

E-cigarette Cessation Interventions

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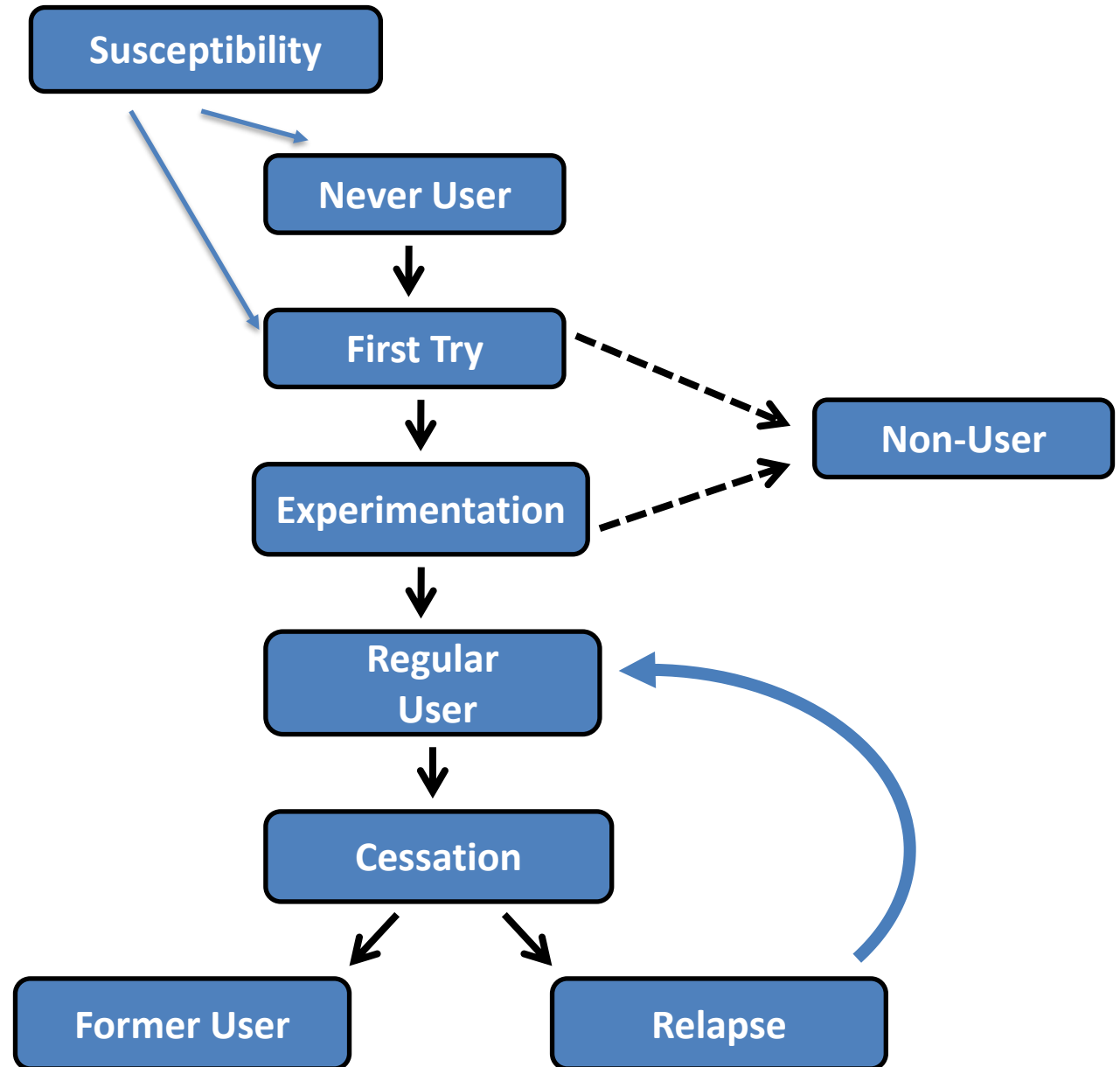
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Multiple “Windows of Opportunities” for E-cigarette (any tobacco) interventions

