

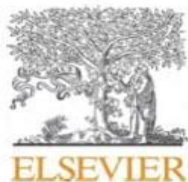
Addiction Medicine Update

Smoking Cessation & E-cigarettes

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Commentary

Failure to treat tobacco use in mental health and addiction treatment settings: A form of harm reduction?

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ABSTRACT

In mental health and addiction treatment settings, failure to treat tobacco dependence has been rationalized by some as a clinical approach to harm reduction. That is, tobacco use is viewed as a less harmful alternative to alcohol or illicit drug use and/or other self-harm behaviors. This paper examines the impact of providers' failure to treat tobacco use on patients' alcohol and illicit drug use and associated high-risk behaviors. The weight of the evidence in the literature indicates: (1) tobacco use is a leading cause of death in patients with psychiatric illness or addictive disorders; (2) tobacco use is associated with worsened substance abuse treatment outcomes, whereas treatment of tobacco dependence supports long-term sobriety; (3) tobacco use is associated with increased (not decreased) depressive symptoms and suicidal risk behavior; (4) tobacco use adversely impacts psychiatric treatment; (5) tobacco use is a lethal and ineffective long-term coping strategy for managing stress, and (6) treatment of tobacco use does not

Tobacco Use:

- Leading cause of death in pt's with psychiatric d/o's or SUD
- Associated with worsened SUD treatment outcomes
- Associated with increased (not decreased) depressive sx's and suicidal behavior
- Lethal and ineffective long-term coping strategy for managing stress

Treatment of Tobacco Use d/o

- Supports long-term sobriety
- Does not harm mental health recovery or worsen SUD treatment outcomes
- Actually improves MH SUD treatment outcomes

Tobacco Use Disorder Among Patients With Smoking-related Chronic Medical Disease: Association With Comorbid Substance Use Disorders

- VA study. FY 2012, 3.2 million pt's with smoking-related illnesses (MI, CHF, PVD, CVA, COPD, cancer, DM, liver dx, kidney dx, HIV)
- 16% also with TUD (more than just nicotine use)
- Of those 16%, 4x more likely to be homeless
- 5x more likely to have another SUD (etoh use disorder, drug use disorder) , 25% vs 5%

- “A substantial portion of people with TUD dx despite concurrent smoking-related illness are also likely to have other comorbid SUDs, complicating efforts at smoking cessation...”

Treating Smoking in Adults With Co-occurring Acute Psychiatric and Addictive Disorders

Smita Das, MD, PhD, MPH, Norval J. Hickman, PhD, MPH, and Judith J. Prochaska, PhD, MPH

Objectives: Tobacco use is undertreated in individuals with psychiatric and substance use disorders (SUDs), with concerns that quitting smoking may compromise recovery. We evaluated outcomes of a tobacco intervention among psychiatric patients with co-occurring SUDs.

Methods: Data from 2 randomized tobacco treatment trials conducted in inpatient psychiatry were combined; analyses focused on the subsample with co-occurring SUDs ($n=216$). Usual care provided brief advice to quit and nicotine replacement therapy during the smoke-free hospitalization. The intervention, initiated during hospitalization and continued 6 months after hospitalization, was tailored to readiness to quit smoking, and added a computer-assisted

Quitting smoking was associated with abstinence from alcohol and cannabis at follow-up. The findings support addressing tobacco in conjunction with alcohol and other drugs in psychiatric treatment.

Key Words: dual diagnosis, mental health, smoking cessation, tobacco

(J Addict Med 2017;11: 273–279)

For the clinician, a smoker with dual issues of mental illness and substance use disorders (SUDs) presents a hefty treatment challenge. Although the smoking prevalence in the general population has dropped to 18%, people with mental illness and SUD have 2 to 4-fold higher rates of smoking than the general population, and are estimated to

Treating Smoking with Co-occurring Acute Psychiatric and Addictive Disorders

- Tobacco treatment in psychiatric patients with co-occurring SUDs was effective and did not adversely impact recovery
- Quitting smoking was associated with abstinence from alcohol, cannabis at follow-up.
- The findings support addressing tobacco in conjunction with alcohol and other drugs in psychiatric treatment.

