E-Cigarette Public Health Concerns

INADEQUATE INFORMATION ABOUT THE HEALTH RISKS OF E-CIGARETTES

WHAT WE DO KNOW:

- Nicotine is a highly addictive drug. The tobacco industry has a history of making false and misleading public statements regarding their control of the nicotine content and delivery of their products.[1]
- Youth are highly sensitive to nicotine and can feel dependence earlier than adults. [2]
- Nicotine may have potential negative impact on adolescent brain development.[3]
- Nicotine has the following health effects: raises blood pressure and cholesterol, increasing the likelihood of a heart attack or stroke, accelerates growth of existing cancers and produces central nervous cell damage.[4]
- Several incidents of nicotine poisoning have resulted from children consuming bottles of e-cigarette nicotine solution; one such incident has already led to the death of a child.[5]
- The physical characteristics of nicotine delivery systems can affect their toxicity and addictiveness. Therefore, new nicotine delivery systems should be evaluated independently for their toxic and addictive effects. [6]
- Nicotine has been shown to be a gateway drug. [27]
- E-cig vapors (aerosol) have been shown to contain formaldehyde a class 1 carcinogen and other harmful chemicals such as acetaldehyde and lead.[23]

- **UNSUBSTANTIATED HEALTH CLAIMS MISLEAD CONSUMERS**
- Scientific evidence of electronic cigarettes as an effective tobacco cessation aid is inconclusive.
- In Utah, we know that people are purchasing e-cigarettes with the intention to quit. However, population surveys show that adult tobacco use rates have not declined with the rise in e-cigarette use. [25]
- There is some indication that they may alleviate the desire to smoke[7] and can produce short-term cessation,[8 9 10] however, well-designed safety and efficacy studies are lacking.
- To date, the only randomized clinical trial that compared e-cigarettes with conventional nicotine patches found no statistically significant difference in the ability of smokers to quit when they used e-cigarettes or nicotine patches.[11]
- Research has shown that most e-cigarette users are “dual users,” meaning that they still continue to smoke conventional cigarettes.[12] This is of concern because smoking-related cardiovascular and cancer risks depend more on how long people smoke than on how much they smoke. Dual users are unlikely to gain significant health benefits from smoking a few less traditional cigarettes each day.[13]
- A significant number of the flavor chemicals were aldehydes, a compound class recognized as ‘primary irritants’ of mucosal tissue of the respiratory tract.[24]

- **LACK OF CONTROL OVER WHAT IS IN E-CIGARETTES**
- The Salt Lake County Health Department found that amounts of nicotine in e-juice were as much as three times higher than the labeled amount. E-juice labeled as zero nicotine were also found to contain nicotine.
- Secondhand vapor exhaled from the e-cigarette user exposes non-users to nicotine.[14 15]
- Due to a lack of regulation of these products and varying ingredients from one to the next, it is impossible to make sweeping statements about what may or may not be in secondhand vapor.
- Indoor e-cigarette vapor includes detectable levels of volatile organic compounds. [16]

- **E-CIGARETTE MARKETING ATTRACTS YOUTH**
- With a total lack of restriction, e-cigarette companies are advertising heavily across mass media.
- For the first time since 1970, Big Tobacco is once again airing TV ads.[17]
- They have re-introduced the highly stylized ads of the mid-century era, featuring celebrity endorsements and thinly veiled false claims reverting the dialog back to the golden age of cigarette marketing.[18]
- Awareness and positive perceptions of e-cigarettes are high among youth and young adults. [19]
- Due to lack of enforcement of youth access restrictions, youth have easy access to e-cigarettes from sources such as specialty retail shops, regular stores, or the Internet. [20]

- Due to widespread marketing and early adoption of these products, youth are being exposed to e-cigarettes in such large numbers that public health officials are concerned this may "renormalize" smoking-behaviors and cigarette use. [21]
- The statistics are alarming for e-cigarette usage among teens. In a study of Utah students in grades 8, 10, 12:
    - The rate of students who currently use electronic cigarettes has tripled from 2011- 2013.
    - Youth are more likely to use e-cigarettes than any other tobacco product on the market.
    - Nearly one-third of teens who used e-cigarettes in the past 30 days have never tried a cigarette
    - Due to candy-like flavors, aggressive marketing and lack of safety data, monitoring and slowing the increasing use of e-cigarettes among youth is a public health priority.[25]
- Police are beginning to warn of people using e-cigarettes to smoke various forms of marijuana, alcohol, cocaine, and others in plain sight. [26]

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