- ❖ Targeting susceptibility
- ❖ Preventing initiation
- ❖ Preventing experimentation
- ❖ Prevent escalation to regular use
- ❖ Increase cessation attempts among established users
- ❖ Preventing relapse



Modalities Tried with Youth for Smoking Cessation

- **5 A's** (USDHHS, 2012): Ask, Advice, Assist, Arrange
- **Cognitive Behavioral Therapy**
 - Goal setting, self-monitoring, cognitive reframing, problem solving, coping skills
- **Motivational Interviews or Enhancement**
 - Strengthening desire to quit, reducing ambivalence about quitting, supporting self-efficacy
- **Behavior Change based on Transtheoretical Model of Change**
 - Identifying stage (precontemplation, contemplation, preparation, action, maintenance) and facilitating behavior change using ME
- **Pharmacological Interventions**
 - Nicotine patch and inhaler, bupropion, varenicline

Treatment Settings



Schools

Ideal setting to access youth

- Confidentiality problems in schools



Health Care Settings

Opportunity for teaching moment when with Pediatrician/Primary care

- Lack of provider time
- Lack of Follow up



Internet/mobile phones

Great reach/fast speed

- Hard to keep youth motivated and engaged

Cochrane review of adolescent smoking outcomes

Fanshawe TR, Halliwell W, Lindson N, Aveyard P, Livingstone-Banks J, Hartmann-Boyce J. Tobacco cessation interventions for young people. Cochrane Database of Systematic Reviews 2017, 11.

- Group counselling (9 studies, risk ratio (RR) 1.35, 95% confidence interval (CI) 1.03 to 1.77),
- Individual counselling (7 studies, RR 1.07, 95% CI 0.83 to 1.39)
- Mixed delivery methods (8 studies, RR 1.26, 95% CI 0.95 to 1.66) or the computer or messaging interventions (pooled RRs between 0.79 and 1.18, 9 studies in total).
- Nicotine replacement therapy (3 studies, RR 1.11, 95% CI 0.48 to 2.58)
- Bupropion (1 study RR 1.49, 95% CI 0.55 to 4.02).

Chantix trial

14-17 year old and 18-21 year old

Table 2. Abstinence Outcomes for Available Data and Imputed Data^a

End Point	No. With 7-d Abstinence ^a	Available Data, Estimate	Imputed Data, Estimate	
			Impute to Smoking	Multiple Imputation
Primary Efficacy Outcome				
Cotinine-confirmed abstinence (≤50 ng/mL)				
End of treatment (week 12 only), RR (95% CI)	8	0.97 (0.29-3.18)	0.90 (0.27-3.06)	0.95 (0.24-3.71)
Varenicline group, % (95% CI)	4	8.9 (2.5-21.2)	5.2 (1.4-12.8)	8.1 (0.3-16.0)
Placebo group, % (95% CI)	4	8.9 (2.5-21.2)	5.0 (1.4-12.3)	7.8 (0.3-15.5)

Adolescent Who Use Substances

- Difficult to engage and retain in treatment
- Resistant to the concept of behavior change
- Do not find their substance use to be problematic and fail to see the urgency in needing to quit
- Traditional cessation and prevention methods may not be appealing

Focus Groups to Inform Youth E-cigarette Interventions

8 focus groups; 64 14-18 year old regular e-cigarette users

Teens want to quit!

“I only know probably, one or two people that don't want to quit, like that aren't willing to quit. Everyone else is like, yeah I would love to quit.”

“Everyone tries to quit. And I feel like everyone struggles with it...nobody wants to spend their money on something every single day. No one, like, wants to feel they need something.”

Bold et al., 2022; Addictive Behaviors; 125: 107167
Kong et al., 2021; Addictive Behaviors; 114:106729.

