2013

Smokers with depression: Helping them quit

Kay Wilhelm
St Vincent’s Hospital, University of New South Wales

Robyn Richmond
University of New South Wales

Nicholas Arnold Zwar
University of New South Wales, nzwar@uow.edu.au

Alex D. Wodak
St Vincent’s Hospital

Publication Details
Smokers with depression: Helping them quit

Abstract
Helping smokers with current or past depression quit smoking can be challenging. A range of online resources and telephone services are available for clinicians to complement smoking cessation treatment for these patients.

Disciplines
Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details
Key points

• Continuing smokers with depression are more likely to be nicotine dependent, to smoke more heavily and to have problems stopping smoking.
• It is important to understand the specific relation between depression and smoking in individual patients.
• Addressing both smoking cessation and depression has multiple benefits for mental and physical health.
• Useful strategies to help patients quit include motivational interviewing and development of a smoking cessation plan in collaboration with patients.
• A collaborative multifaceted approach is often required, with referral to Quitline, to a tobacco treatment specialist and/or for psychological support.
• A range of online resources and telephone services are available for use by clinicians to complement smoking cessation treatment for these patients.

Helping smokers with current or past depression quit smoking can be challenging. A range of online resources and telephone services are available for clinicians to complement smoking cessation treatment for these patients.

Smoking is now seen as a chronic condition that requires repeated smoking cessation advice, treatment and monitoring. Most smokers relapse after a quit attempt and may try to quit on multiple occasions before they succeed. Australian guidelines recommend that health professionals should take every opportunity to identify smokers, to offer them smoking cessation treatment in the form of brief advice to quit and pharmacotherapy, and to refer them to Quitline or other suitable programs. Selected treatment-refractory patients can be referred to a tobacco treatment specialist.

The 2010 National Drug Strategy Household Survey reported that 18% of Australians aged 14 years and over are smokers. This low rate by international standards follows decades of proactive public health policy and the availability of good smoking cessation treatment resources, including Quitline and well-informed GPs, pharmacists and other health professionals. The survey report also notes that ‘Compared with non-smokers (never smoked or ex-smokers), smokers were: more likely to rate their health as being fair or poor; more likely to have asthma; twice as likely to have been diagnosed or treated for a mental illness; and more likely to report high or very high levels of psychological distress in the preceding four-week period.’

However, continuing smokers with depression are more likely to be nicotine dependent, to smoke more heavily, to have problems stopping smoking and to have other medical and mental health conditions. Facts about smoking and depression are summarised in the box on page 47.

A recent review concludes that ‘despite the availability of effective smoking cessation...’
pharmacotherapies and psychosocial interventions, as well as increasing evidence that individuals with psychiatric disorders are motivated to quit, nicotine dependence remains an under-treated and under-recognised problem within this patient population. The authors postulate a number of reasons for this, including lack of research into newer approaches and higher tolerance of smoking in people with a mental illness. They call for an attitude shift in the treating clinicians and an individualised approach for these patients.

GPs have important roles in promoting mental and physical health and proactively identifying and assisting with problems related to depression and anxiety, which can be barriers to smoking cessation. It is challenging for any one clinician to have the expertise and time to effectively manage both depression and smoking cessation. In this article we focus on services and resources available to GPs and other health professionals to assist patients with a history of depression in smoking cessation. Some examples are outlined in the box on page 48.

APPLYING THE 5AS APPROACH TO SMOKERS WITH DEPRESSION

The 5As (ask, assess, advise, assist and arrange follow up) are the suggested framework for providing smoking cessation support in clinical practice. Issues of relevance to depression under each of the 5As are as follows.

Ask. Enquire about smoking in all patients with depression. Smoking rates are high and relapse is common in people with depression so it is important to keep asking.

Assess. Assess the stage of change in relation to smoking and the relation between smoking and depression for the individual. Smoking is commonly triggered by low mood, lack of meaningful activity, low self-esteem and use of alcohol and recreational substances. People with depression (and other dependence behaviours, including gambling) are more likely to be nicotine dependent. Explore which came first, smoking or depression, and use of other substances such as sedatives and stimulants.

Advise. Smokers with depression should be informed in a way that is clear but non-confrontational of the importance of quitting for their physical and mental health, and the increasing evidence that depression actually improves after quitting.

Assist. Motivational interviewing strategies such as exploring ambivalence can be used to encourage change. A useful motivating tactic involves attributing patients’ conditions to smoking – for example, ‘smoker’s heart’ and ‘smoker’s lung’ – and informing them of their ‘lung age’ (see the box on page 48 for an online ‘lung clock’). Be willing to provide individually tailored information on the health effects of smoking and benefits of quitting. Offer collaborative care with Quitline or a tobacco treatment specialist and/or referral for psychological support such as cognitive behavioural therapy and mood management. For nicotine-dependent patients, offer pharmacotherapy based on clinical suitability and patient preference.

Arrange follow up. Try to maintain contact during a quit attempt to review progress and problems, encourage continuation of pharmacotherapy, monitor mood and encourage use of support services. Longer courses of smoking cessation pharmacotherapy may be indicated. Patients taking antidepressants may need a dosage reduction after ceasing smoking. Interactions between nicotine and psychoactive medications are summarised in the box on page 49. Also, encourage patients who have

FACTS ABOUT TOBACCO SMOKING, QUITTING AND DEPRESSION

- Tobacco smoking in patients with depression is more common than in the general population, because of complex neurobiological and psychological mechanisms.
- Nicotine dependence exposes smokers with co-occurring depression to increased risks of smoking-related morbidity and mortality, and to detrimental impacts on their quality of life.
- Some common medical illnesses (e.g. diabetes, chronic obstructive pulmonary disease and vascular disease) are associated with depression and are also common in smokers.
- Current smoking is consistently associated with suicidal ideation and suicide in both case-control and cohort studies however, smoking cessation has not been associated with suicide in the few studies available.
- In some smokers, stopping smoking may lead to depressive symptoms while quitting but there is some evidence to suggest that cessation does not increase the risk of episodes of major depression.
- Flexible, individualised smoking cessation programs are the key to success in this patient population.
- Nicotine lowers serum levels of some antidepressants; smoking cessation can increase side effects and necessitate dose adjustment.
- GPs working in a collaborative care arrangement with Quitline have been shown to make a difference to outcomes for smokers with a history of depression.
- Reviews of smoking and depression or mental illness provide more detail and an Australian context.
quit to consider changes needed to their life, work patterns and social network to maintain their nonsmoking status.

The following three cases illustrate the principles of collaborative care in helping smokers with a history of depression quit smoking.

**CASE 1: MARIA**
Maria is 55 years old and works as a laboratory technician. She has been smoking for 30 years (a total of 33 pack years). She stopped smoking five years ago by going ‘cold turkey’ but resumed (at 25 cigarettes per day) after her marriage broke down a year ago. She has some insight into her problems. She has three children and now has a grandson; she wants to stop smoking before he is ‘old enough to understand’. She had some depressive symptoms and put on 10 kg in weight when she stopped previously and does not want...
to go through a similar experience this time.

**Management and outcome**

- Maria’s GP weighs her, measures her blood pressure and administers the K10 psychological distress measure, which includes items related to anxiety and depression. The GP tells her she scores in the ‘mild’ distress range and that the score will provide a good baseline. They then discuss her smoking history, including pack years and ‘lung age’ (see the box on page 48).
- The GP asks Maria ‘How do you feel about your smoking?’, consistent with the GP guidelines, and identifies her stage of change as ‘contemplation’. By her next visit, Maria has moved to the action phase.
- Together Maria and her GP create a smoking cessation plan (see the box on page 50). They set targets for positive activities (exercise, strategies for difficult times of day) before the quit date, based on what worked for Maria and what she learnt from her previous quit attempt.
- The GP discusses Maria’s concerns about her weight and suggests she start a weight management program before the quit date. The GP tells Maria about some online weight management advice (e.g. www.ucanquit2.org/facts/AvoidWeightGain.aspx and http://win.niddk.nih.gov/publications/PDFs/quitsmoking.pdf) and refers her to a dietician.
- The GP encourages Maria to track her mood on a daily chart (e.g. a suitable chart is available at www.blackdoginstitute.org.au/docs/MoodChartforDepressionandhowtomonitoryourprogress.pdf) along with her planned daily exercise and positive activities.
- The GP discusses pharmacotherapy options based on clinical suitability and Maria’s preference (pharmacotherapy options are listed in Table 1).

They choose varenicline, and the GP explains the dosage titration, the possibility of nausea and how to minimise this and the need for monitoring and follow up for mood or behaviour changes. Maria is enrolled in the ‘My time to quit’ program from the manufacturer of varenicline, and the GP encourages her to make use of this program.

- Maria quits successfully but three months later presents with a relapse. She is in conflict with her ex-husband about weekend access to their children and also has some work problems. She says ‘I’m stressed, I can’t sleep and I’m starting to feel depressed. I have had a few cigarettes and they seem to help’.
- The GP reinforces that people often have setbacks and asks Maria what she has learned from this quit attempt that she could use again. The GP also explains that although cigarettes may relieve stress in the short term, in the long term they make stress and mood disorders worse.
- The GP prescribes a further 12-week course of varenicline after explaining that this helps reduce the risk of relapse.
- The GP arranges for Maria to see the mental health nurse in the practice for sessions on problem solving and assertion skills to apply to her current situation. The nurse also encourages the use of ‘mindfulness’, a technique that promotes living in the moment and helps with smoking cessation as well as worry and stress management. She suggests Maria read some online factsheets (see the box on page 48).
- Maria quits successfully but three months later presents with a relapse. The GP discusses with the GP guidelines and identifies that the score will provide a good baseline. They then discuss her smoking history, including pack years and ‘lung age’ (see the box on page 48).

**INTERACTIONS BETWEEN NICOTINE, ANTIDEPRESSANTS AND OTHER PSYCHOACTIVE SUBSTRATES**

- Cigarette smoking induces activity of cytochrome P450 enzymes CYP1A2 and CYP2B6. This induction is mediated by chemicals in cigarette smoke, not nicotine. Enzyme activity is thus unaffected by nicotine replacement therapy.
- Induction of CYP1A2 enzyme activity is reversed after one week of stopping smoking.
- CYP1A2 enzyme induction affects amitriptyline, caffeine, clozapine, duloxetine, fluvoxamine, haloperidol, imipramine and olanzapine.
- CYP2B6 enzyme induction affects methadone.

* These medications are most affected by smoking cessation and close monitoring is required because of the greater likelihood of side effects necessitating dose adjustment. For other tricyclic antidepressants, serum levels fall but free drug levels rise, minimising the overall effect.

**CASE 2: JACOB**

Jacob is a 58-year-old man who is married with two adult children and works as a clerk. He has been smoking 20 to 30 cigarettes a day for 40 years. He is obese, has type 2 diabetes and hypertension, and was diagnosed with ischaemic heart disease about three years ago; he is taking standard medication for these problems.
He has had three episodes of depression in the past five years and is taking sertraline 100 mg daily, with some improvement. His GP has advised him to stop smoking. He says ‘I know that I have to, but I enjoy smoking.’ He has tried to quit ‘a couple of times’ in the past few years, but only lasted 24 to 36 hours. It was ‘horrible’, he says.

Management and outcome

• The GP assesses Jacob as being at the precontemplation stage of quitting.
• The GP makes a quick assessment of Jacob’s level of nicotine dependence with the following questions, as recommended by the GP guidelines, and assesses him as nicotine dependent.3
  – How soon after waking do you have your first cigarette?
  – How many cigarettes do you smoke each day?
  – Have you had cravings for a cigarette or urges to smoke and withdrawal symptoms when you have tried to quit?
• The GP discusses cardiovascular risk factors and demonstrates the effect of smoking on Jacob’s score for cardiovascular disease risk using a risk calculator (http://www.cvd-check.org.au).
• The GP explains nicotine replacement therapy (NRT) and reassures Jacob about its safety in stable heart disease.21 The GP also recommends varenicline, as a recent meta-analysis showed no significant change in rates of cardiac events.22
• Jacob agrees to see the practice nurse and the GP to develop a chronic disease management plan.
• The GP suggests Jacob telephone the NSW Health Get Healthy Information and Coaching Service to help him structure a fitness program and NSW Quitline to see how they can assist (see the box on page 48).
• The GP talks about using exercise bursts to control cravings and help with depression.23 The GP encourages Jacob to exercise daily, for example by walking with a ‘buddy’ in his lunch breaks at work.
• Jacob starts walking at lunchtime and finds this enjoyable. After several more prompts from the GP, Jacob decides to quit smoking.
• In the lead-up to his quit attempt, the GP suggests Jacob:
  – get in touch again with Quitline
  – smoke a different (less preferred) brand of cigarettes for a week, and then smoke using his less preferred hand for another week
  – use precession NRT (patch) for two weeks, followed by combination NRT (patch and 4 mg gum) from quit day.
• After two weeks, Jacob feels he has more control of his smoking and is ready to stop.
• Jacob visits his GP weekly to allow close mood monitoring and also has follow-up calls from Quitline. With this support, he finds quitting easier than he expected.
• The GP continues regular monitoring of Jacob’s mood, weight and HbA1c.
**TABLE 1. PHARMACOLOGICAL AGENTS USED IN SMOKING CESSION**

<table>
<thead>
<tr>
<th>Agent</th>
<th>Properties</th>
<th>Dosage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine replacement therapy</td>
<td>Decreases craving, withdrawal</td>
<td>Varying doses for patches (7 to 21 mg, 16- or 24-hourly) with gum supplementation (4 mg unless mild dependence)</td>
<td>Nicotine replacement should be considered for patients with Fagerstrom score &gt;5 or prior failures</td>
</tr>
<tr>
<td>Varenicline</td>
<td>Nicotine partial agonist; binds to nicotinic receptors</td>
<td>Start with 0.5 mg daily for three days, increase to 0.5 mg twice daily, then 1 mg twice daily</td>
<td>Nausea is most common adverse effect (30% of users)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treat for 12 weeks; consider further 12 weeks’ treatment for those who have quit successfully</td>
<td>Limited evidence of effectiveness and safety in people with psychiatric conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Monitor for mood changes, behaviour disturbance, suicidal thoughts</td>
</tr>
<tr>
<td>Bupropion</td>
<td>Antidepressant with specific anticraving and also anxiolytic properties</td>
<td>Start with 150 mg in morning, after three days may increase to 150 mg twice daily</td>
<td>Specific time-limited indications under the PBS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start one week prior to quit date, treat for seven to 12 weeks, then assess clinical need</td>
<td>Has been used effectively with NRT for smokers with a history of depression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bupropion therapy was added to SSRIs in one open study with no problems, but can affect doses of some other agents, including tricyclic antidepressants</td>
<td>Check contraindications (epilepsy, diabetes, facial oedema, pregnancy, hypersensitivity reactions)</td>
</tr>
<tr>
<td>Nortriptyline</td>
<td>Antidepressant effective against cravings, withdrawal, dysphoria</td>
<td>Start with 10 to 25 mg, aim for 50 to 100 mg at night, as tolerated</td>
<td>Blood level monitoring possible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start at least one week prior to quit date</td>
<td>No pronounced hyptensive effects but can induce cardiac arrhythmias</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Full antidepressant levels usually not required for anticraving effect</td>
<td>Used effectively for smokers with a history of depression, in combination with CBT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treat for seven to 12 weeks, then assess clinical need</td>
<td>Cheaper than bupropion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Avoid if history of arrhythmias; consider consulting a cardiologist if in doubt</td>
</tr>
</tbody>
</table>

ABBREVIATIONS: CBT = cognitive behavioural therapy; NRT = nicotine replacement therapy; SSRI = selective serotonin reuptake inhibitor.

**CASE 3: ZOE**

Zoe is a 30-year-old woman who works as a casual waitress. She has been smoking about 20 roll-your-own cigarettes a day since she was 15 years old. She also smokes marijuana each evening ‘to relax’ and binge drinks alcohol at weekends. She has a history of cutting her arms when a teenager. She has overdosed on prescription drugs on three occasions, at the ages of 18 and 20 years, and a few weeks previously, each time related to a relationship break-up. She reports longstanding low mood and several episodes of depression and has been diagnosed with borderline personality disorder. She says that her substance use is ‘self-medication – it helps me with my moods and my appetite’. She says that her psychiatrist has suggested she stop substance use, including smoking cigarettes, but Zoe says ‘I don’t want to put on more weight’.

**Management and outcome**

- The GP asks Zoe about substance abuse, eating patterns, self-harming and other behaviours related to borderline personality disorder.
- The GP encourages Zoe to use a daily chart to plot her mood, sleep, alcohol, tobacco and marijuana use and cutting behaviour. This enables Zoe to note dips in her mood after a ‘heavy night out’ and triggers for smoking, stress and cutting. The GP also suggests Zoe list strategies she can use at different times of day when cigarette cravings occur (see Table 2).
- The GP refers Zoe to her psychiatrist for assessment of her current status and risk issues.
The GP arranges for Zoe to see the mental health nurse in the practice who encourages her to use mindfulness techniques; these have been shown to be extremely effective for emotional regulation and have also been used to aid smoking cessation.16

The GP and mental health nurse discuss with Zoe strategies for dealing with impulsivity and when and how to engage the mental health acute care team.

The GP refers Zoe to Quitline and enquires about Quitline advice each time she visits.

The GP discusses use of NRT (gum and an inhaler) in combination with bupropion, an anticraving agent with anxiolytic and antidepressant qualities. The GP mentions the need to monitor Zoe’s blood pressure while she takes these medicines, as combined NRT and bupropion can produce hypertension in some people.

The GP also tells Zoe that these medications can be reviewed after she completes the course, and could be followed by a selective serotonin reuptake inhibitor (SSRI) if needed for mood regulation.

The GP discusses ways for Zoe to improve her general health and encourages exercise (e.g. dance, swimming).

In addition, the mental health nurse encourages Zoe to look into SMART Recovery groups as a way of learning cognitive techniques to help with cravings and mood regulation (see the box on page 48). As an alternative, the mental health nurse or a psychologist could discuss cognitive behavioural therapy approaches with her: cognitive reframing to counter smoking and depression, and behavioural activation to encourage exercise and starting new activities.

When Zoe stops smoking, she does experience increased depressive symptoms and an urge to cut herself. However, she is able to talk to the acute care team, who visit her in the evenings. She also has increased support from Quitline during this time.

CONCLUSION

GPs are well placed to motivate their patients to improve their health-related behaviours. People with depression often require more intensive individualised support to quit smoking that addresses mental health issues as well as nicotine dependence. A collaborative approach should be taken that brings in a range of health professionals and services. There are some excellent resources available to help GPs support their patients with depression to quit successfully.

REFERENCES

A list of references is included in the website version (www.medicinetoday.com.au) and the iPad app version of this article.

ACKNOWLEDGEMENTS: We thank Associate Professor Marilyn McMurchie and Sister Kerrie Cooper (RN) for their helpful comments and suggestions about management.

COMPETING INTERESTS: None.

TABLE 2. ZOE’S QUIT SMOKING STRATEGIES

<table>
<thead>
<tr>
<th>Strategies for Indoors</th>
<th>Strategies during daylight hours</th>
<th>Strategies at night-time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mindfulness exercise each morning and at ‘punctuation points’ in the day</td>
<td>Knitting*</td>
</tr>
<tr>
<td></td>
<td>Go to the gym</td>
<td>Stretching exercises</td>
</tr>
<tr>
<td></td>
<td>Plan something to do after work – avoid the pub, places where people smoke</td>
<td>Cleaning, other chores (have list of chores on refrigerator)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategies for Outdoors</th>
<th>Strategies during daylight hours</th>
<th>Strategies at night-time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Walk briskly, take the stairs, have a walk wherever possible and especially when stressed</td>
<td>Go into the garden for some fresh air</td>
</tr>
<tr>
<td></td>
<td>To counter cravings and panicky feelings, do some scissor jumps or skipping (until tired)</td>
<td></td>
</tr>
</tbody>
</table>

* Knitting is a suggestion for people to have ‘something to do with their hands’.

What are the steps in the 5As approach to helping patients quit smoking?

Review your knowledge of this topic and earn CPD/PDP points by taking part in MedicineToday’s Online CPD Journal Program.

Smokers with depression
Helping them quit

KAY WILHELM AM, MB BS, MD, FRANZCP; ROBYN RICHMOND MA, PhD;
NICHOLAS A. ZWAR MB BS, FRACGP; ALEX D. WODAK MB BS, FRACP, FAFPHM, FAC hAM

REFERENCES