Smoking Cessation In Integrated Settings

Brian Hurley, M.D., M.B.A., D.F.A.S.A.M.
Addiction Psychiatrist
Robert Wood Johnson Foundation Clinical Scholar
David Geffen School of Medicine of UCLA
Mr. Brown is a 54 year-old Caucasian male from Hill Valley with history of schizoaffective disorder managed with Risperdal Consta (risperidone) 50mg q2weeks and quetiapine 600 mg at night. He smokes four packs of cigarettes per day, and has no history of tobacco cessation treatment.

GO!
Which of the following medication option is first-line for this patient, in addition to psychosocial tobacco cessation treatment?

A. Nicotine Replacement Therapy (NRT)
B. Bupropion
C. Varenicline
D. Bupropion + NRT
E. Varenicline
F. Bupropion + Varenicline

Assume no other medication interactions, no allergies, and pt is otherwise naïve to nicotine replacement products and other anti-smoking medication options.
Smoking and mental illness

• NESARC study: Nicotine-dependent individuals with a comorbid psychiatric disorder made up 7.1% of the population yet consumed 34.2% of all cigarettes smoked in the United States. 
  *Grant et al. Arch Gen Psychiatry. 2004 Nov;61(11):1107-15*

• NESARC study: Mood, anxiety, personality and illicit substance use disorders were associated with significantly increased risk of persistent nicotine dependence.

• NCS study: those with mental illness twice as likely to smoke but report lower quit rates, smoked 44% of all cigarettes consumed in US.
Smoking in Mental Health Populations

Smoking prevalence in 42 U.S. addiction treatment studies, in epidemiological reports, and in the U.S. population.

Smoking topography in schizophrenia

- >80% co-occurrence
- Time between puffs shorter by 6.5 secs
- More puffs per cigarette
- Greater peak flow (more intense inhalation) and higher volume puff
- Higher nicotine intake per cigarette and greater smoking per 24 hrs

Increased severity of SPD ↑ likelihood of being a current smoker

2002 National Survey on Drug Use and Health

Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012
Smoking and psychotropics

- Polycyclic aromatic hydrocarbons induce hepatic enzymes to increase metabolism of many categories of medication, including antipsychotics, antidepressants and anxiolytics.

Desai, Seabolt and Jann. 2001 CNS Drugs, 15, 469-494.
Smoking and psychotropics

P450 1A2 isoenzyme particularly affected:

haloperidol
perphenazine
chlorpromazine
fluphenazine
clozapine
olanzapine
ziprasidone

amitriptyline
clomipramine
imipramine
duloxetine
mirtazapine
ropinirole
ALL methylxanthines

http://www.psychresidentonline.com/CYP450 drug interactions.htm – Accessed 9/10/11 at 12:00pm
Dual diagnosis smokers don’t receive medications for smoking cessation

• Nicotine Dependence documented in 2% of mental health records.
• Psychiatrists treat tobacco dependence in less than 2% of their outpatient practices.
• Psychiatrists have lowest awareness of Quitlines and state tobacco services.
• Less than 30% of state psychiatric hospitals offer cessation sessions.
• Less than half of outpatient substance abuse treatment programs offer smoking cessation counseling or pharmacology.

Peterson 2003; Montoya 2005; Friedman 2008; Steinberg 2006
Dual diagnosis smokers don’t receive medications for smoking cessation

- Prospective evaluation of smoking status and quit attempts over 11 years in 174 community outpatients enrolled in longitudinal study
- 75% made at least one quit attempt over 11 years but none received NRT or bupropion
- Low quit success

Cravings and relapse to smoking

• In an internet survey sample of 403 former smokers with 1-10 years abstinence, the most commonly endorsed triggers for craving were:
  – DEPRESSED MOOD 47%
  – SEEING SOMEONE SMOKING 43%
  – ALCOHOL USE 37%
  – BEING WHERE YOU USED TO SMOKE 32%


• Having an axis I mood or anxiety disorder worsens the subjective experience of nicotine withdrawal and increases the risk for craving-related relapse

The majority of patients enrolled in treatment for SUDs also smoke tobacco.

Smoking is associated with poorer treatment outcomes compared to non-smokers.

Without smoking cessation treatment, smokers in SUD treatment do not reduce or quit smoking.

Smoking in SUD populations

- Meta-Analysis of Smoking Cessation Interventions With Individuals in SUD Treatment or Recovery:
  - 25% increased likelihood of long-term abstinence from alcohol and illicit drugs.
  - Smoking cessation interventions during addictions treatment enhanced long-term sobriety

Smoking in SUD populations

- Stopping smoking during first year of substance use treatment predicted alcohol and drug treatment outcomes:
- 1 year: 14.1% smokers stopped, 10.7% of the non-smokers started.
- Smokers who stopped were more likely in remission from SUD, OR 2.4 (year 1 data).