Reasons for Use and Barriers to Quitting

Addiction

"..it's hard [to quit], ... I don't even like using it but it's just the fact that I fiend for it ... like you want the nicotine cravings."

Peer Use

"...one person around every friend group has at least like one nicotine device."

Like if I was bored, I would just hit it. Not because I need it or wanted it. If I was bored, I just grab it."

Stress and Boredom

....when I'm hitting the device it makes me stop thinking about all the stuff that's like going on inside my head. So, its like a stress reliever.

School Cues: smelling, seeing

"The second that bell rings, I'm in the bathroom with it...everybody is in the barthroom with it."

"Hardest part is overcoming school. That was the hardest one."

Reasons for Quitting

Health concerns

Addiction

Physical Performance

“I would vape and like I would wake up in the middle of the night like coughing for like 10 minutes straight ...”

“During sports, ... I would try not to use it or do anything at all because it just make like my breathing worse. So like before the season started I would be like ween off of it . And then like try to stop for the season....so I can perform better.”

What Do Teens Want in a Quit Program?

Confidentiality!

“...its not just students...like if a teacher finds out or like an administrator. I feel like when you get labeled that stays with you so you really don't want people knowing”

Education!

“Yeah if you showed me my lungs, I would stop if it was so bad, I'd stop like immediately.”

Personal Anecdotes!

Skills to manage social influences, negative moods and withdrawal!

.....how people are affected by it... what happened to people... we see pictures ... people in the hospital... But I want to know what happened. Like how did it feel? Why should I be scared of it?”

Existing Teen/Young Adult Cessation Programs

- My Life, My Quit (National Jewish)
 - Texting/Quitline support; phone, text, online chat sessions
 - All tobacco including e-cigarettes
 - CBT focused; Self-help and educational materials
- 1-800 CDC now (CDC)
 - Quitline
 - Incorporates e-cigarette cessation along with other tobacco cessation
 - Theory of Behavior Change
- Teen.Smokefree.Gov (NCI)
 - Information sheets, texts, quit tips, counselors
 - CBT focused
- INDEPTH (ALA)
 - Alternative to suspension program
 - Smoking
 - Educational covers nicotine dependence and healthy alternatives

Other Existing Teen Cessation Programs

- NOT (not on tobacco; ALA)
 - School-based or community-based small group format
 - Cigarettes and E-cigarettes
 - Social Cognitive Theory
- ASPIRE (MD Anderson Cancer Ctr/NCI)
 - Individual and Game-based
 - Tobacco and e-cigarettes
 - CBT and behavior change

Newer Teen/Young Adult Interventions

- **THIS IS QUITTING (Truth Initiative)**
 - Text-to-quit vaping program
 - Educational information on nicotine
 - Tips to quit and stay quit from nicotine
 - Community-based quitting messages and support
- **Stanford Tobacco Prevention Toolkit**
 - School-based, or individual-based; directed at educators
 - Educational information on tobacco products and e-cigarettes
 - Enhance understanding of deceptive marketing
 - Teach skills to refuse experimentation and use

AAP Youth Tobacco Cessation: “Considerations for Clinicians” Resource

Practical tool to help **clinicians** support a patient who uses tobacco

Product-agnostic: cessation of all tobacco/nicotine products

Cessation-focused, not prevention-focused

Synthesize content that clinicians can use to help youth quit:

- How to screen and counsel

- How to link to behavioral and pharmacological support

- How to connect youth to treatment extenders

Package with supplemental tools and resources

AAP Youth Tobacco Cessation: “Considerations for Clinicians” Resource

Ask – Counsel – Treat model:

Encourage universal tobacco screening with all youth ages 11+

(Questions inclusive of smoking, vaping, other tobacco products)

Counsel all youth about quitting, regardless of level of dependence

Connect to longer-term support

Behavioral support: online/text supports or other relevant modality

Pharmacological support: AAP Policy recommends that pediatricians consider off-label NRT for youth who are moderately- to- severely dependent on nicotine

Adjuncts:

Case studies, EHR support, patient care algorithm

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