

Environmental Health Department



**Electronic Cigarette Use
Public Health & Public Policy Implications**

VAPING



Terms Used in Discussion

- Electronic Cigarette - battery-operated products designed to deliver nicotine, flavors and other chemicals (E-Cig)
- Electronic Vaping Device (ordinance term) - any electronically-powered or battery-powered device utilizing an atomizer which allows users to inhale nicotine vapor or any other vapor to simulate the smoking of tobacco, cigarettes, pipes or cigars

E-Cig Terms

- Vaping - common term for inhaling vapors from an e-cig device
- Vape shop - common term for a retailer specializing in the sale of e-cig products
- E-juice - common term for the liquid used in e-cig refill vials and e-cig cartridges (synonym: e-liquid)

Framing the Issues

- Should vaping be regulated?
- If vaping is regulated, to what extent and by what levels of government?
- Should minors be allowed to purchase and possess e-cigs?
- Does vaping pose a health hazard to users (to “vapers”)?
- Does vaping pose an IAQ hazard to bystanders?
(For example, is exhaled vaping aerosol a hazard?)
- Should Plano regulate e-cig sales as a land use issue?

History of E-Cigs

- First invented in the early 1960s by Herbert Gilbert.
- More modern devices designed and patented in China by Hon Lik in the early 2000s.



The United States E-Cig Industry

- About 250 brands sold
- Annual sales for 2013 were approximately \$2 billion
- Projected sales by 2019: \$10 billion
- Two million young people have vaped
- Starter kits cost \$60 - \$80; 5 pack of cartridges costs about \$10

Positive Attributes of Vaping:

OPINIONS OF THE INDUSTRY & USERS

- Electronic cigarettes are less harmful than tobacco cigarettes
- E-cigs can be an effective smoking cessation method (i.e. they are another Nicotine Replacement Therapy or NRT similar to nicotine patches and nicotine gum)
- Exhaled vapor contains fewer harmful pollutants (lower risk from “second hand” vapor) than tobacco smoke

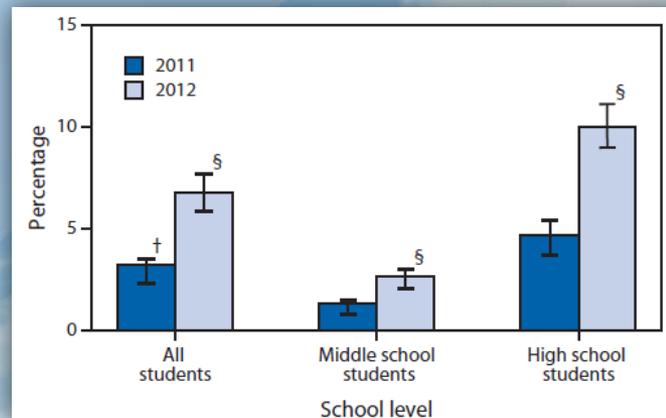
Positive Attributes

- E-cigs are safer for both users and bystanders.
- E-cigs are cheaper to purchase.
- Smokers perceive e-cigs are safer than tobacco cigarettes.
- E-cigs duplicate the sensory, behavioral and social components of smoking.
- Switching completely from traditional tobacco cigarettes to e-cigs removes about 99 percent of the risk for disease.

Negatives of Vaping

OPINIONS OF PUBLIC HEALTH AND HEALTH CARE PROFESSIONALS

- May lead to increased experimentation among young adults (i.e. gateway behavior to tobacco cigarettes)

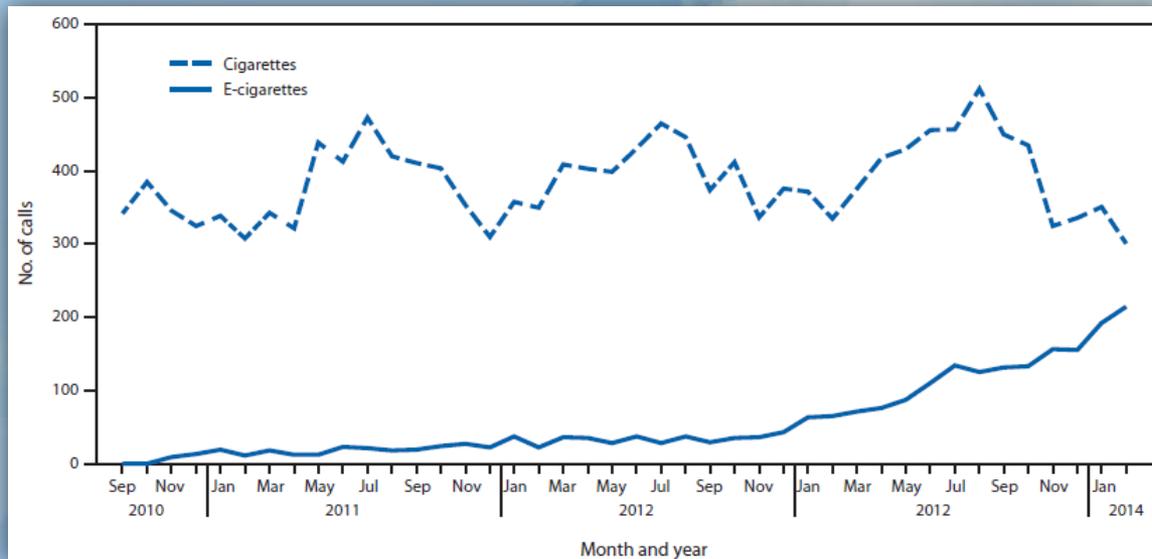


Source: *MMWR*, Sept. 6, 2013

- Vapor contains nicotine which can be respired by bystanders
- Could lead smokers who have quit tobacco to begin vaping (re-establish nicotine addiction)

