and adapted with permission from BMJ Publishing Group Limited. Data for 2013 (Q3)–2014 from Kantar Media (unpublished data).

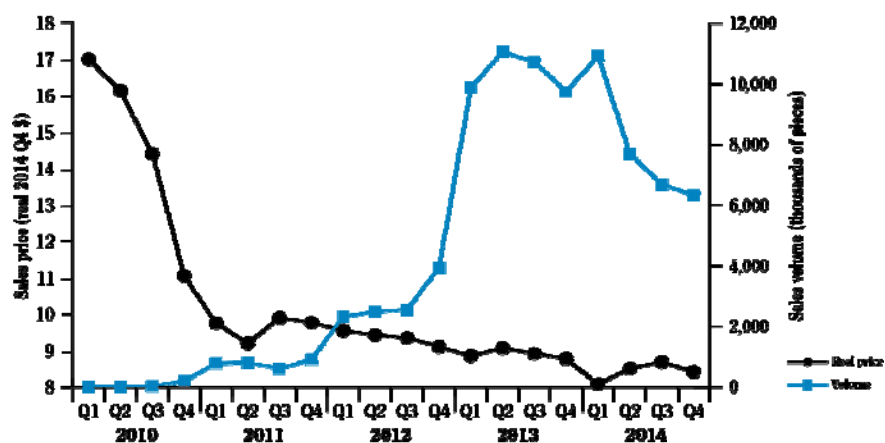
Chapter 4

Conclusion 2

Prices of e-cigarette products are inversely related to sales volume: as prices have declined, sales have sharply increased.

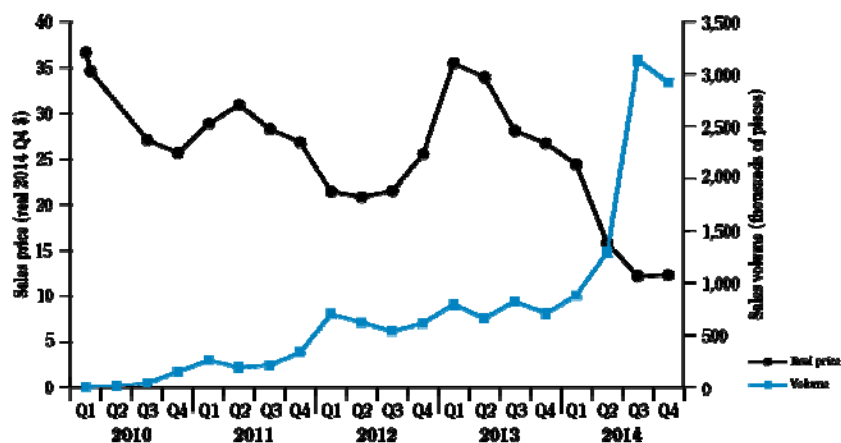


Figure 4.3 Disposable e-cigarette sales volume and price (U.S. market)



Source: Huang and Chaloupka (in press)

Figure 4.4 Rechargeable e-cigarette sales volume and price (U.S. market)



Source: Huang and Chaloupka (in press)

Chapter 4

Conclusion 3

E-cigarette products are marketed in a wide variety of channels that have broad reach among youth and young adults, including television, point-of-sale, magazines, promotional activities, radio, and the Internet.



Marketing Approaches

- Print has been the dominant channel
- E-cigarettes are able to use venues for marketing previously banned for conventional cigarettes: television and sponsorships of events
- Digital sources, such as twitter and message forums, can offer price promotions outside of the brick-and-mortar store



Chapter 4

Conclusion 4

Themes in e-cigarette marketing, including sexual content and customer satisfaction, are parallel to themes and techniques that have been found to be appealing to youth and young adults in conventional cigarette advertising and promotion.



Themes of print marketing



Romance, sexuality, or sociability
Source: Maxim (2012)



Taste
Source: Soap Opera Digest (2013)



Circumvent smokefree policies
Source: Spin (2012)



Smoking Cessation
Source: Rolling Stone (2013)

Effects of E-Cigarette Advertising on Behavior

- 10 studies have examined the impact of advertising on the use of or intentions to use e-cigarettes
 - NYTS data has indicated there are strong associations between recall of seeing advertisements and both ever use and susceptibility to use e-cigarettes.¹⁻²
 - Exposure to e-cigarette advertisements increased the odds of intending to use e-cigarettes in 2 separate experimental studies of youth and young adults.³⁻⁴
- Concern that constant exposure to e-cigarette advertising may perpetuate dual use of e-cigarettes and conventional cigarettes.

1. Centers for Disease Control and Prevention. Vital signs: exposure to electronic cigarette advertising among middle school and high school students—United States, 2014. *Morbidity and Mortality Weekly Report* 2016;64(52):1403–8
2. Mantey DS, Cooper MR, Clendennen SL, Pasch KE, Perry CL. E-Cigarette marketing exposure is associated with e-cigarette use among U.S. youth. *Journal of Adolescent Health* 2016;58(6):686–90.
3. Farrelly MC, Duke J, Crankshaw E, Eggers ME, Lee YC, Nonnemaker J, Kim A, Porter L. A randomized trial of the effect of e-cigarette television ads on intentions to use e-cigarettes. *American Journal of Preventive Medicine* 2015;49(5):686–93.
4. Pokhrel P, Fagan P, Kehl L, Herzog TA. Receptivity to e-cigarette marketing, harm perceptions, and e-cigarette use. *American Journal of Health Behavior* 2015;39(1):121–31.

Chapter 5

E-Cigarette Policy and Practice Implications

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CHAPTER 5**E-Cigarette Policy
and Practice
Implications**

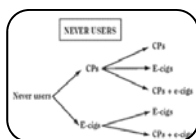
This chapter explores the policy landscape of e-cigarettes and sets forth recommendations that should protect the public's health, particularly as these policies relate to the short- and long-term health of youth and young adults.

**Chapter 5****Conclusion 1**

The dynamic nature of the e-cigarette landscape calls for expansion and enhancement of tobacco related surveillance.



Areas to Expand Tobacco Related Surveillance



(a) tracking patterns of use in priority populations;



(b) monitoring the characteristics of the retail market;



(c) examining policies at the national, state, local, tribal, and territorial levels;



(d) examining the channels and messaging for marketing e-cigarettes in order to more fully understand the impact future regulations could have; and



(e) searching for sentinel health events in youth and young adult e-cigarette users, while longer-term health consequences are tracked.



Chapter 5

Conclusion 2

Strategic, comprehensive research is critical to identify and characterize the potential health risks from e-cigarette use, particularly among youth and young adults.



**Table 5.1. Comparative risk assessment:
Potential harms and benefits of e-cigarettes**

Harms	Benefits
• Increased youth exposure to nicotine and potentially greater initiation of conventional cigarettes • Slowing cessation by smokers due to nicotine addiction • Nicotine addiction in former smokers who begin to use e-cigarettes and possibly transition back to smoking • Renormalization of nicotine use and smoking as acceptable • Future disease risks for youth who are exposed to nicotine • Increasing the dual use of e-cigarettes with combustible products • Serving as a “gateway” to the initiation of tobacco smoking • Increased disease risk vs. complete cessation among those who use both e-cigarettes and combustible products • Exposure to secondhand aerosol and lack of clean air	• Reduced disease risk for current smokers who completely switch to e-cigarettes • Reduced disease morbidity for smokers with existing heart or lung disease who switch to e-cigarettes • Potential for cessation of combustible products • Fewer users of combustible products in the entire population

Address Research Gaps

- What are the risks of progressing to traditional tobacco use among youth and young adults who have used e-cigarettes?
- What are the health risks posed by e-cigarettes?
- Are e-cigarettes safer and more effective than current products at helping smokers with smoking cessation?
- What are the health consequences for youth and young adults of initiation of e-cigarettes and of dual use (conventional cigarettes plus e-cigarettes) compared with the health benefits of completely quitting smoking (or not starting at all)?
- What are the health risks to former smokers who are exposed to nicotine from e-cigarette use? Will these persons be more likely to resume smoking?

Improve Quality, Timeliness, and Scope of Research/Surveillance/Evaluation

Track patterns of e-cigarette use through cross-sectional surveys and through panels that follow the same people, including youth and young adults, over time;

Monitor trends in the e-cigarette retail market by type of product;

Examine the channels and messaging in the e-cigarette marketplace to inform proactive counter marketing strategies;

Assess the short- and medium-term health effects of e-cigarette use by youth and young adults and track long-term consequences;

Examine the risk factors and other risk behaviors that may be associated with using e-cigarettes; and

Create a model to develop and track the public health impact of e-cigarettes.

Chapter 5

Conclusion 3

The adoption of public health strategies that are precautionary to protect youth and young adults from adverse effects related to e-cigarettes is justified.



Public Health Strategies



Implement FDA's authority to regulate tobacco products to provide oversight of manufacturing, distribution, & marketing



Funding comprehensive statewide tobacco control programs at CDC recommended levels



Implement comprehensive clean indoor air policies that protect people from exposure to secondhand tobacco smoke & aerosol



Raising & strongly enforcing minimum age-of-sale laws for all tobacco products to prevent initiation



Setting price policies for e-cigarettes, which could include taxation policies;



Restricting advertising & marketing that encourages youth & young adults to use e-cigarettes;



Sponsoring high-impact media campaigns to educate the public



Expanding tobacco control & prevention research efforts to increase our understanding of the evolving landscape of e-cigarettes.

Chapter 5

Conclusion 4

A broad program of behavioral, communications, and educational research is crucial to assess how youth perceive e-cigarettes and associated marketing messages, and to determine what kinds of tobacco control communication strategies and channels are most effective.



Public Service Announcement



Chapter 5

Conclusion 5

Health professionals represent an important channel for education about e-cigarettes, particularly for youth and young adults.



Provide consistent and evidence-based messages about the health risks of e-cigarette use and exposure to secondhand aerosol from e-cigarettes.



The use of any tobacco product, including e-cigarettes, among young people is unsafe.

Messaging about the potential role of e-cigarettes in reducing the burden of tobacco-related diseases should note that e-cigarette products that deliver nicotine are not considered safe, particularly for youth and young adults, even before researchers fully characterize and quantify all of their health risks, including possible permanent changes to the adolescent brain and lungs.



Chapter 5

Conclusion 6

Diverse actions, modeled after evidence-based tobacco control strategies, can be taken at the state, local, tribal, and territorial levels to address e-cigarette use among youth and young adults.



Chapter 5 Conclusion 6.

- incorporating e-cigarettes into smoke-free policies;
- preventing the access of youth to e-cigarettes;
- price and tax policies;
- retail licensure;
- regulation of e-cigarette marketing that is likely to attract youth and young adults, to the extent feasible under the law;
- and educational initiatives targeting youth and young adults.
- Among others, research focused on policy, economics, and the e-cigarette industry will aid in the development and implementation of evidence-based strategies and best practices.



Call to Action

The Surgeon General issues this Call to Action on e-cigarettes, specifically focusing on youth and young adults, to accelerate policies and programs that can reduce e-cigarette use among young people.

It highlights the need to implement proven strategies that will prevent potentially harmful effects of e-cigarette use among young people.

E-Cigarette Use Among Youth and Young Adults

The Call to Action on E-Cigarette Use Among Youth and Young Adults

The Surgeon General issues this Call to Action on e-cigarettes, specifically focusing on youth and young adults, to accelerate policies and programs that can reduce e-cigarette use among young people. This Call to Action comes amid the dramatic increase in e-cigarette use among our nation's youth and young adults. It highlights the need to implement proven strategies that will prevent potentially harmful effects of e-cigarette use among young people. The previous chapters explained what we know and do not know about e-cigarettes and reviewed policy options. Gaps in scientific evidence still exist, and this Call to Action is being issued while these products and their patterns of use are changing quickly. However, policies and strategies are available that can clearly reduce the public health threat posed by e-cigarette use among young people.

Use of e-cigarettes is increasing rapidly among young people, even among those who have never smoked cigarettes.

This Call to Action presents six goals and related strategies that should guide efforts to reduce e-cigarette use among youth and young adults. To achieve these goals, we must work together, which means working with individuals and families; civic and community leaders; public health and health care professionals; e-cigarette manufacturers and retailers; voluntary health agencies; researchers; and other stakeholders.

