Smoking cessation in alcohol and other drug users

DANA Many Faces of Addiction Forum
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Disclosure

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- Pfizer Australia Ltd
- GlaxoSmithKline
- Johnson & Johnson Pacific
Some key questions

- Will quitting smoking compromise recovery from other substance treatment?
- Should smoking be treated at the same time as other drugs or delayed?
- Is smoking really a priority in substance users?
- Does smoking reduce stress?
- Can drug users quit smoking?
- Is different treatment needed for smokers with SUDs?
Prevalence of smoking in SUD

- Australian smoking rate 15.8% (aged 14+) ¹
- Substance users
  - 73% in the community ²
  - 74-98% in treatment settings ³,⁴
- Alcohol dependence
  - 61%

Alcohol and other drug users

- Start smoking at a younger age
- Smoke more heavily
- Are more nicotine dependent
- Have more difficulty quitting
Why are smoking rates so high in patients with SUDs?

- Psychiatric comorbidity common
- Self medication of psychiatric symptoms
- Common genetic vulnerability
- At-risk personality types: rebellious, low self esteem
- Smoking is a gateway to harder drugs
- Pharmacological interactions between drugs, increasing reinforcing effects
- Smoking culture in drug-using social groups

Kalman D. Am J Addict 2005
Mortality from drug use

- Tobacco causes far greater mortality (and morbidity) than alcohol, illicit drugs and suicide combined.

Why is it so hard to quit?
Success is elusive

- 75% of Australian smokers WANT to quit \(^1\)
- 40% try to quit at least once each year \(^1\)
- The average 40 year old smoker has tried 20 times to quit \(^1\)
- Unaided quit rate is 3-5% at 6-12 months \(^2\)
- Even after 6 months, 50% of smokers relapse \(^3\)

Smoking is a drug addiction

- Nicotine dependence is a substance use disorder
  \(^1,^2\)
- Nicotine activates the mesolimbic dopaminergic system, the common pathway for drugs of addiction
- Powerful genetic factors
  \(^3\)
- Learned associations and cue-induced triggers
- The most difficult drug to give up
  \(^4\)

A new paradigm

- Smoking is an addiction not a lifestyle choice
- Smokers have lost control of their behaviour
- Empathic, non-judgemental, supportive approach
- Most smokers need help to quit
- Many need repeated assistance to quit
Smoking neglected in SUD treatment setting

- Urgency of other drug presentations
- High staff smoking rates
- Lack of staff training
- Historical and cultural factors
- Smoking with clients for therapeutic relationship
- Myths about smoking and drug use...

Schroeder SA. Confronting a neglected epidemic. Cessation for mental illness and SUDs. Annu Rev Pub Hlth 2010
6

myths about smoking and substance use
Fact. They are as motivated to quit as the general population

40% to 80% are interested in quitting smoking

Many have tried to quit repeatedly

Have often have made a serious attempt to quit within the last year

§ Fact. They can quit smoking
  - But have lower quit rates
  - May need more intensive treatment

§ Quit rates
  - Stimulants: 13% at 6m \(^1\)
  - Alcohol dependence: 12% at 12m \(^2\)
  - Methadone: 4-5% at 6m \(^2\)

§ Best practice interventions in general population 22-32% \(^3\)

Fact. Smoking cessation *improves* recovery from alcohol and other drugs

- Quitting *during* other drug treatment improves outcomes \(^1,^2\)
- Smokers who quit *within 1 year* of substance abuse treatment were 2.4x more likely to be abstinent up to 9y > treatment \(^3\)

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1. Prochaska JJ. J Consult Clin Psychol. 2004  
2. Baca C. J Subs Abuse Treat 2009  
3. Tsoh JY. Drug Alc Depend 2011
Fact. The majority of evidence supports concurrent treatment for tobacco and other substances \(^1\)

- 25% increase in abstinence from alcohol and illicit drugs, 12 months after concurrent treatment \(^1\)
- Many opportunities lost if treatment is delayed \(^2\)

1. Prochaska JJ. J Consult Clin Psych 2004  
2. Joseph AM. J Stud Alcohol 2004
Fact. Smokers are more likely to die from a tobacco-related illness than their primary drug.

