Implementing MAT Services for Tobacco Cessation in Integrated Care Settings Innovation Community

Setting the Stage:
Today’s Moderator

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Slides for today’s webinar will be available on the CIHS website:

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Setting the Stage:
Today’s Facilitator

Aaron Williams
Senior Director of Training and Technical Assistance for Substance Use
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Reminder: Workplans

Please submit your workplans as soon as possible to aaronw@thenationalcouncil.org
Setting the Stage:
Today’s Facilitator

Sarah Pratt, PhD
Assistant Professor in Psychiatry
The Geisel School of Medicine at Dartmouth

Evaluating Outcomes of Smoking Cessation Programming
Sarah Pratt, PhD
Assistant Professor in Psychiatry
The Geisel School of Medicine at Dartmouth
May 30, 2017
Domains to Assess

“Quitting”
- Biologically Verified Abstinence
- Self-reported Abstinence and Quit Attempts

Use of Tobacco Products (Reduction)
- Confidence in Quitting
- Readiness
- Environmental Factors
- Nicotine Dependence
- Attitudes Toward Smoking
- Withdrawal Symptoms
- Craving

Factors Impacting Quitting
- Use of Cessation Treatment
  - Pharmacotherapy
  - Behavioral

Impact of Quitting on Health
- Objective Indicators of Health (BP, pulse, weight)
- Subjective Health

Biologically Verified Abstinence

Carbon Monoxide (by-product of combustion)
- Blood
- Breath

Cotinine (metabolite of nicotine)
- Blood
- Urine
- Saliva

NNAL (tobacco-specific carcinogen that has been identified as a causative factor for lung cancer)
- Blood
- Urine
Breath Carbon Monoxide

Toxin in cigarette smoke
Provides an objective value indicative of smoking/not smoking (CO<5)
Sensitive to CO over the past several hours
Not present in people using e-cigarettes
Importance of training and demonstration on proper use of monitor
Influenced by level of pollution in environment, smoking other substances (e.g., marijuana) and exposure to second-hand smoke
Value should roughly match # of daily cigs (when it doesn’t, repeat, recalibrate CO monitor if needed, determine why)

Breath Carbon Monoxide

Requires Equipment and Peripherals
Starter Kit: $835
Covita Micro+ basic Smokerlyzer®: $620
D-pieces (replaced monthly): $7.88
Steribreath mouthpieces: $0.15
Calibration kit (use every 6 mo): $195
Replacement canister: $95
http://www.covita.net/shop/index.php/
Cotinine

Metabolite of nicotine (not toxic in cigarette doses or NRT)
Long half-life (10-40 hours)
Use to confirm abstinence at least 4-7 days after quitting
Cotinine is present if people are using NRT or e-cigs
Saliva: Harder to collect from people with chronic dry mouth, viscosity varies
Urine: Easy to collect (not considered a biohazard)

Accutest® NicAlert™ test strip
- **Pros**: Faster, easier than blood; can use with saliva or urine
- **Cons**: Provides a range, not an exact value; can be hard to read
  (<100 ng/mL indicates not smoking)

Dip test strip into urine cup and lay flat.
Check in 5 minutes.
Read lowest number with color.
Self-Reported Abstinence & Quit Attempts

What does it mean to “Quit”?

• **Most common**: No cigarettes, not even one puff for at least (1 or 2) weeks

• Quit Attempts
  – Number of intentional attempts to stop smoking

• Days of Abstinence
  – Number of days (24-hour period) with no smoking, not even one puff

• Gold Standard: Timeline Follow-Back Method

Timeline Follow-Back

Used extensively in tobacco research
Validated for use in people with serious mental illness
Use to collect information on Days of Abstinence, use of tobacco products and combustibles, use of pharmacotherapy for smoking cessation
Day-by-day recall for up to 30 days
3-month or more recall: week-by-week pattern
Requires training and practice
Need to track carefully and ensure no gaps in
Timeline Follow-Back 101

Show list of all tobacco products and combustible products of interest and identify all that were used in target time frame.

Identify on a printed calendar all important or significant dates (e.g., holidays, birthdays).

Identify periods when smoking was forbidden (e.g., hospital stay, jail).

Identify out-of-the ordinary occurrences (e.g., sickness, visits from relatives, trips).

Identify daily activities and other events (e.g., work, appointments, social activities).

Ask for recall of smokes/day the day before the interview, work backward from there, providing reminders of what was identified in initial exploration.

Ask about use of any other tobacco products and cessation treatment for each day.

If recall of number of smokes is hazy, “Do you think you smoked your average number of cigarettes that day?”

Assessing Effectiveness of Pharmacotherapy

People with SMI should be strongly encouraged to use cessation treatment, including pharmacotherapy.

Combination therapy is more effective than pharmacotherapy or behavioral therapy alone.

Important to assess proper use.

Assess adequacy of the trial.

