Tobacco and the Emergence of E-Cigarettes: Addressing Unmet Needs in Mental Health

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Smita Das, Disclosures

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- Consultant for an IOP (The Camden Center)

The contents of this activity may include discussion of off label or investigative drug uses. The faculty is aware that it is their responsibility to disclose this information.
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• Several images from srita.stanford.edu (Stanford Research Into the Impact of Tobacco Advertising)
Target Audience

- The overarching goal of PCSS-MAT is to make available the most effective medication-assisted treatments to serve patients in a variety of settings, including primary care, psychiatric care, and pain management settings.
A typical patient...

- EC, a 48 year old male, comes in for a medication management visit
  - OCD, anxiety stable on fluvoxamine and propranolol
  - Completed an IOP 4 years ago, no acute events since
  - Came in late since he spilled coffee all over self rushing from dropping off kids in daycare while on conference call (professional)
  - Denies any changes in OCD symptoms and anxiety. Endorses he has a decent amount of stress with work
• You ask about mood, OCD symptoms, anxiety, and psychosis as part of ROS (stable)
• You ask about alcohol and drugs as part of ROS and he endorses having a glass of wine with dinner on weekends with friends. Denies stimulants, opiates, noting “You know me, I would never do those things, just an occasional joint.”
Case, Continued

• “But you’d be proud of me— I bought an e-cigarette today online and am going to use it to quit smoking.”
• “Oh, that’s great.” (Thinking it is great)
• “Oh that’s great.” (Unsure what to think)
• “Oh that’s great.” (Whoops, I forgot to check in about his smoking—right, he smokes 1 ppd x 4 years)
• “That’s a horrible idea.” (Why replace one addiction for another?)
• “Interesting.”
E-cigarettes

• E-cigarettes are new
  ▪ US market in 1996; developed in China in 1993
  ▪ Philip Morris had a precursor in 1990s
• Most of us didn’t learn about e-cigarettes in training
  ▪ Very few of us learned about tobacco in training
    (only half of psychiatry residencies provide training)
• How do we discuss tobacco and e-cigarettes with our patients, taking into account mental health conditions?

E-Cigarettes

• Generally similar in appearance to cigarettes, cigars, pipes, or pens

• Battery-operated devices that create a vapor for inhalation
  ▪ Simulates smoking but does not involve combustion of tobacco

• Also known as
  ▪ E-cigarette
  ▪ E-hookah, Hookah pen
  ▪ Vapes, Vape pen, Vape pipe
  ▪ Electronic nicotine delivery system (ENDS)
E-Cigarettes: Components

- Power source: Rechargeable/disposable battery
- Cartridge containing liquid solution
  - Propylene glycol
  - Glycerin
  - Flavorings (tobacco, fruit, chocolate, mint, cola, candy, etc.)
  - Nicotine
- Electronic atomizer/vaporizer
  - Heating element vaporizes liquid at temperatures 65-120 °C
- Modifications to e-cigarettes or “mods” allow for users to smoke other substances (ie marijuana); Open tank system vaporizers being marketed and developed for the purpose of vaporizing loose leaf products
E-cigarettes: Nicotine Exposure

- Varies based on the device and experience level of the user
- 15 puffs yields 0.025-0.77 mg nicotine versus 1.54-2.6 mg with a traditional cigarette
- E-cigarettes have a more addictive and concentrated delivery method, as the nicotine is aerated, reaching the brain faster
- Strength likely to increase over time
- Cartridges have 6 to 24 mgs of nicotine per ml
- Study of 32 cartridges found:
  - trace nicotine in three products labelled as nicotine-free
  - 9 products showed differences between labelled and detected nicotine concentrations greater than 20%.