Myths

- Tobacco use is less harmful than etoh, illicit drug use and other self-harm behaviors
- Continuing to smoke will help me be successful in my attempt to quit etoh and drugs
- Smoking lowers my risk of depression (and suicidal behavior)

Myths

- Allowing smoking in MH treatment settings is effective in addressing agitation and encouraging medication compliance
- Smoking helps me manage my stress
- Quitting smoking will lead to decompensation in MH functioning (e.g. recurrence of MDD)

Facts: Tobacco Use

- Leading cause of death in pt's with psychiatric d/o's or SUD
- Associated with worsened SUD treatment outcomes
- Associated with increased (not decreased) depressive sx's and suicidal behavior
- Lethal and ineffective long-term coping strategy for managing stress

Smoking Cessation

- Encourage cessation whenever possible (at every visit) regardless of self-reported readiness to quit
- Discuss myths and facts

Smoking Cessation

- 5 A's Model
 - Ask about tobacco use
 - Advise to quit
 - Assess willingness to make quit attempt
 - Assist in quit attempt
 - Arrange follow-up

One Year Success In Smoking Cessation Using Different Interventions

- No action 1%
- Brief Advice 5%
- Brief advice + Nicotine Replacement therapy 10%
- Intensive counseling 15-20%
- Intensive counseling + NRT 30-40%

Nicotine Replacement Therapy (NRT)

- First line treatment
- Covered on most Medicaid plans
- It is OKAY to smoke while on patches!!
- 24 hours. Only remove at bedtime if nightmares
- Don't need to be "Ready to quit"
- Nothing to lose by trying

Nicotine Replacement Therapy (NRT)

- Patches available in 21, 14, 7 mg
- No hurry to lower dose
- Can use two patches for heavy smokers who need it (many >1 ppd smokers will need more than one 21mg patch)
- At follow-up appt, add nicotine gum or lozenges to patch

Cochrane Review 2016

- Using NRT, doubled chances of decreasing cigs/day by $\frac{1}{2}$
- NRT also doubled chances of quitting completely.

Pharmacotherapy

- NRT, single, additive
- NRT + bupropion
- Varenicline (Chantix)

E-cigarettes and Vaping

- It's all the rage
- Numbers going up
- I will use "Ecigs" to mean ecigs or vaping

The New York Times

April 2, 2018

'I Can't Stop': Schools Struggle With Vaping Explosion



Liz Blackwell, a school nurse in Boulder, Colo., showed a collection of vape pens that had been confiscated from students during a presentation at Nevin Platt Middle School in March. Nick Cote for The New York Times

By Kate Zernike April 2, 2018

The student had been caught vaping in school three times before

E-cigarettes

- Cessation
- Safety
- Gateway?
- Limited studies on all three

Ecigs: Pro

- Viable harm-reduction strategy
- Could reduce tobacco-related morbidity and mortality
- Existing research r.e. toxins show levels that are orders of magnitude lower than cigs

Ecigs: Cons

- Long-term safety not established
- Cig smokers should use current, evidence-based strategies for cessation
- Popularity w/youth will lead to switching to cigarettes
- Tobacco companies cannot be trusted & will use Ecigs to maintain cigarette use among smokers
- Dual use may decrease likelihood of successful cessation and normalize cigarette smoking
- Ecig use among former smokers may lead to relapse of tobacco use

E-cigarettes-Cessation

- Studies limited by small sample sizes, using older EC technology
- Review of 29 articles in *Current Drug Safety*, 2/26/18
- Cochrane Review 10/2015
 - Modest benefit in some studies
 - Where Ecigs introduced as intervention, many used them to maintain their habit

E-cigarettes-Cessation

- Self-titration. 2016 study showed users tend to engage in “compensatory puffing” as nicotine concentration is lowered
- (2015 Low-nicotine cigarette study showed that when nicotine content lowered enough, smoking becomes less addictive)

Ecigs: Safety

- Again, limited studies
- Not regulated, nicotine levels vary
- Additives use to allow vaporization, glycerol and propylene glycol, are considered safe as food additives. Unknown if safe for inhalation.
- Flavorings likewise (7764 unique flavors in 2014 study)

Ecigs: Safety

- Toxins identified in vapor
- One study estimated that levels of toxins were 9-450x lower than in cigarettes
- Some toxins higher than in cigs (heavy metals, silicate)
- Increased voltage increases toxins

Ecigs: Safety

- Brightly colored and sweet smelling liquids may increase risk to children of accidental exposure

Ecigs: Gateway

- Increase in new-users of Ecigs/vaping among adolescents.
- Adolescents tend to use not as cessation tool
- Need to screen adolescents specifically about use of ecigs and vaping-they might answer “no” when asked, “do you smoke cigarettes?”

E-cigs: approaches

- Britain: public health recommendations include switching to ecigs as part of harm reduction strategy for cessation
- US: so far, mostly recommend against d/t lack of evidence of safety (may be moving a bit)

Which recommendation
is right?

