ELECTRONIC NICOTINE DELIVERY SYSTEMS, ADOLESCENT USE AND NICOTINE ADDICTION

Sigma Theta Tau Research Day
April 12, 2019
Deb Vincent, PhD, APRN-BC
Jeanne Potts, DNP, WHNP-BC, FNP-C
Jessica Durbin, DNP, FNP-BC
Jill Moore, PhD
Susan Eley, PhD, APRN-BC
VAPING: HOW MUCH DO YOU KNOW?

• In 2016, over 37 million U.S. adults inhaled various levels of nicotine daily (Jamal et al., 2018).

• E-cigarettes are known by many different names. They are sometimes called “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems” (CDC, 2018).

• Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items (CDC, 2018).

• Electronic Cigarettes can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents (CDC, 2018).
INCIDENCE IN ADOLESCENTS

- Numbers of adolescents who utilize vaping from 2017 to 2018 were the largest ever recorded for any individual adolescent substance use outcome in the United States (Miech et al., 2018).

- Overall, electronic nicotine usage is 20.1% of all high school students (CDC, 2018).

- Tobacco usage among America’s youth is a signal to providers to screen all young patients for nicotine use in any form, identify addiction behaviors, discuss health risks, and provide resources for nicotine cessation.

- ENDS use rose to 37.7% among regular monthly users in 2018.
## MONTHLY ADOLESCENT USE OF ENDS

<table>
<thead>
<tr>
<th>Grade</th>
<th>2017 Monthly Use</th>
<th>2018 Monthly Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th</td>
<td>3.5%</td>
<td>6.1%</td>
</tr>
<tr>
<td>10th</td>
<td>8.2%</td>
<td>16.1%</td>
</tr>
<tr>
<td>12th</td>
<td>11.0%</td>
<td>20.1%</td>
</tr>
</tbody>
</table>
FDA REGULATIONS

• 2009: Family Smoking Prevention and Tobacco Control Act (USFDA, 2018a)

• 2016: E-cigs was added to the e-cigs to the final ruling (USFDA, 2018a)


• Currently: Public hearing to discuss (USFDA, 2018b)

• All states, except Michigan and Pennsylvania, have regulations on (USFDA, 2018b)
IMPLICATIONS FOR PROVIDERS

ASSESSMENT and EDUCATION are critical!

• Educate
  • providers, parents, adolescents
• Be aware of the consequences of ENDS usage
• Assess
  • Adolescent knowledge
  • Smoking/ENDS usage
ADOLESCENT ENDS CHECKLIST

• How old are you?
• How would you describe your school performance?
• How would you describe your relationship with others?
• Do you use tobacco or smokeless tobacco? If so, what types?
• If you use e-cigarettes:
  - How old were you when you first started using e-cigarettes?
  - What was the reason you start using e-cigarettes?
  - Do you use e-cigarettes daily or only on the weekends?
  - Do your parents/guardian know you use e-cigarettes?
  - Do your friends or family use e-cigarettes?
  - Do you use e-cigarettes with your family or friend?
  - Are you aware of the harmful effects of e-cigarettes?
  - Are you interested in e-cigarette cessation?

Vincent, Potts, Durbin, Moore, & Eley, (2018)
ADDICTION TREATMENT PLAN

• Use of ENDS, such as Juul Pods
  • Led to nicotine addiction surge among teens

• Providers, parents, educators, and teens
  • Searching for strategies that target smoking cessation and nicotine addiction

• National news
  • Adolescents revealing their addiction to nicotine
ADDICTION TREATMENT PLANS, CONT’D

• Traditional Therapies
  • Focus on adults
    • same strategies be used with adolescents?
      • Yes and No
  • Yes (National Institute of Health, 2018)
    • address underlying psychiatric constructs and addiction tendencies
      • Psychosocial therapy – CBT, use of social media, cell phones
  • No
    • Medication therapy is controversial
• Medication therapy controversial
  • OTCs
    • Nicotine gum
    • Nicotine replacement therapy

• Prescription
  • Chantix (varenicline)
  • Wellbutrin SR (bupropion)
    • Antidepressant-dual inhibition of norepinephrine and dopamine uptake
    • Zyban
    • EBP – not enough studies
CONCLUSION

• Development of programs specific to adolescents
  • nicotine addiction treatment
  • Smoking cessation

• Providers
  • Use of tool to assess adolescents’ use of tobacco and ENDS products
  • Discuss smoking, ENDS usage, and nicotine addiction at each visit
  • Educate public
    • smokefree.gov and 1-800 QUIT NOW ((National Institute of Health, 2018)

• Legislation
  • STOP the marketing to adolescents!
  • Online and OTC purchasing regulations
REFERENCES