Patients in inpatient addiction treatment at 11y follow-up (n=845)¹
- 51% died from smoking-related disease

Every year of smoking >35y shortens life expectancy by 3 months²,³

1. Hurt R. JAMA 1996
2. Doll R. BMJ 2004
3. Jha P. NEJM 2013
Fact. Smoking appears to benefit stress but actually increases it

After quitting, smokers have
- Significantly improved mood, reduced anxiety and enhanced psychological health
- Significantly improved quality of life (overall life satisfaction)
  Mental and physical health, social functioning, emotional wellbeing, less pain, enhanced self control

‘I smoke to relax’

- Relief of nicotine withdrawal confused with relaxation

1. Parrott A. Human Psychopharm 2012
Relief of ‘stress’

Stress of nicotine withdrawal

Real stress

Perkins KA. Acute negative affect relief from smoking depends on the affect measure and situation, but not on nicotine. Biol Psychiatry 2010

Hmmm... Stress is relieved by a cigarette

I still feel stressed

Smoking cessation for alcohol and other drug users
How to help smokers quit
2 intervention pathways

**ASK**
Ask all patients if they smoke

**ADVISE**
Advise all smokers to quit

**ASSESS**
1. Readiness to quit
2. Nicotine dependence

**ASSIST**
1. Psycho-education
2. Plan coping strategies
3. Discuss barriers to quitting
4. Pharmacotherapy
5. Set a Quit Date

**ARRANGE**
Arrange follow up visits

**REFER**
Advise behavioural support and drug treatment and offer referral
- Quitline 137 848
- GP
- Tobacco Treatment Specialist
  [www.aascp.org.au](http://www.aascp.org.au)

Supporting smoking cessation: a guide for health professionals. RACGP 2014
1 ASK | Do you smoke?

- Do you smoke?
- A brief smoking history
  - Cigarettes per day, years of smoking
  - Previous quit attempts
  - What worked?
  - Current medications
2 ADVISE | Advise all smokers to quit

- Advise all smokers to quit in a clear, personalised, non-judgemental way
- ‘Quitting is the best thing you can do for your health. You will be less anxious and it will be easier to abstain from alcohol’
3 ASSESS | Readiness to quit

- ‘How do you feel about your smoking at the moment?’
- ‘Are you ready to quit now?’

Smokescreen for the 1990s. Richmond R, Mendelsohn C et al. 1991
3 ASSESS | Nicotine dependence

- **Time To First Cigarette (TTFC)** \(^1,2\)
  - Smoking within 30 minutes of waking is the single best predictor of nicotine dependence
  - <5 mins indicates high dependence

- **Guide to**
  - Need for medication
  - Severity of withdrawal
  - Intensity of support

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1. Fagerström K. Time to first cigarette; the best single indicator of tobacco dependence? Monaldi Arch Chest Dis 2003
4 ASSIST | Develop coping strategies

- Avoid
- Escape
- Distract
- Delay

Smoking cessation for alcohol and other drug users
4 ASSIST | Barriers to quitting

- Nicotine withdrawal
- Fear of failure
- Social pressure
- Weight gain
- Stress

Smoking cessation for alcohol and other drug users
4 ASSIST | Medication

- “... for all motivated smokers who have evidence of nicotine dependence” (smoke <30 mins of waking)

- First line treatments
  - Nicotine replacement therapy: first choice in hospital due to quick response
  - Varenicline
  - Bupropion

- All work by relieving cravings and withdrawal symptoms

Zwar N. Supporting smoking cessation. A guide for health professionals. RACGP 2014
## Effectiveness

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Increase in quit rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine replacement therapy monotherapy (patch, gum, inhalator, lozenge, mouth spray)</td>
<td>84%</td>
</tr>
<tr>
<td>Bupropion</td>
<td>82%</td>
</tr>
<tr>
<td>Varenicline Combination NRT (patch + quick acting form)</td>
<td>288%</td>
</tr>
</tbody>
</table>

Cahill K. Pharmacological interventions for smoking cessation. An overview and network meta-analysis. Cochrane review 2013
## NRT product categories

<table>
<thead>
<tr>
<th>Speed of action</th>
<th>NRT product</th>
<th>Time to peak blood levels</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow</td>
<td>Nicabate</td>
<td>3-7 h</td>
<td>Continuous application</td>
</tr>
<tr>
<td></td>
<td>Nicotinell</td>
<td>9-12 h</td>
<td>Nicorette 6-9 h</td>
</tr>
<tr>
<td>Medium</td>
<td>Regular</td>
<td>30-60 minutes</td>
<td>Regular or prn use</td>
</tr>
<tr>
<td>Fast</td>
<td>Rescue</td>
<td>10 minutes</td>
<td>Rescue cravings</td>
</tr>
<tr>
<td></td>
<td>cravings</td>
<td></td>
<td>Cue-induced cravings</td>
</tr>
</tbody>
</table>

