

Background and Recommendations of **The New Zealand Guidelines for Helping People to Stop Smoking**



The 2007 *New Zealand Smoking Cessation Guidelines* were written by a project team led by the Clinical Trials Research Unit (now the National Institute for Health Innovation) at The University of Auckland in association with the Guidelines development group (see Appendix 1 for further details). *The New Zealand Guidelines for Helping People to Stop Smoking* provide an update of this work.

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Summary

The New Zealand Guidelines for Helping People to Stop Smoking (the Guidelines) provide health care workers with updated guidance for use during their contacts with people who smoke tobacco. The Guidelines replace the *New Zealand Smoking Cessation Guidelines*, which were published in 2007. The update is based on recommendations from a recent review of the effectiveness and affordability of interventions for stopping smoking (West et al 2013), supplemented with information from the literature review undertaken to produce the 2007 Guidelines (Ministry of Health 2008).

The basis for the Guidelines continues to be the ABC pathway. ABC prompts health care workers to:

- **Ask** about and document every person's smoking status
- give **Brief advice** to stop to every person who smokes
- strongly encourage every person who smokes to use **Cessation support** (a combination of behavioural support and smoking cessation medicine works best) and offer them help to access it. Refer to, or provide, cessation support to everyone who accepts that offer.

This document (*Background and Recommendations of The New Zealand Guidelines for Helping People to Stop Smoking*) contains the detailed information that supports the recommendations made in the Guidelines. A number of other resources have also been developed that offer guidance on specific topics (see Appendix 2). These resources can be found on the Ministry of Health's website www.health.govt.nz, on the *New Zealand Guidelines for Helping People to Stop Smoking* page.

Background

Tobacco smoking is a major public health problem in New Zealand. In addition to causing around 5000 deaths each year, it is the leading cause of disparity, contributing to significant socioeconomic and ethnic inequalities in health.

Stopping smoking confers immediate health benefits on everyone who smokes. This is why helping people who smoke to stop is one of New Zealand's leading health goals (as reflected in the Ministry of Health's smoking cessation implementation strategy and *Better help for smokers to quit health target*). *The New Zealand Guidelines for Helping People to Stop Smoking* can contribute to this high-priority goal by providing health care workers with the information they need to encourage the people they see to stop smoking for good.

The first New Zealand Guidelines for stopping smoking were published in 1999 and revised in 2002 (National Health Committee 2002). Those Guidelines focused on the '5As' framework for stopping smoking (Ask, Advise, Assess, Assist and Arrange) and the 'Stages of Change' model. In 2007 a development team, led by The University of Auckland, revised the Guidelines. It replaced the '5As' with the simpler 'ABC pathway' and removed all reference to the 'Stages of Change' model. A key message of the 2007 Guidelines was that all people who smoke, regardless of how ready they are to stop, should be offered help to quit. The 2007 Guidelines identified the full range of stop-smoking services available in New Zealand and how they applied to priority population groups such as pregnant women and people who use mental health services.

In October 2013, the Guidelines were revised again using evidence and recommendations from a recent review of the effectiveness and affordability of stop-smoking interventions (West et al 2013).

The basis for the current Guidelines continues to be the ABC pathway. However, these Guidelines differ in the following important ways.

1. The title of the Guidelines has been changed from the *New Zealand Smoking Cessation Guidelines* to *The New Zealand Guidelines for Helping People to Stop Smoking*.
2. The latest evidence on providing brief advice suggests that more people will make a quit attempt if the brief advice is followed by an offer of cessation support (Aveyard et al 2011).
3. All health care workers, regardless of their location, specialty or seniority, have a responsibility to help people who want to stop smoking. It is expected that all health care workers (A) ask the people they see about their smoking status and (B) give brief advice to stop to everyone who smokes. It is not expected that all health care workers provide ongoing cessation support themselves; rather these Guidelines encourage busy health care workers to (C) strongly encourage everyone who smokes to use cessation support and offer them help to access it. If the person accepts the offer, then the health care worker should refer them on to a stop-smoking service or prescribe them a stop-smoking medicine.
4. The 2014 Guidelines also have a different structure to previous Guidelines and have been condensed into a simple format that is relevant for all health care workers. With this format, a health care worker can refer quickly to the process for providing an ABC intervention and making an offer of cessation support.
5. The Guidelines are based on the recommendations contained in this background document. The recommendations stem from a recent review of the effectiveness and affordability of stop-smoking interventions, which produced specific recommendations for national guidelines (West et al 2013). This information was supplemented by material from the comprehensive literature review undertaken to produce the 2007 Guidelines (Ministry of Health 2008).

Grading of recommendations

Each of the recommendations included in this document has been graded based on a system developed by the Australian National Health and Medical Research Council (NHMRC 2009) to indicate the quality of the evidence used. The table below sets out the different grades in this grading system.