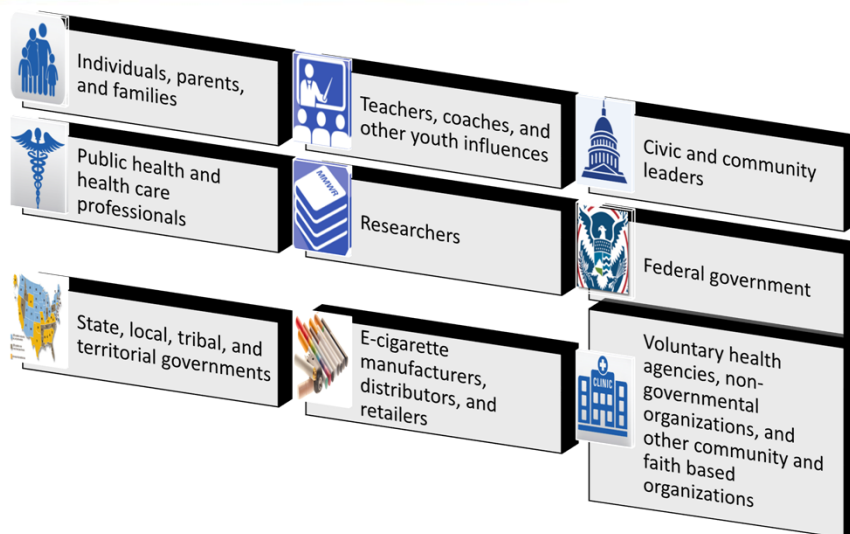
Stakeholders Who Can Take Action

- Individuals, parents, and families - Teachers, coaches, and other youth influencers - Civic and community leaders - Public health and health care professionals - Researchers	- Federal government - State, local, tribal, and territorial governments - E-cigarette manufacturers, distributors, and retailers - Voluntary health agencies, non-governmental organizations, and other community- and faith-based organizations
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Goal 1. First, Do No Harm

Since 1964, reports from the U.S. Surgeon General have led the way in identifying the harms of tobacco use and detailing the most effective ways to reduce the dangerous effects of tobacco use. For example, reports from 1994 and 2012 outlined proven strategies to prevent and reduce tobacco use among youth and young adults (U.S. Department of Health and Human Services (USDHHS) 1994, 2012). Building on these and other past reports, this Call to Action considers the harms of e-cigarette use among youth and young adults and stresses the importance of strategies that will protect young people from the adverse consequences of these new products.

Stakeholders Who Can Take Action



Call to Action: GOALS



1. First, Do No Harm



2. Provide information about the dangers of e-cigarette use among youth and young adults



3. Continue to regulate e-cigarettes at the federal level to protect public health



4. Programs and policies to prevent e-cigarette use among youth and young adults



5. Curb advertising and marketing that encourages youth and young adults to use e-cigarettes



6. Expand surveillance, research, and evaluation related to e-cigarettes

Goal 1. First, Do No Harm



Strategy 1A.

- Implement a comprehensive strategy to address e-cigarettes that will avoid adverse consequences and give careful consideration to the risks for youth and young adults. This can be done by including e-cigarettes in policies and programs related to conventional cigarette smoking at the national, state, local, tribal, and territorial levels.

Strategy 1B.

- Provide consistent and evidence-based messages about the health risks of e-cigarette use and exposure to secondhand aerosol from e-cigarettes.

Goal 2. Provide Information About the Dangers of E-Cigarette Use Among Youth and Young Adults



Strategy 2A.

- Educate parents, teachers, coaches, and other influencers of youth about the risks of e-cigarette use among youth and young adults.

Strategy 2B.

- Educate health professionals about the risks of e-cigarette use among youth and young adults.

Goal 3. Continue to Regulate E-Cigarettes at the Federal Level to Protect Public Health



Strategy 3A.

- Implement FDA regulatory authority over the manufacturing, marketing, and distribution of e-cigarettes.

Strategy 3B.

- Reinforce other federal agencies as they implement programs and policies to address e-cigarettes.

Goal 4. Programs and Policies to Prevent E-Cigarette Use Among Youth and Young Adults



Strategy 4A.

- State, local, tribal, and territorial governments should implement population-level strategies to reduce e-cigarette use among youth and young adults, such as including e-cigarettes in smokefree indoor air policies, restricting youth access to e-cigarettes in retail settings, licensing retailers, and establishing specific package requirements.

Strategy 4B.

- Coordinate, evaluate, and share best practices from state and local entities that have implemented programs and policies to address e-cigarette use among youth and young adults.

Goal 5. Curb Advertising and Marketing that Encourages Youth and Young Adults to Use E-Cigarettes



Strategy 5A.

- Curb e-cigarette advertising and marketing that are likely to attract youth and young adults.

Strategy 5B.

- Urge the e-cigarette companies to stop advertising and marketing that encourages and glamorizes e-cigarette use among youth and young adults.

Goal 6. Expand Surveillance, Research, and Evaluation Related to E-Cigarettes



Strategy 6A.

- Improve the quality, timeliness, and scope of e-cigarette surveillance, research, and evaluation.

Strategy 6B.

- Address surveillance, research, and evaluation gaps related to e-cigarettes.

E-cigarettes.SurgeonGeneral.gov



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THE
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E-CIGARETTES
& YOUNG PEOPLE

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THE FACTS

on e-cigarette use among
youth and young adults

 A Message from the U.S. Surgeon General

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