Vaping Negatives

- In last few years, calls to poison centers for accidental nicotine poisoning (skin absorption and ingestion) have spiked (215 calls in February 2014)



Source: *MMWR*, April 4, 2014

- Some brands of e-juice (nicotine) emit formaldehyde and acrolein (both are carcinogens)

Vaping Negatives

- Sales are unregulated, which allows minors to purchase products from stores and online.
- Marketing of flavors such as chocolate, cola, strawberry, mint, and bubble gum is targeted to adolescents and young adults.
- E-cigs are not approved by the Food and Drug Administration (FDA) as a Nicotine Replacement Therapy (NRT).
- Vaping is marketed to smokers as a means of enjoying nicotine in places where smoking is banned.
- Liquid vials and cartridges of nicotine may contain multiple contaminants.

Vaping Negatives

- Nicotine vials and cartridges lack child-resistant caps.
- Companies shipping free samples and purchased product cannot verify the age of consumer.
- Marketing strategies target adolescents and young adults.
- Companies use celebrity endorsers.
- Propylene glycol (a common carrier in e-juice) is a known lung irritant.

Adverse Effects of Vaping

AS REPORTED TO THE FDA

Reported By Users

- Racing pulse
- Dizziness
- Slurred speech
- Mouth ulcers
- Heartburn
- Coughing
- Diarrhea
- Sore Throat

Reported by Bystanders

- Eye irritation
- Nose irritation
- Throat irritation
- Chest tightness
- Nausea

Nations With Some Form of E-Cig Regulation

- Australia
- Brazil
- Canada
- Finland
- Israel
- Malaysia
- Mexico
- New Zealand
- Singapore



States With Some Form of E-Cig Regulations

- Alabama
- Arkansas
- Arizona
- California
- Colorado
- Delaware
- Hawaii
- Idaho
- Illinois
- Indiana
- Kansas
- Maryland
- Minnesota
- Mississippi
- New Hampshire
- New Jersey
- New York
- North Carolina
- North Dakota
- Oregon
- Oklahoma
- South Carolina
- South Dakota
- Tennessee
- Utah
- Vermont
- Washington
- Wisconsin
- Wyoming

Texas Cities With Ordinance Requirements for E-Cigs

- Flower Mound
- Frisco
- Georgetown
- Lufkin
- San Angelo
- San Marcos
- Lewisville
- Weatherford
- Richardson
(SUP for vape shops)



Plano Organizations with E-Cig Use Policies

- Plano Independent School District
- Collin College
Fines up to \$200.
- City of Plano
Personnel Policy - No use in city facilities or vehicles.
- Hospitals
Baylor Regional Medical Center
Medical Center of Plano
Children's Medical Center
Texas Health Presbyterian Hospital



FDA Regulations

(PROPOSED)

Published in the Federal Register on April 25, 2014.

1. Deem E-Cigs “tobacco products.”
2. Set a minimum age for purchase.
3. List ingredients.
4. Determine health warnings.

Public comment period ends on July 9, 2014.



Retail Sales in Plano



- Available almost any location where tobacco products are sold:
 - Supermarkets
 - Convenience stores
 - Tobacco shops
- Plano has approximately 200 retail outlets for E-Cigs and E-juice.

High Level of Regulation

- Treat vaping identically to smoking tobacco cigarettes
- Prohibit sales to minors (under age 18)
- Prohibit possession by minors
- Prohibit sales from vending machines
- Require clerk-assisted sales with e-cigs, such as limiting product to “only behind the counter”
- Prohibit product use in vape shops which are not located in a free-standing building
- Prohibit vaping in City of Plano facilities

Moderate Level of Regulation

- Prohibit sales to minors (under age 18)
- Prohibit possession by minors
- Prohibit sales from vending machines
- Require clerk-assisted sales with e-cigs, such as limiting product to “only behind the counter”
- Allow vaping in all vape shops, including those which are not in a free-standing building
- Prohibit vaping in City of Plano facilities

Minimal Level of Regulation

- Prohibit sales to minors (under age 18)
- Prohibit possession by minors
- Prohibit sales from vending machines
- Prohibit vaping in City of Plano facilities only



Recommendations:

ENVIRONMENTAL HEALTH DEPARTMENT

- Direct staff to draft an ordinance containing the highest level of regulation.
- Direct staff to perform semi-annual literature surveys to stay abreast of developing “body of knowledge” of the public health impacts of vaping.
- Direct staff to present annual update to Council on body of knowledge - Revise Chapter 14 if and when warranted.