ASAM, AAFP, AAP

<https://www.asam.org/resources/publications/magazine/read/article/2014/08/11/e-cigarettes-and-patients>



E-Cigarettes and Patients

by Richard G. Soper, MD, JD, MS, FASAM, ABAM Diplomate | August 11, 2014



Since the introduction of electronic cigarettes (dubbed “electronic nicotine delivery systems” or “ENDS” by the World Health Organization) in 2003 to the world marketplace, their use has exploded. Currently, ENDS have a significant portion of the market.

The July/August 2014 of ASAM's official journal, *Journal of Addiction Medicine*

Electronic nicotine delivery systems (ENDS)

What physicians should know about ENDS

- Electronic nicotine delivery systems (ENDS), also called electronic cigarettes, e-cigarettes, vaping devices, or vape pens, are battery-powered devices used to smoke or “vape” a flavored solution.
- ENDS solution often contains nicotine, an addictive chemical also found in cigarettes.
- ENDS use is popular—the rate of adults trying an e-cigarette at least once more than doubled from 2010 to 2013,³ and more youth are current users of e-cigarettes than combustible cigarettes.²
- In 2016, the Food and Drug Administration (FDA) expanded its regulatory authority to include the manufacture, import, packaging, labeling, advertising, promotion, sale, and distribution of all tobacco products, including ENDS. Under this new law, often called the “Deeming Rule,” the FDA:
 - Requires health warnings on ENDS and other tobacco products.
 - Prohibits the sales of ENDS to youth under the age of 18.
 - Bans free samples and prohibits the sale of ENDS in vending machines.
 - Requires that ENDS manufacturers receive marketing authorization from the FDA.
 - Requires vape shops that mix e-liquids to comply with legal requirements for tobacco manufacturers.
- Exhaled ENDS vapor is not harmless water vapor—it has been shown to contain chemicals that cause cancer,³ can cause harm to unborn babies,⁴ and is a source of indoor air pollution.⁵ ENDS are promoted as a way to smoke where smoking is prohibited. However, state and local officials are incorporating ENDS use into existing smoke-free air regulations to protect health.
- Some people use ENDS as a way to quit smoking combustible cigarettes, but current evidence is insufficient to recommend ENDS for tobacco cessation in adults,⁶ and some people use both devices due to the addictive nature of nicotine.

ENDS are a health hazard

- ENDS companies can legally promote these products by using techniques that cigarette companies have not been able to use since the 1998 Master Settlement Agreement, including television and radio ads, billboards, outdoor signage, and sponsorships.
- ENDS and ENDS solutions are available in many flavors (bubble gum, chocolate, peppermint, etc.) that appeal to youth. Flavors, design, and marketing renormalize and glamorize smoking.
- In 2016, the Child Nicotine Poisoning Prevention Act was signed into law. This law requires packaging safety standards for ENDS and the containers that hold ENDS solution. Under this law, liquid nicotine must be packaged in child-proof packaging, in accordance with Consumer Product Safety Commission standards. This law is an important step to protect children’s health. Prior to the passage of this act, poison control centers in the United States reported skyrocketing adverse exposures from e-cigarettes and liquid nicotine since 2011.⁷

JUULING: What Pediatricians and Families Need to Know

What is a JUUL?

JUUL (pronounced “jewel”) is a brand of e-cigarette made by JUUL Labs Inc.

JUUL has grown quickly in popularity since introduction to the market in 2015, fueled by a serious following among youth and young adults.

JUUL’s popularity among youth raises significant concerns for pediatric health.



JUUL Characteristics:

JUUL is a sleek, small e-cigarette that resembles a flash drive. Unlike other types of e-cigarettes, JUUL does not look like a traditional cigarette and thus may not be immediately identifiable as a vaping device. Due to their size, JUUL devices are discrete and can be easily concealed in a fist or a pocket.

JUUL operates by heating a “pod” of e-liquid containing nicotine, flavorings and other substances. When heated, the e-liquid creates an aerosol which is inhaled by the user.

JUUL has spawned its own terminology: use of these devices is called “juuling.”

Public Health Concerns:

JUUL comes in youth-friendly flavors. including mango, mint and fruit-medley. For decades, the tobacco industry has used flavors to attract youth to their products.¹ Youth cite flavors as a common reason for e-cigarette use.²

JUUL is highly addictive. The concentration of nicotine in JUUL is more than double the concentration found in other e-cigarettes. This high concentration is a serious concern for youth, who are already uniquely susceptible to nicotine addiction. The addictive potential is so high that the US Surgeon General has declared that youth use of nicotine in any form is unsafe.³

JUUL users have a significant risk of becoming cigarette smokers. Youth who use e-cigarettes are more likely to progress to smoking traditional cigarettes.^{3,4}

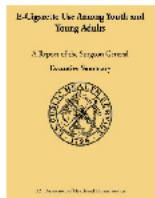
JUULing is increasingly common in high school and college campuses. Educators report that youth are using JUUL in classrooms, hallways and restrooms, and are sharing devices with their peers. This social use encourages non-users to try JUUL, and enables students who are too young to purchase these products, or who could not otherwise afford them, to access them through peers.

