E-CIGS AND VAPING
OUTLINE

• Knowledge Check
• What is an E-cig/Vaping?
• Contents in an E-cig/Vaping
• Prevalence
• Long-Term Toxicities
• E-Cig/Vaping Regulation Timeline
• Smoking Cessation Alternatives
A JUUL e-cigarette does not contain as much nicotine as a pack of regular cigarettes.

Each JUUL cartridge contains 0.7 mL of nicotine with 5% nicotine by weight, equal to the amount of nicotine in a pack of cigarettes (20 cigarettes) or 200 puffs

Vaping contains just water vapor and nicotine.
• The flavoring that helps the nicotine go down has NOT been approved for inhalation.

• Propylene glycol
• Ammonia

"THE MANUFACTURERS AND MARKETERS OF ENDS [ELECTRONIC NICOTINE DELIVERY SYSTEMS], AND ALL OTHER FLAVORED TOBACCO PRODUCTS, AND ALL OTHER FLAVOR MANUFACTURERS, SHOULD NOT REPRESENT OR SUGGEST THAT THE FLAVORING INGREDIENTS USED IN THESE PRODUCTS ARE SAFE…"

Source: https://cosmosmagazine.com/society/twelve-myths-about-e-cigarettes
E-Cigs and Vaping are risk-free for your health
• Nicotine is the primary agent in both regular cigarettes and E-cigarettes
• Toxic metals have been discovered in E-cigarettes
• E-cigarettes are relatively new to the market
E-Cigarettes and other vaping products are proven methods for smoking cessation.
• There is little to no evidence that reliably reduced cigarette smoking or lead to smoking cessation

• The U.S Prevention Services Task Force, a group of health experts, conclude the evidence is insufficient to recommend e-cigarettes for smoking cessation

• Teen e-cig users are more likely to start smoking within 6 months (30.7%) compared to non-users (8.1%)

Source: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-508.pdf
VAPING AND E-CIGS

• E-Cig:
  • “E-Cigs”, “E-hookahs”, “vape-pens”, “mods”
  • Made to look like regular cigarettes, cigars or every day items (i.e pens, USB sticks, and other every day items)
  • Not currently approved by the FDA

• Vaping
  • Process of inhaling aerosol through an E-cig
CONTENTS OF E-CIG

Nicotine

- Nicotine exposure during adolescence can cause addiction and can harm the developing brain
- JUUL has higher nicotine content than many other e-cigs
  - 59mg/mL = 200 puff = 1 pack of cigarette
Ethylene glycol and Propylene glycol

- Used to make antifreeze and de-icing solutions for cars, airplanes, and boats.
- When absorbed, these agents can affect multiple vital organs, causing seizures, abnormal heart rhythms and kidney failure.
- Ingestion of sufficient amounts can be fatal.
CONTENTS OF E-CIG (CONT)

Toxic chemicals: formed as the e-liquid heats up to make the aerosol

- Ammonia
- Lead
- Metals
- Formaldehyde
- Acetaldehyde
- Acrolein
- Tobacco alkaloid
- Benzene

Can cause cancers, birth defects and other reproductive harm!!
WHY E-CIGS ARE SO DANGEROUS AND ADDICTIVE

1. Easier to use and more elegant than cigarettes
2. Less restrictions
3. Hard to track how much or how frequently you are actually smoking
4. Flavoring
5. Developing adolescent brain more likely to suffer from addiction and consequences on the brain
Altria Group Inc. said it would pull its e-cigarette pods from the market and discontinue the sale of most flavored e-cigarettes in response to increasing concerns about a surge in underage use of similar products.

- Altria represented 9% of the U.S. e-cigarette market
- Juul accounted for 62%
- Altria will continue to sell e-cigarette products that resemble traditional cigarettes but limit them to tobacco, menthol and mint flavors
- These are less popular among children
LONG-TERM TOXICITIES

- Pulmonary fibrosis
- Bronchitis
- Pneumoconiosis
- Lung cancer
- Damage to kidneys
E-CIGARETTE EXPLOSIONS
E-CIGARETTE EXPLOSIONS (CONT)
Tobacco

1800s
Cigarettes first introduced

1913
Birth of modern cigarette

1956
Relationship identified between smoking and lung cancer

1992
Environmental Protection Agency classified tobacco smoke as “Group A” carcinogen, the most dangerous class

1999
Major U.S. companies removed all advertising from outdoor and transit billboards

E-Cigarettes

• Not FDA regulated
• Long-term effects have not been established
• What will the timeline look like?

2006
E-cigs introduced to US

2018
Not FDA regulated, long term effects have not been established

WAYS TO QUIT SMOKING

APPROVED TOBACCO CESSATION MEDICATIONS
NICOTINE REPLACEMENT THERAPY

Variety of Formulations

• Nicotine patch
• Nicotine gum
• Nicotine Lozenges
• OTC products
• Must be 18 years or older to buy unless prescribed by a doctor
PSYCHOTROPIC AGENT

Zyban (Bupropion SR)

• Prescription only
• Will help reduce cravings
PARTIAL NICOTINE RECEPTOR AGONISTS

Chantix (Varenicline)

• Prescription only
• Will help reduce cravings
Questions?