Useful to ask about strength of nicotine

E-cigarettes: Epidemiology

• Between 2010 and 2013, ever use of e-cigarettes among US adults increased significantly from 3.3% to 8.5%
  ▪ US adult smokers increased significantly from 9.8% to 36.5%
• E-cigarettes, have been tried by 15% of those with mental health conditions, versus 7% of the general population.
• Consider mental health settings, smoke breaks, regulations
• More dual use in people with mental illness

E-CIG USE: SMOKERS with SERIOUS MENTAL ILLNESS (N=956)

Growth in Reported E-cig Use by Year of Study Enrollment

- 2009: 0%
- 2010: 1%
- 2011: 9%
- 2012: 19%
- 2013: 25%

% reporting recent e-cigarette use vs. Year Entered Study

Slide from Prochaska & Grana (2014) PLOS ONE
E-CIG USE: SMOKERS with SERIOUS MENTAL ILLNESS (N=956)

- **PREDICTORS of E-CIG USE**
  - Later year of enrollment: OR=29.2 (95% CI 10.5 - 80.7)
  - Younger age (18-25): OR =2.6 (1.2 - 5.7)
  - nonHispanic vs. Hispanic: OR=4.0 (1.8 - 8.9)
  - Preparation vs. precontemplation: OR=2.7 (1.4 - 5.2)
  - NS: gender, race, employment status, hospital site, study condition, psychiatric or substance use diagnosis, mental health severity, time to 1\textsuperscript{st} AM cig, cigs/day

- **Not more likely to be tobacco abstinent @ follow-up:**
  - 21% for EC users and 19% for non-EC users, p=.726

- **Not more likely to reduce cigarettes/day @ follow-up:**
  - Median reduction in cpd: 7.1 (EC) vs. 6.6 (non-EC), p=.730
  - CPD at latest FU: 10.0 (EC) vs. 10.1 (non-EC), p=.915

- **All smoking outcomes not significant by EC use in adjusted models**

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Slide from Prochaska & Grana (2014) PLOS ONE
E-cigarettes and Mental Health

E-cigarette use in US population survey (n=10,041)

Cummins et al. (2014) Tobacco Control
**E-cigarettes: Youth**

- CDC: Past-month **e-cigarette use tripled from 2013 to 2014 among HS students** (4.5% to 13.4%), surpassing all other tobacco use (including traditional cigarettes 9.2%)
- LA HS student study: Ever users compared with **nonusers more likely initiate combustible tobacco use over next year**
- For the first time in decades, the percent of US youth exposed to any nicotine product increased year over year, from 2013 to 2014 and again from 2014 to 2015.
- 1/5 e-cigarette using adolescents use device to **smoke cannabis oil**
- "Nicotine acts as a **gateway** drug on the brain, and this effect is likely to occur whether the exposure is from smoking tobacco, passive tobacco smoke, or e-cigarettes" and concern that behavior is outpacing science (Kandel and Kandel NEJM 2014)
- Liquid nicotine in a variety of flavors is widely available for purchase on the internet, and neighborhood vape shops are proliferating
- Presence is normalizing

Note that youth use rate in 2014 13% vs adults at 4.8%

Leventhal et al., 2015 JAMA; Morean et al., 2015 Pediatrics; Rigotti, Jama 2015
E-cigarettes: Marketing and Regulating

- **2014** study: Online e-cigarette market identified **466 brands** (each with its own website) and **7764 unique flavors** available.
- Advertising and sales increased especially with major tobacco retailers
  - 2014, e-cigarette advertising exceeded **$88 million**, (52% increase from 2013)
  - $35 mil from Altria/Philip Morris and $30 mil by Blu (owned by Imperial Tobacco).
- Tobacco advertising banned from television and radio since the 1970s
  - But e-cigarettes promoted widely and on the web and in social media.
- Youth exposure to television e-cigarette ads increased 256% from 2011 to 2013.
- From 2012 to 2013, e-cigarette revenues doubled, from $273.6 million to $636.2 million.
- 2016: FDA extended regulatory authority to cover all tobacco and ENDS products.