Grade of recommendation	Description
Grade A	Body of evidence can be trusted to guide practice
Grade B	Body of evidence can be trusted to guide practice in most situations
Grade C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
Grade D	Body of evidence is weak and recommendation must be applied with caution
Grade ✓ Good practice point	Recommended best practice based on clinical experience and expert opinion

Plans for revising these Guidelines

The Ministry of Health will revise these Guidelines as required. Updates will be put on the Ministry of Health's website.

Endorsements

The Guidelines have been endorsed by the following groups:

- Addiction Practitioners' Association Aotearoa-New Zealand
- Asthma Foundation
- Cancer Society of New Zealand
- Heart Foundation
- New Zealand College of Clinical Psychologists
- New Zealand Rural General Practice Network
- Pharmacists and Therapeutics Special Interest Group of the Paediatric Society of New Zealand
- Pharmacy Guild of New Zealand
- Physiotherapy New Zealand
- Smokefree Coalition
- The Quit Group
- The Royal Australian and New Zealand College of Psychiatrists

Part 1 – Information for managers of health care services

Barriers and facilitators to implementing the ABC pathway

Recommendations

- Support and encourage health care workers who smoke to stop. **[Grade ✓]**
- Give training to all health care workers to assist them in screening for tobacco use, making an offer of treatment and referring people who want help with stopping smoking to a stop-smoking service. Such training should be relevant to trainees and sensitive to their other time commitments. **[Grade ✓]**
- For health care workers who provide stop-smoking treatment (ie, stop-smoking practitioners), give the appropriate level of training to enable them to provide evidence-based, stop-smoking interventions (including multi-session behavioural support and advice on using stop-smoking medicines). **[Grade ✓]**
- Health care organisations (at all levels) should put in place tools and systems that (1) prompt health care workers to implement the ABC pathway and (2) provide feedback on performance. **[Grade ✓]**
- Health care organisations should foster and support clinical leadership in helping people stop smoking. **[Grade ✓]**

Barriers to implementing the ABC pathway

Key messages

Health care workers who smoke

- Smoking prevalence among New Zealand doctors is low – 4 percent of male doctors and 3 percent of female doctors are regular smokers. The prevalence of smoking is higher among New Zealand nurses – 13 percent of female and 20 percent of male nurses smoke daily. Rates of smoking can differ depending on one's place of work. For example, a higher proportion of nurses working in mental health smoke – 30 percent of female and 26 percent of male mental health nurses smoke (Edwards et al 2008).
- Health care workers who smoke may have different knowledge of and attitudes towards smoking compared with their non-smoking colleagues (eg, they rate risks of smoking and benefits of stopping as lower) and are less likely to give stop-smoking advice (Myers et al 2012).

Lack of time, knowledge and skills

- Lack of time is one of the most frequently cited barriers to providing an ABC intervention. A relatively consistent finding in the literature is that the more health care workers are asked to do, the less likely they are to do it (Brinson and Ali 2009). Health care workers are generally good at screening for tobacco use and advising smokers to stop. However, they appear to be less likely to provide further assistance. The time required to provide stop-smoking support is likely to be a factor, but other factors such as lack of knowledge and skills are also likely to contribute.

Health care workers who see ABC as beyond their job description

- While most health care workers will agree that stopping smoking is important, some believe that helping people to stop is outside of their professional role. However, all health care workers have an important role to play, especially in prompting a quit attempt and recommending treatment that will increase the chances of stopping long term.
- The ABC pathway directs health care workers to (A) ask the people they see about their smoking status and (B) give brief advice to stop to everyone who smokes. It is not expected that health care workers provide ongoing cessation support themselves. Instead, health care workers should (C) strongly encourage everyone who smokes to use cessation support and offer them help to access it.
- Providing health care workers with a rationale that is specific to their area of work (eg, a key message for surgeons is that stopping smoking prior to surgery reduces a patient's risk of wound infection and post-operative pulmonary and cardiac complications) may help to change these views. Key messages for frontline health care workers are available on the Ministry of Health's website www.health.govt.nz

Facilitators for implementing the ABC pathway

Key messages

Training, reminders and prompts, audit and feedback, incentives and clinical leadership can make it easier for health care workers to deliver ABC in all health care settings.

Training

- Training of health care workers is essential to changing their behaviour.
- Training can increase the rate at which health care workers ask about smoking, give brief advice to stop smoking and make referrals to stop-smoking support (Brinson and Ali 2009).
- Because one-off training may not change clinical behaviour long term, reinforcement (ie, ongoing training and leadership) and systems support are required to maintain these changes.
- Training health care workers in practical skills (eg, how to raise the issue of smoking and how to make an offer of cessation support) appears to be more effective than just systems training (eg, how to fill in the smoking section on a computer).
- Training also needs to take into account time and cost pressures, such as time out of the office and the cost of training.

System prompts

- Simple reminders and prompts are effective in changing clinical behaviour. For example, using medical chart stickers can increase the rates of screening for smoking (Brinson and Ali 2009).
- