E-Cigarettes:
Talking Tech with the New Generation

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Disclosure

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Objectives

- Describe the e-cigarette device
- Discuss its appeal to users
- Recognize usage patterns of e-cigarettes
- Identify current e-cigarette prevention strategies
Question #1

- Electronic cigarettes do not contain the same cancer causing chemicals that are found in traditional cigarettes.
  - True
  - False
Question #2

- Electronic cigarette use has increased among the US population since 2007 with 13% of all high school students currently using them.
  - True
  - False
Question #3

- The Federal Drug Administration has approved the use of electronic cigarettes as a smoking cessation aid.
  - True
  - False
17 Facts about E-Cigarettes that May Surprise You
Electronic Cigarettes

- E-cigs
- Electronic Nicotine Delivery Systems (ENDS)
- Battery powered devices that heats up a liquid
- Liquid, and in turn, the vapor contains:
  - Nicotine
  - Flavoring
  - Chemicals
- Inhale the vapor
  - “vaping”
  - “cloud chasing”
What is an E-Cigarette?

Sample of e-cigarette products. Images are not to scale. Vaporizer products are considered “tank systems.”
How do E-Cigarettes work?
I ROLL MY OWN E-CIGARETTES.
Recharging
Flavors
Chemicals

- Propylene glycol
- Glycerol
- Nicotine
- Formaldehyde
- Acetaldehyde
- Acrolein
- Toluene
- Nickel
- Lead
## Current E-Cigarette Use

<table>
<thead>
<tr>
<th>Year</th>
<th>Middle school</th>
<th>High school</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>0.6% - 1.4%</td>
<td>1.5% - 4.7%</td>
</tr>
<tr>
<td>2012</td>
<td>1.1% - 2.7%</td>
<td>2.8% - 10.0%</td>
</tr>
<tr>
<td>2013</td>
<td>1.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>2014</td>
<td>3.9% (450,000)</td>
<td>13.4% (2 million)</td>
</tr>
</tbody>
</table>

**Adults:**
- 2010: 3.3%
- 2011: 6.2%
- 2013: 8.5%
Stealth Vaping

“The Ultimate Stealth Device??”

tictac-toke

510 Connection
10440 Battery

‘Clicky’ Button

Real tictacs That Rattle!

AFFORDABLE MODS
A The Home of Affordable eCig Mods

£20 DELIVERED

Strawberry Kiwi

Premium

Strawberry Kiwi

Sprinkles that taste Flavored Creampuffs.
Adverse Medical Effects

- Vomiting
- Nausea
- Ocular irritation
- Dizziness
- Tachycardia
- Agitation
- Headache
- Red eye

- Abdominal pain
- Oral irritation
- Chest pain
- Coughing
- Flushing
- Palpitations
- Confusion
- Death
Poison center calls involving e-cigarettes

215 Calls per Month

1 Call per Month

September 2010 - February 2014
Texas Poison Control Network

- E-cig exposure related calls
- January 2010 – June 2014
  - 57% - Age <5
    - Unintentional
    - 96% in residence
    - 85% ingestion
    - 11% dermal
    - 23% vomiting
Dangers of E-Cigs
Smoking Cessation Aid

• Not been approved by the FDA as a cessation aid
• Smokers that used e-cigarettes were less likely to quit smoking – Majority of studies
  ▫ Contradictory reports
• Nicotine delivery that exceeds a traditional cigarettes
## Nicotine Comparison

<table>
<thead>
<tr>
<th>Regular Cigarette</th>
<th>E-liquid Nicotine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfiltered, very strong</td>
<td>Super High</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Full Flavored, Strong</td>
<td>Extra High</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Regular (most)</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Light</td>
<td>Med</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Ultra-light</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Freedom from Nicotine!</td>
<td>No Nicotine</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>36mg</th>
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<tbody>
<tr>
<td></td>
<td>24mg</td>
</tr>
<tr>
<td></td>
<td>16mg</td>
</tr>
<tr>
<td></td>
<td>11mg</td>
</tr>
<tr>
<td></td>
<td>8mg</td>
</tr>
<tr>
<td></td>
<td>0mg</td>
</tr>
</tbody>
</table>
Increase in Sales

- Increase in sales every year since 2007
  - Decrease in traditional cigarette sales
- Internet sales of e-cigarettes are unregulated

Table 1. Annual Dollar Sales (Thousands) for Disposable E-Cigarettes, Starter Kits, and Cartridge Refills, Convenience Stores