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Understanding the 2016 Surgeon General's Report on Youth and Electronic Cigarettes: What Clinicians Need to Know

In December 2016, US Surgeon General Vivek Murthy, MD MBA released a report about youth and electronic cigarettes (e-cigarettes). The AAP Julius B. Richmond Center of Excellence has created this fact sheet to help pediatric clinicians interpret the findings of the Surgeon General's Report and incorporate the information into patient care.



Key Findings

After a comprehensive review of current literature, the report made the following conclusions:

1. The landscape of e-cigarettes and other electronic nicotine delivery systems is diverse, and these products are known by many different names.
2. E-cigarette use among youth and young adults is a public health concern, and has increased significantly in recent years.
3. E-cigarettes are the most commonly-used tobacco product among youth, and use of e-cigarettes is associated with use of traditional cigarettes and other tobacco products.
4. E-cigarettes and other products containing nicotine pose a danger for youth, pregnant women and fetuses. Youth use of nicotine, including in e-cigarettes, is unsafe.
5. Secondhand exposure to e-cigarette aerosol is not harmless; it contains nicotine and other harmful constituents. The nicotine contained in aerosol can cause addiction and have neurotoxic effects on the adolescent brain.
6. E-cigarettes are advertised and marketed to youth using the same tactics the tobacco industry has used to promote cigarette smoking in the past.
7. Evidence-based tobacco control interventions should be used to protect youth from e-cigarette use and exposure.

Recommendations for Patient Care

Screen: Ask about tobacco use, including use of e-cigarettes, as a part of routine clinical screening with every patient and family.

Ask the Right Questions: Because e-cigarettes are known by many different names, it's important to use a specific e-cigarette screening question.

One example is: *"Do you use any kind of tobacco, such as cigarettes? What about electronic smoking devices like e-cigarettes or vape pens?"*

Talk with Teens Honestly: Counsel about the harms of e-cigarette use, and stress the importance of avoiding these products. Explain that e-cigarettes contain nicotine and cancer-causing chemicals; they are not "just water vapor." Discuss the effects of e-cigarettes on brain function, and explain that nicotine addiction happens quickly, and that users have an increased risk of using other tobacco products, including cigarettes.

When counseling, choose messages that resonate with adolescents: consider talking about the expense of e-cigarettes, or the loss of freedom that occurs when you're addicted to nicotine. Talk with them about the tobacco industry's efforts to target them with misinformation and advertising.

For both users and non-users, mention the dangers of secondhand e-cigarette exposure, and advise teens to avoid secondhand e-cigarette aerosol, and to discourage others from using e-cigarettes around them. For teens who babysit or have young siblings, explain that e-liquid is poisonous and can be fatal if ingested. Ensure that e-liquid is kept in childproof containers, and out of the reach of children.

Some suggestions for starting the conversation include:

- *"Can you tell me what you know about e-cigarettes?"*
- *"I know there's a lot of confusion out there about e-cigarettes, but I'd like to tell you what I know for sure."*

Use Evidence-Based Interventions: Although e-cigarettes are relatively new to the market, there are many evidence-based tobacco interventions that can be applied to e-cigarette use. Consider adapting the US Public Health Service's "5As" Tobacco Cessation Intervention to guide your conversation with parents and with youth:

- **ASK** about e-cigarette use
- **ADVISE** against e-cigarette use and about avoiding secondhand vapor exposure
- **ASSESS** whether teen is ready to quit using e-cigarettes
- **ASSIST** them in quitting, by setting a quit date and giving them practical advice for a successful quit attempt and for prevention of secondhand exposure by non-users
- **ARRANGE** follow-up to check on the teen's progress with quitting

Related Resources

For the full text of the Surgeon General's Report, visit www.surgeongeneral.gov; for related resources, visit E-cigarettes.Surgeongeneral.gov.

For more information about electronic cigarettes, including statistics and citations, visit: <http://www2.aap.org/richmondcenter/ENDS.html>

Visit the AAP Julius B. Richmond Center of Excellence online at: www.richmondcenter.org

E-cigs: approaches

- My approach: likely that harms will surface, but also likely that ecigs are far less toxic than tobacco, so...
- Encourage as a step towards cessation (if NRT not successful, and/or if pt interested)
- Discourage long-term use

The End

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