2. Kraiczi H. Nic Tob Res 2011  
4. Du D. JOSC 2014
## Combination NRT

<table>
<thead>
<tr>
<th>Nicotine patch</th>
<th>Steady background nicotine levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow acting</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral nicotine products</th>
<th>For cue-induced or breakthrough cravings</th>
</tr>
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<tbody>
<tr>
<td>Intermediate or fast acting</td>
<td></td>
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</table>
Varenicline

- The most effective monotherapy

- 3-month course of twice daily tablets

- Optional second 3-month course

- Nausea. Increase dose slowly and take with food

- PBS authority

Neuropsychiatric side-effects

- Post-marketing case reports of depressed mood, agitation, changes in behaviour, suicide ideation and suicide
  - The least valid research design
  - Can’t determine causality
  - Poor report quality

Subsequent studies and analyses with more robust design have found no evidence of a causal relationship \(^1\)
  - RCTs: Smokers without mental illness (10 trials)
  - RCTs: Schizophrenia, depression
  - Pooled RCTs, meta-analyses
  - Large observational studies

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\(^1\) Cahill K. Cochrane Database 2012
Recommendations

- Varenicline can be used in patients with mental illness and SUDs

- Advice to patients
  - There have reports of changes in mood and behaviour but there is no evidence that varenicline is the cause
  - Advise family and carers to report any unexplained changes
  - Stop at first sign of these symptoms and contact the doctor

Zwar N. Supporting smoking cessation. A guide for health professionals. RACGP 2014
Bupropion

- As effective as NRT monotherapy
- Many potential drug interactions
- 1:1,000 seizure risk
- Contraindicated in
  - Increased seizure risk: Seizures: CNS tumours; excessive alcohol or benzodiazepine use; bulimia, anorexia nervosa; history of head trauma
  - Pregnancy

Hughes JR. Antidepressants for smoking cessation. Cochrane Database Syst Rev 2014
5 ARRANGE | Follow up

- Ongoing advice, support and encouragement
- Review problems
- Medication monitoring
- Increases success rates
Specific management issues for smokers with substance use disorders
Some general principles

- **Smoking cessation should be integrated into the routine care of other drug addictions**
- Concurrent treatment preferred
- Use standard behavioural and pharmacological treatments
- **Smokers with SUDS may require**
  - More intensive, longer-term treatment
  - Higher dose and combination pharmacotherapy

1. Prochaska JJ. J Clin Psychol 2004  
3. Okoli C. J Dual Diagn 2014  
4. Schroeder SA. Annu Rev Pub Hlth 2010
Address perceived barriers

Barriers to quitting smoking reported by AOD users:

- Quitting will compromise treatment of alcohol /other drugs
- Loss of a tool for coping with stress, low mood
- Withdrawal symptoms: irritable, anxious, restless
- Intolerable urges to smoke
- Urges to drink or use drugs will be overwhelming
- Gaining weight

Methadone

- Extremely low quit rates: 4-5% at 6m \(^1,2\)
- No sustained benefits from NRT \(^1-4\) or varenicline \(^5,6\)
- Consider tobacco harm reduction, eg nicotine patch or e-cigarettes long-term

Alcohol

- Varenicline may be the drug of choice for heavy drinking smokers

- Effect on alcohol use
  - Reduces alcohol cravings \(^1\)
  - Reduces alcohol consumption \(^1\)
  - Effectiveness comparable to naltrexone and acamprosate \(^2\)

- Combination NRT more effective than monotherapy in heavy drinkers \(^3\)

Cannabis

- 2 out of 3 users ‘mull’
  - NRT may be required

- Simultaneous treatment recommended \(^1,^2,^3\)
  - Continuing either drug increases risk of relapse of the other
  - Reinforcement from similar management strategies
    - Motivational interviewing, quit day, coping strategies for triggers, relaxation strategies, managing withdrawals - urge surfing, exercise

- More severe withdrawal from both drugs

1. Agrawal A. Addiction 2012  
2. Peters E. Addiction 2012  
3. Management of cannabis use disorder. A clinicians guide. NCPIC
Take home messages

1. Substance users are more likely to die from smoking than from their drug of choice
2. Substance users want to quit smoking and can quit, but may have lower quit rates
3. Smoking does not relieve stress, but actually increases it
4. Quitting smoking does not compromise recovery from other drugs
5. Concurrent treatment is recommended where possible
6. Substance users may need more intensive support and pharmacotherapy
7. Ask all patients if they smoke and offer help to quit using the AAR or 5As frameworks