Ask what the patient knows or has heard about e-cigarettes.
ELECTRONIC CIGARETTES: Potential health risks

- Propylene glycol may cause respiratory irritation and increase the risk for asthma
- Flavors like cinnamonaldehyde cause pulmonary injury
- Oxidants, acrolein, free radicals all generated by ECs
- Glycerin may cause lipoid pneumonia on inhalation
- Nicotine is highly addictive and can be harmful
  - Refill cartridges with high concentrations of nicotine are a poisoning risk, especially in children; **Poison control calls** for nicotine poisoning have increased from only one call in September 2010 to 215 calls per month relating to exposure in February 2014
  - Nicotine can impair healing
  - Nicotine can directly affect oral and pulmonary tissues through oxidative stress and remodeling

Javed, Oral Diseases 2017; Benowitz, Nat Rev Cardiol 2017

Electronic cigarettes are not proven to be safe.
ELECTRONIC CIGARETTES: Potential health risks

- Carcinogenic substances are found in some aerosols
- Use of e-cigarettes leads to emission of propylene glycol, particles, nicotine, and carcinogens into indoor air
  - Cotinine in passive household members elevated
  - Chronic Exposure to children/infants is concerning
- Half of current smokers report regular use of e-cigarettes (dual use).
  - Despite the lack of research on efficacy and safety, the products continue to be sold in large mass.

Hess, Public Health Research and Practice 2016

Electronic cigarettes are not proven to be safe.
Cessation? Not based on current evidence

• 2 main RCTs investigating e-cigarette for cessation vs placebo
  ▪ Study 1: Reduction in cigarettes per day in e-cig vs placebo at 12 weeks but no significant difference at 6 or 12 months
  ▪ Study 2: No significant difference for e-cigarettes vs placebo vs patch
  ▪ 2016 Cochrane Review: Combined, 2 studies suggest e-cigarette vs placebo does have an effect on cessation but low grade evidence (“Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate”)
  ▪ No difference in e-cigarette versus NRT
• A recent systematic review in The Lancet Respiratory
  ▪ 20 controlled studies of e-cigarettes and tobacco use
  ▪ Odds of quitting cigarettes were 28% lower in those who used e-cigarettes compared with those who did not use e-cigarettes, regardless of interest in quitting.
• Not much research done in those with psychiatric illness (aside from Caponnetto study of 14 smokers with schizophrenia)

Ultimately the product was not recommended, but if a patient has tried evidence based methods or is unwilling to try them, e-cigarettes may offer a form of harm reduction. It is recommended that a) there is no dual use of traditional cigarettes with e-cigarettes and b) that a quit date is also set for the e-cigarette.
Tobacco, Nicotine and Mental Health
Smoking, Substance Use Disorders (SUD) and Mental Illness

- Individuals with mental illness and/or SUD
  - 2-4 fold higher rates of smoking
  - Consume 44-46% of cigarettes sold in the US
  - Account for 200,000 of the 480,000 premature deaths annually
  - Die on average 25 years earlier (treatable conditions related to tobacco use)

- Smoking accounts for more morbidity than alcohol and all other drugs combined, even among individuals with SUD

Grant, et al, Arch Gen Psych, 2004
Lasser, et al, JAMA, 2000
Surgeon General’s Report, 2014
Colton, Manderscheid, Prev Chronic Disease 2006
Schroeder, Morris, Ann Review Pub Health, 2010
TOBACCO USE ISOLATES and is COSTLY

• Aside from staggering morbidity/mortality…

• Median $142.40/month spent on cigarettes among an outpatient sample of smokers with schizophrenia
  - 27% of their monthly incomes

• 75% of psychiatric patients who smoke report smoking most or all of their cigarettes while alone

For this patient, does he smoke around kids, SHS, THS

How much does the patient spend ($7-8 a day, $50 a week, $2500 a month)

Steinberg et al., 2004; Prochaska et al., 2006
PHARMACOKINETIC DRUG INTERACTIONS with SMOKING