SmokeFree Addiction Treatment

- In a 2006-2008 national telephone survey of 897 addiction treatment organizations:
- Few programs have a full range of tobacco-related services
- Less than half of programs offered any smoking cessation services.
- Barriers: organizational culture; low staff skills

SmokeFree Addiction Treatment

- 7/24/2008: NYS Required all publically funded SUD treatment to be smokefree.
- Increased tobacco-related intake procedures, counseling, and pharmacotherapy.
  

- SUD admission and completion rates remained stable
  
Smoking Cessation in SUD Treatment

- Smoking cessation during substance use disorder treatment:
- Does not impair outcome of the presenting substance abuse problem
- Enhances substance use disorder treatment outcomes

Smoking Cessation in MH Treatment

- Smoking cessation during mental health treatment:
  - Reduced depression, anxiety, and stress
  - Improved positive mood and quality of life
  - Worked more effectively than antidepressants for mood and anxiety disorders

Smokers are more stress reactive

- Stress during nicotine abstinence results in reduced ability to resist smoking, and intensification of smoking pleasure.

McKee SA et al.  
Which Approach to Take?

- Tailored Approach
  - Longer Treatment
  - Face to face
  - Expanded Medicare / Medicaid
  - Combinations
  - Clinical / co-occurring treatment model

- Evidence Based Practices
  - Telephone Counseling
  - Brief Strategies
  - Limited Insurance Coverage
  - Public Health Model
  - Primary vs. Behavioral Health

*Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012*
Behavioral Health Should Take the Lead

- High prevalence of tobacco use disorders
- Tobacco Use Disorder is in the DSM
- Knowledge about addiction / co-occurring disorders
- Tobacco interactions with psychotropics
- Longer and more treatment sessions
- Experts in psychosocial treatment
- Tremendous patient need
- Relationship to mental symptoms

*Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012*
READINESS to QUIT in SPECIAL POPULATIONS

- General Population: 40% (Intend to quit in next 6 mo) 20% (Intend to quit in next 30 days)
- General Psych Outpts: 43% (Intend to quit in next 6 mo) 28% (Intend to quit in next 30 days)
- Depressed Outpatients: 55% (Intend to quit in next 6 mo) 24% (Intend to quit in next 30 days)
- Psych. Inpatients: 41% (Intend to quit in next 6 mo) 24% (Intend to quit in next 30 days)
- Methadone Clients: 48% (Intend to quit in next 6 mo) 22% (Intend to quit in next 30 days)

* No relationship between psychiatric symptom severity and readiness to quit

Smokers with mental illness or addictive disorders are just as ready to quit smoking as the general population of smokers.

Slide Courtesy J Prochaska; Acton 2001; Prochaska 2004; Prochaska 2006; Nahvi 2006

Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012
People with mental illness and SUDs are motivated to cease smoking

- Combined data from nine studies suggests:
  - More than half of all smokers may be contemplating quitting within 6 months or preparing to quit within 30 days.
  - Not dissimilar from general population.

Integrated care begins with brief interventions to assist motivation for SMOKING CESSATION!
BRIEF INTERVENTIONS:

• The 5 A’s:
  Ask, assess, advise, assist, arrange

  - Feedback
  - Responsibility
  - Advice
  - Menu of options
  - Empathy
  - Self-efficacy/support follow up
State your conclusion and recommendations unambiguously while highlighting autonomy.

“You’ve noticed that you get winded more easily climbing stairs or walking distances, and we’ve discussed the risks of second-hand smoke exposure to your family and pets. There is nothing but poison in cigarettes and the safest thing for your health is to stop smoking altogether. But it’s up to you, have you thought about quitting?”
HUGHES 2008 algorithm for smoking

A

Want to quit soon?

Yes

Advise use of meds and counseling

Assess,
Past quit hx - use of old vs new txs
Gradual vs abrupt - use patient preference
Cigs/day - if daily smoker, use meds
Psychiatric hx - if yes, consider prophylactic tx

Smoke daily

Yes

Ask about med cautions

No

Assess relative risk

Okay

Not Okay

Present med options

Bupropion, Gum, Inhaler, Lozenge, Nasal spray, Patch, Varenicline

Choose one or, preferably, two

Advise use of counseling

No

To motivation algorithm

B

Present counseling options

Phone

Group

Individual

Choose one or, preferably more

Fail

Succeed

Assess reasons

Want to try again?

Yes

Offer to help in future

No

New med, ↑ dose, combine

Also consider

Nortriptyline

Fail

Repeat or refer

Succeed

New counseling, ↑ dose, combine

Also consider

Clonidine

Internet

Rapid smoking

Journal of Substance Abuse Treatment 34 (2008) 426–432
Medications for nicotine dependence*

Nicotine replacement
Bupropion
Varenicline

*always paired with psychosocial support interventions
Nicotine replacement (NRT)

- Each cigarette has an average of 1 mg nicotine; each pack has 20 cigarettes
- Full agonist replacement at central nicotinic cholinergic receptors
- Aim to either replace current habit or decrease by no more than 25%
- Carcinogens are the non-nicotine components of cigarettes (tar, toxic gases)
- Available in transdermal patch, gum, lozenges, nasal spray, and inhaler
- It often takes at least 5 tries for a patient to quit and stay quit; psychosocial supports a must
- www.smokefree.gov
Nicotine replacement (NRT)

- NRT increases the rate of quitting smoking by 50-70% regardless of treatment setting and independently of psychosocial intervention.

Nicotine replacement (NRT)

- Abrupt quit attempts do not result in better sustained abstinence outcomes compared to those preferring gradual reduction with or without NRT lead-in to gradual quit attempt
  

- Review of current evidence supports the safety and efficacy of continuing NRT during lapse to smoking as well as using combination long-acting and short-acting NRT for best outcomes (dosing up to 40 mg daily safe)
  
“I’m prescribing a patch to help you quit smoking. Wear it over your mouth.”
NRT patch

- 7-28 mg available
- Produces steady nicotine levels which reduces cravings and withdrawal symptoms
- Take off at night (nightmares), skin irritation
- Have gum by bedside for early awakenings and before shower, put patch on after shower
- Easily comes off with sweat – have pts prepared with surgical tape and spare patches
- Can safely combine with gum/lozenge for breakthrough cravings (recommended)
NRT gum or lozenge

• 2 – 4 mg; replacement boxes cheaper than starter kits
• “chew and park” method – nicotine absorbed through cheek mucosa – “peppery” taste
• Some peak effects but less than inhaled
• Lozenges also available OTC in 2-4 mg
• Inhalers and nasal spray prescription only, disadvantages are more adverse events with spray and failure to break behavioral cues with inhaler
Bupropion SR (Zyban, Wellbutrin)

- Also an antidepressant, improves probability of quit success, may reduce weight gain
- Contraindicated in those with seizure disorder or predisposition to seizures (active bulimia nervosa) and also with bipolar I disorder patients
- Begin 1-2 weeks before quit date: 150 mg x 3 days, then increase as tolerated to 150 mg BID
- Warn about “jitters,” insomnia
- Can combine with NRT safely
- First-line for schizophrenia

Partial agonist at the nicotinic cholinergic receptor
Provides mild activation while blocking exogenous nicotine from being able to activate receptor
Abrupt discontinuation can result in mild withdrawal syndrome
Begin 1 week before quit date:
  Days 1 – 3:  0.5 mg once daily
  Days 4 – 7:  0.5 mg twice daily
  Day 8 – End of treatment: 1 mg BID
12-24 weeks; nausea, insomnia, HA
Vareniciline (Chantix)

- Highly publicized neuropsychiatric effects (black box warning), especially risk of suicidal ideation reported in open trials
- FDA notification (6/16/11 Drug Safety Communication, Drug Information Update 12/12/12) of a small increased risk for serious harmful cardiac events – uncommon, and did not reach statistical significance in meta analysis.
Vareniciline (Chantix)

- Reviews on the topic and recent trials suggest greater safety in patients with psychiatric illness
  


- Cohort study found no increased risk of major cardiovascular events associated with use of varenicline compared with bupropion for smoking cessation.

  **Svanström H, Pasternak B, Hviid A. Use of varenicline for smoking cessation and risk of serious cardiovascular events: nationwide cohort study. BMJ. 2012 Nov 8;345:e7176.**
Moderate dosing of varenicline:

1. Significantly reduced the P50 sensory gating deficit in nonsmokers after long-term treatment ($P=0.006$)

2. Reduced startle reactivity ($P=0.02$) regardless of baseline smoking status.

3. Improved executive function (reducing the antisaccadic error rate $P=0.03$) regardless of smoking status.

- No significant effect on spatial working memory, predictive and maintenance pursuit measures, processing speed, or sustained attention.

- No evidence of exacerbation of psychiatric symptoms, psychosis, depression, or suicidality using a gradual titration (1-mg daily dose).

*Hong LE, et al Arch Gen Psychiatry. Published online August 1, 2011.*
Returning to the Case Presentation

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PSYCHOSOCIAL INTERVENTION

- Group therapies (professional, peer support)
  - Engages group in problem-solving and supporting each other
  - Often paired with wellness teaching/program
  - Less flexible commitment
  - Nicotine Anonymous
  - Dual diagnosis

- Individual therapy
  - Personalized, more flexible, but no peer support
  - Mindfulness/meditation approaches being developed

- Telephone counseling
  - Convenient and personalized, but no peer support

- Online manualized treatment (internet interventions)
  - No solid evidence base
Resources: DO’s and DON’Ts

- www.smokefree.gov
- http://www.nicotine-anonymous.org/
- http://smokingcessationleadership.ucsf.edu/BehavioralHealth.htm
- DON’T recommend:
- “light” cigarettes or “natural” cigarettes
- Smokeless tobacco (carcinogenic, just as addictive)
PERSISTENCE

THANK YOU!