Assess knowledge of options for pharmacotherapy and knowledge of side effects.
Nicotine Replacement Therapy (NRT)

Proper Use
- Park, don’t chew gum
- Match use to smoking habits (use enough and space it out)
- Simultaneous use of >1 type is sometimes needed
- Smoking with patch is not dangerous
- Can be used in combination with medication (Zyban, Chantix)

Assess adequacy of the trial
- Encourage use for several months

Assess knowledge
- Nasal spray is very effective but rarely used
- Inhaler is an option that is infrequently used
- NRT does not affect metabolism of psychotropics
- Side effects: skin irritation, nausea, sleep disturbance, throat irritation (some can mimic withdrawal symptoms)

Varenicline (Chantix)

Greatest effectiveness in clinical trials in general population and SMI
- alpha-4, beta-2 nicotine acetylcholine agonist (greatest effect on reduction of cravings)
- Dosing: 0.5 mg/day → 1.0 mg BID over 1 week, then 0.5-1.0 mg BID x 3-6 months
- No significant drug-drug interactions
- Common side effects: Nausea, vivid dreams, headache, psychiatric effects

“Black Box” warning removed in 2016 based on results of the EAGLES Study (Anthenelli et al., 2016)
Evaluating Adverse Events in a Global Smoking (EAGLES) Cessation Study

8000 smokers (half with psychiatric disorder) receiving care at 140 centers in 16 countries

- Random assignment to varenicline, bupropion, patch, or placebo
- Varenicline was more effective than placebo, patch, and bupropion in helping smokers achieve abstinence (bupropion and patch were more effective than placebo but not different from each other)
- Most frequent side effects: nausea (25% varenicline), insomnia (12% bupropion), abnormal dreams (12% patch), headache (10% placebo)
- No significant increase in psychiatric adverse events attributable to varenicline or bupropion compared to patch or placebo.
- More psychiatric events in the psychiatric cohort, but very low incidence of suicidal ideation (n=5) and no completed suicides despite 34% with history of suicidal ideation and 13% with history

Varenicline

Proper use

- Take with food
- Take with full glass of water
- Start with .5mg up to one month before quit and increase to 1mg

Assess adequacy of the trial

- Side effects often subside within a week or 2, so it is important not to give up

Assess knowledge and monitor for side effects

- No danger of smoking, but could increase nausea
- Intentionally and regularly monitor for changes in mood
Bupropion (Zyban)

Norepinephrine and Dopamine re-uptake inhibitor
Reduces seizure threshold
Potential interactions with many antidepressants (don't use with MOA inhibitors)
Doctors may reduce aripiprazole, risperidone, iloperidone

Proper Use
- Start 2 weeks before quit date
- Start with 150 mg/day, increase to 150 mg BID

Assess adequacy of the trial
- Continue use up to 1 year

Assess knowledge
- Common side effects: insomnia, GI upset, constipation, diarrhea, HTN
- Better if used in combination with NRT (start bupropion 2 weeks before quit and NRT on quit date or up to a month before)

Factors Affecting Abstinence

Environmental Factors
- Number of smokers and nonsmokers in the household
- Number of smokers and non smokers in social network
- Ability to smoke at residence
- Social support for quitting/not smoking
- Familiarity with others who have quit
- Proximity to other smokers and places to buy cigarettes
Factors Affecting Abstinence

Confidence in Quitting
- *Smoking Self-Efficacy Questionnaire* (Etter et al., 200): 17 items assessing motivation and ability to attain and sustain abstinence

Readiness
- Single item: How likely are you to quit smoking in the next X days? (Use stages of change options)

Nicotine Dependence
- *Fagerström Test for Nicotine Dependence* (Heatherton et al., 1991): 6 items, scores from 0-10 (0-2=very low; 3-4=low; 5=medium; 6-7=high; 8-10=very high)

Factors Affecting Abstinence

Withdrawal (symptoms such as anxiety, irritability, depression, headache, nausea peak 3 days after quit when nicotine is cleared)
- *Wisconsin Smoking Withdrawal Scale* (Welsch et al., 1999): 28-item scale measuring 7 factors (anger, anxiety, sadness, concentration, craving, sleep, hunger)
- *The Cigarette Withdrawal Scale* (Etter, 2005): 21-item scale measuring depression/anxiety, craving, irritability/impatience, appetite/weight gain, insomnia, trouble concentrating

Craving
- *Tobacco Craving Questionnaire (TCQ)* (Heishman et al., 2003): 47-item scale measuring desire to smoke, positive outcomes of smoking, relief from withdrawal symptoms or negative mood, lack of control over use, intention and planning to smoke
- *Short Form of the TCQ* (Heishman et al., 2008): 12-item scale measuring positive effects of cigarettes and lack of control
Factors Affecting Abstinence

Smoking Attitudes Questionnaire (Etter et al., 2000): 18 items measuring attitudes toward smoking
- “Smoking is ruining my health.”
- “I spend too much money on cigarettes.”
- “It bothers me to be dependent on cigarettes.”

Smoking Effects Questionnaire (Rohsenow et al., 2003): 33 items measuring physical and emotional effects of smoking and importance of each
- “Smoking gives me a morning cough.”
- “My smoking makes my family or friends respect me less.”
- “Smoking makes social occasions feel better.”

Impact of Quitting on Health

Blood Pressure and Pulse
- Nicotine raises heart rate and blood pressure
- Heart rate drops and starts to approach normal w/in 20 minutes of quitting
- BP approaches normal w/in 2 hours after quit

Other Health Effects
- Lowered risk of CAD 24 hours after quit
- Lowered risk of Heart Disease 1 year after quit (1/2 that of a smoker)
- Lowered risk of Stroke 5 years after quit (same as that of a nonsmoker)
- Lowered risk of Lung Cancer 10 years after quit (1/2 that if a smoker)

Weight
- Average 6 pound weight gain

Subjective Perception of Health
- SF-36: Extent to which functioning is affected by physical and emotional well-being
Questions?

Thank you for joining us today. Please take a moment to provide your feedback by completing the survey at the end of today’s webinar.

If you have additional questions/comments please send them to:

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