Drugs that may have a decreased effect due to induction of CYP1A2: (PAH effect in smoke hydrocarbons)

- Propranolol
- Tertiary TCAs
- Other medications: estradiol, naproxen,riluzole, ropinirole, Tacrine, theophylline, verapamil, r-warfarin (less active), zolmitriptan

- Caffeine
- Clozapine
- Fluvoxamine
- Haloperidol
- Olanzapine
- Phenothiazines
- Propranolol
- Tertiary TCAs
- Other medications: estradiol, naproxen, riluzole, ropinirole, tacrine, theophylline, verapamil, r-warfarin (less active), zolmitriptan

Slide Adapted from RxForChange.ucsf.edu
TOBACCO USE is ASSOCIATED with GREATER AMA RATES


Hospitalized smokers twice as likely to leave AMA, if withdrawal not treated with nicotine replacement

<table>
<thead>
<tr>
<th></th>
<th>Smoker, No NRT</th>
<th>Smoker, NRT</th>
<th>NonSmoker</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA Discharge*</td>
<td>10%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Placed in Seclusion</td>
<td>10%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Ativan Prescription</td>
<td>83%</td>
<td>70%</td>
<td>69%</td>
</tr>
</tbody>
</table>


Slide Adapted from RxForChange.ucsf.edu
TUD in Psychiatric Populations

Cause

Bio  Psycho  Social

Higher Rates of Use
Lower Rates of Quitting

Increased Morbidity/Mortality
Treatment Gap: Practice Guidelines

- Tobacco Clinical Practice Guidelines and American Psychiatric Association: Provide evidence based tobacco cessation treatment to all smokers
- Programs overlook tobacco: Concern quitting smoking threatens recovery/sobriety
- AAMC Survey (>3000 MDs): Psychiatrists least likely to address tobacco

- Online survey of 685 people with bipolar disorder: Few reported a psychiatrist (27%), therapist (18%), or case manager (6%) ever advised them to quit smoking
  - Several reported discouragement to quit from mental health providers

Prochaska, Reyes, Schroeder, et al. (2011). Bipolar Disorders
Treatment Gap: Practice Guidelines

- No evidence of worsening of clinical symptoms with tobacco treatment
  - Unipolar depression
  - Bipolar disorder
  - Posttraumatic stress disorder
  - Schizophrenia
- Treatment of tobacco dependence associated with decreased likelihood of rehospitalization
- Meta-analysis: Tobacco treatment associated with increased likelihood of sobriety among smokers in treatment for addictive disorders
- Among dual diagnosis hospitalized smokers, quitting smoking associated with less marijuana and alcohol at 12 months

With the health disparity, comes guidelines

- Released June 2000; Update 2008
- Sponsored by the Agency for Healthcare Research and Quality of the U.S. Public Health Service with
  - Centers for Disease Control and Prevention
  - National Cancer Institute
  - National Institute for Drug Addiction
  - National Heart, Lung, & Blood Institute
  - Robert Wood Johnson Foundation

www.surgeongeneral.gov/tobacco/
Nicotine Pharmacology
Nicotine reaches the brain within 10–20 seconds.

NEUROCHEMICAL and RELATED EFFECTS of NICOTINE

- **Dopamine**: Pleasure, appetite suppression
- **Norepinephrine**: Arousal, appetite suppression
- **Acetylcholine**: Arousal, cognitive enhancement
- **Glutamate**: Learning, memory enhancement
- **Serotonin**: Mood modulation, appetite suppression
- **β-Endorphin**: Reduction of anxiety and tension
- **GABA**: Reduction of anxiety and tension

NICOTINE PHARMACODYNAMICS: WITHDRAWAL EFFECTS

- Irritability/frustration/anger
- Anxiety
- Difficulty concentrating
- Restlessness/impatience
- Depressed mood/depression
- Insomnia
- Impaired performance
- Increased appetite/weight gain
- Cravings

Most symptoms manifest within the first 1–2 days, peak within the first week, and subside within 2–4 weeks.

NICOTINE ADDICTION CYCLE

Treating Tobacco: Evidence Based Methods
EFFECTS of CLINICIAN INTERVENTIONS

With help from a clinician, the odds of quitting approximately doubles

$n = 29$ studies

Compared to patients who receive no assistance from a clinician, patients who receive assistance are 1.7–2.2 times as likely to quit successfully for 5 or more months.

With help from a clinician, the odds of quitting approximately doubles

<table>
<thead>
<tr>
<th>Type of Clinician</th>
<th>Estimated abstinence at 5+ months</th>
</tr>
</thead>
<tbody>
<tr>
<td>No clinician</td>
<td>1.0</td>
</tr>
<tr>
<td>Self-help material</td>
<td>1.1</td>
</tr>
<tr>
<td>Nonphysician clinician</td>
<td>1.7</td>
</tr>
<tr>
<td>Physician clinician</td>
<td>2.2</td>
</tr>
</tbody>
</table>

The NUMBER of CLINICIAN TYPES CAN MAKE a DIFFERENCE, too

Compared to smokers who receive assistance from no clinicians, smokers who receive assistance from two or more clinician types are 2.4–2.5 times as likely to quit successfully for 5 or more months.

The 5 A’s

- **ASK** about tobacco USE
- **ADVISE** tobacco users to QUIT
- **ASSESS** READINESS to make a quit attempt
- **ASSIST** with the QUIT ATTEMPT
- **ARRANGE** FOLLOW-UP care
The 5 A’s (cont’d)

**ASK** about tobacco use

- “Do you ever smoke or use other types of tobacco or nicotine, such as e-cigarettes?”
- “I take time to ask all of my patients about tobacco use—because it’s important.”

**ADVISE** tobacco users to quit (clear, strong, personalized)

- “It’s important that you quit as soon as possible, and I can help you.”

**ASSESS** readiness to make a quit attempt
The 5 A’s (cont’d)

**ASSIST** with the quit attempt
- Not ready to quit: enhance motivation (the 5 R’s)
- Ready to quit: design a tailored treatment plan
- Recently quit: relapse prevention

**ARRANGE** follow-up care

<table>
<thead>
<tr>
<th>Number of sessions</th>
<th>Estimated quit rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1</td>
<td>12.4%</td>
</tr>
<tr>
<td>2 to 3</td>
<td>16.3%</td>
</tr>
<tr>
<td>4 to 8</td>
<td>20.9%</td>
</tr>
<tr>
<td>More than 8</td>
<td>24.7%</td>
</tr>
</tbody>
</table>

* 5 months (or more) postcessation

Fiore et al. (2008). *Treating Tobacco Use and Dependence.*
IS A PATIENT READY TO QUIT?

Does the patient now use tobacco?

Yes

Is the patient now ready to quit?

No

Promote motivation

Yes

Provide treatment

The 5 A's

No

Did the patient once use tobacco?

Yes

Prevent relapse*

Yes

Encourage continued abstinence

No

Is the patient here?

*not necessary if patient has not used tobacco for many years and not at risk for re-initiation.
BRIEF COUNSELING: ASK, ADVISE, REFER

• Brief interventions have been shown to be effective

• In the absence of time or expertise:
  ▪ Ask, advise, and refer to other resources, such as local group programs or the toll-free quitline 1-800-QUIT-NOW

This brief intervention can be achieved in less than 1 minute.
AIDS for CESSATION

- Nonpharmacologic
  - Counseling and other non-drug approaches

- Pharmacologic
  - FDA-approved medications

Counseling and medications are both effective, but the combination of counseling and medication is more effective than either alone.
NONPHARMACOLOGIC METHODS

• Cold turkey: Just do it!
• Unassisted tapering (fading)
  ▪ Reduced frequency of use
  ▪ Lower nicotine cigarettes
  ▪ Special filters or holders
• Apps
• Acupuncture therapy
• Hypnotherapy
• Massage therapy
• Environment
  ▪ Smoke free treatment centers and smoke free breaks
  ▪ NRT when possible

- Formal cessation programs
  - Self-help programs
  - Individual counseling
  - Group programs
  - Telephone counseling
    - 1-800-QUITNOW
  - Web-based counseling
    - www.smokefree.gov
    - www.quitnet.com
    - www.becomeanex.org
“Clinicians should encourage all patients attempting to quit to use effective medications for tobacco dependence treatment, except where contraindicated or for specific populations* for which there is insufficient evidence of effectiveness.”

* Includes pregnant women, smokeless tobacco users, light smokers, and adolescents.
PLASMA NICOTINE CONCENTRATIONS for NICOTINE-CONTAINING PRODUCTS

NRT products approximately double quit rates.
TRANSDERMAL NICOTINE PATCH

ADVANTAGES

- The patch provides consistent nicotine levels.
- The patch is easy to use and conceal.
- Fewer compliance issues are associated with the patch.

DISADVANTAGES

- Patients cannot titrate the dose.
- Allergic reactions to adhesive may occur.
- Taking patch off to sleep may lead to morning nicotine cravings.
NICOTINE GUM & LOZENGE

ADVANTAGES

- Patients can titrate therapy to manage withdrawal symptoms
- May satisfy oral cravings
- May delay weight gain

DISADVANTAGES

- Gastrointestinal side effects may be bothersome
- Gum may be socially unacceptable and difficult to use with dentures
- Patients must use proper chewing technique to minimize adverse effects
NICOTINE INHALER

ADVANTAGES

- Patients can easily titrate therapy to manage withdrawal symptoms.
- The inhaler mimics hand-to-mouth ritual of smoking.

DISADVANTAGES

- Initial throat or mouth irritation can be bothersome.
- Cartridges should not be stored in very warm conditions or used in very cold conditions.
- Patients with underlying bronchospastic disease must use the inhaler with caution.
NICOTINE NASAL SPRAY

ADVANTAGES
- Most rapidly absorbed form of nicotine replacement
- Patients can easily titrate therapy to rapidly manage withdrawal symptoms
- Demonstrated use with smokers with schizophrenia

DISADVANTAGES
- Nasal/throat irritation may be bothersome
- Dependence can result
- Patients must wait 5 min before driving or operating heavy machinery
BUPROPION SR

**ADVANTAGES**
- Bupropion SR is easy to use.
- Bupropion SR can be used with NRT.
- Bupropion SR may be beneficial in patients with depression.
- Clinical effects
  - ↓ craving for cigarettes
  - ↓ symptoms of nicotine withdrawal

**DISADVANTAGES**
- Bupropion SR should be avoided in patients with an increased risk for seizures
- Side effect profile:
  - Common: dry mouth, anxiety, insomnia (avoid bedtime dosing)
  - Less Common: tremor, skin rash

Effective for treating smoking regardless of depression history (Cox, 2004) and may decrease the negative symptoms in schizophrenia (George 2002, Evins 2005).
VARENICLINE: SUMMARY

ADVANTAGES

- Varenicline is an oral formulation with twice-a-day dosing.
- Varenicline offers a new mechanism of action for persons who previously failed using other medications.
- Efficacy Data are promising
  - ↓ symptoms of nicotine withdrawal
- Blocks dopaminergic stimulation responsible for reinforcement & reward associated with smoking

DISADVANTAGES

- Common side effects:
  - Nausea (in up to 33% of pts)
  - Sleep disturbances (insomnia, abnormal dreams)
  - Constipation
  - Flatulence
  - Vomiting
- Black Box Warning (Cardiac remains, Neuropsych removed)
COMPARATIVE DAILY COSTS of PHARMACOTHERAPY

Average $/pack of cigarettes, $6.28

<table>
<thead>
<tr>
<th>Product</th>
<th>Trade</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gum</td>
<td>$4.68</td>
<td>$2.16</td>
</tr>
<tr>
<td>Lozenge</td>
<td>$4.95</td>
<td>$3.24</td>
</tr>
<tr>
<td>Patch</td>
<td>$3.89</td>
<td>$1.90</td>
</tr>
<tr>
<td>Inhaler</td>
<td>$7.02</td>
<td>$3.62</td>
</tr>
<tr>
<td>Nasal spray</td>
<td>$3.92</td>
<td>$3.62</td>
</tr>
<tr>
<td>Bupropion SR</td>
<td>$7.78</td>
<td>$3.62</td>
</tr>
<tr>
<td>Varenicline</td>
<td>$4.70</td>
<td>$3.62</td>
</tr>
</tbody>
</table>
LONG-TERM (≥6 month) QUIT RATES for AVAILABLE CESSATION MEDICATIONS

Regimens with enough evidence to be ‘recommended’ first-line

• **Combination NRT**
  
  Long-acting formulation (**patch**)
  
  • Produces relatively constant levels of nicotine

  **PLUS**

  Short-acting formulation (**gum, inhaler, nasal spray**)
  
  • Allows for acute dose titration as needed for nicotine withdrawal symptoms

• **Bupropion SR + Nicotine Patch**
• Psychiatrist had not inquired about tobacco use (Having tobacco use as a part of template can help integrate)
• Recommended that psychiatrists inquire about tobacco at every visit, especially in active users.
• If no interest in quitting, asking can increase motivation
• Develop tailored quit plan (not discussed in detail today)
• Try FDA approved methods (evidence based therapies are underutilized in mental health)
• Discuss unknowns about e-cigarettes and risks (ie this patient has kids)
SUMMARY: Clinical Implications

- Every encounter counts
- You are uniquely positioned to address the tobacco epidemic
  - Reduce morbidity
  - Reduce mortality
  - Improve Quality of Life and other health outcomes
- E-cigarettes are gaining in popularity among those with mental illness
  - More research needed on risks/safety
  - More research needed on cessation possibilities
    - Risk of dual use
    - Other addiction risks
    - Effects on youth
- We have evidence based methods of tobacco cessation in those with mental illness that are underused
Resources

- E-Cigarettes: Harmful or Harm-Reducing?
  - Focuses on the science of e-cigarettes – particularly health risks and benefits. Online learners are engaged through interactive video role-play, expert interviews, and interactive activities. Free registration with 1.5 CME credits offered.

- Rx for Change: rxforchange.ucsf.edu
  - Clinician-Assisted Tobacco Cessation curricula
  - Clinical Practice Guideline for Treating Tobacco Use and Dependence
  - Comprehensive, turn-key program for training students and licensed clinicians in virtually any health professional field.
  - Readings, lectures with animated PowerPoint slides, video (a welcome from the US Surgeon General, an introductory segment, counseling sessions, and trigger tapes), and role playing with case scenarios.
  - Externally reviewed
  - Openly shared with others with free registration.

- The American Psychiatric Association’s Council on Addictions has a Tobacco Use Disorders Workgroup, with a goal of informing psychiatrists about tobacco use and reducing use in patients.
  - Tobacco trainings at the annual meeting usually with an expert panel available for questions.

Questions? Comments: smidas@Stanford.edu
PCSSMAT is a collaborative effort led by American Academy of Addiction Psychiatry (AAAP) in partnership with: American Osteopathic Academy of Addiction Medicine (AOAAM), American Psychiatric Association (APA), American Society of Addiction Medicine (ASAM) and Association for Medical Education and Research in Substance Abuse (AMERSA).

For More Information: [www.pcissmat.org](http://www.pcissmat.org)

Twitter: [@PCSSProjects](https://twitter.com/PCSSProjects)

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