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total U.S.</td>
<td>76,927</td>
<td>323,696</td>
<td>320.8</td>
<td>40,245</td>
<td>69,381</td>
<td>72.4</td>
<td>72,942</td>
<td>132,738</td>
<td>82.0</td>
</tr>
</tbody>
</table>
Policies on E-cigarettes

- Lack of restrictions to minors
- Not regulated by FDA
  - April 24, 2014 – Proposed to extend tobacco regulatory authority to included e-cigs
- June 2014 - El Paso City Council passed a ban on E-cigarettes
- Sept 1, 2014 - Use of electronic cigarettes in public places is prohibited (El Paso)
  - Vaping banned within 20 feet of all public entrances
El Paso Ban on E-Cigarettes

El Paso City Council passes ban on e-cigarettes

By Cindy Ramirez / El Paso Times

The use of electronic cigarettes in public places across El Paso where smoking is now banned will be prohibited starting Sept. 1, and both smoking and vaping will be banned from all city-owned properties such as parks starting in 2015.

That comes after the City Council on Tuesday approved changes to its ordinance regulating smoking in public and workplaces. The approved changes also will ban smoking and vaping within 20 feet of all public entrances, except for the El Paso International Airport, starting Sept. 1.

City Rep. Eddie Holguín voted against the changes, while city Rep. Emma Aceña was absent. The other six representatives voted in favor of the ordinance changes.

E-cigarettes are battery-operated devices that heat a flavored liquid which generally contains nicotine. The devices often look like cigarettes or pens and release a vapor that is inhaled by the users known as vapers.

Supporters of the ordinance change argue that the e-cigarettes are unhealthy and the secondhand vapor is unwelcomed even if the devices are healthier than cigarettes.

"Let’s set limits that protect shared public spaces," said Perla Retana, who has a 10-month-old son and says she doesn’t want to be exposed to smoking or vaping at city parks or other public places. "I worry that he’ll find cigarettes or parts of an e-cigarette and that it could be deadly. They’re
Fig. 2 State-by-state comparison of e-cigarette regulation profiles. Mix, Mixed regulations; SBM, Sale to minors ban; SBM-UPL, Sale to minors ban and prohibited use in limited venues; SBM-UPM, Sale to minors ban and prohibited use of e-cigarette by minors; SBM-UPL-UPM, Sale to minors ban, prohibited use by minors, and in limited venues; UPC, Use prohibited comprehensively in indoor public places. Map created with [24]
Marketing

- Flavoring
- Renormalizing “smoking”
- Channels used for traditional cigarettes
- Celebrity endorsements
- Online/Social media presence
- Product innovations – mods
Marketing as a Safe Alternative

Advertising costs
2011: $6.4 million
2012: $18.3 million
2013: $82.1 million
2014: $112.9 million
1. The Food and Drug Administration to establish regulations that hold e-cigarettes to at least the same marketing and advertising rules as conventional tobacco cigarettes.

2. The Consumer Product Safety Commission to add nicotine to its list of substances covered by regulations and to require special packaging, such as childproof packaging and warning labels, on nicotine solution cartridges to prevent childhood poisoning.

3. States and municipalities to enact and enforce laws restricting sales of e-cigarettes to minors, prohibiting the distribution of all free samples of and coupons for e-cigarettes, and prohibiting the use of e-cigarettes in all enclosed areas of public access and places of employment.

4. States and municipalities to impose a tax on the nicotine liquid used in e-cigarettes.

5. Congress to amend the Prevent All Cigarette Trafficking Act to include e-cigarette products, which would prohibit Internet vendors from distributing them through the US Postal Service.

6. Employers to prohibit the use of e-cigarettes on their premises.

7. Federal agencies and voluntary health organizations to fund research on the short- and long-term health effects of e-cigarettes on users and nonusers and the efficacy of e-cigarettes as a harm reduction/smoking cessation strategy.
Arguments

- Contains lower levels of toxicants than a traditional cigarette
  - Most contain nicotine
  - Long-term health outcomes of chronic use have not been tested
- Safer smoking
  - Increased use
  - Gateway effect
- Can choose nicotine level
  - Variation in nicotine
    - Not consistent between puffs, brands, or within brands
  - Deviation from label
  - Foreign manufacturing
  - Products marked as no nicotine have been found to contain up to 10 mg
UNKNOWN
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Questions?

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References


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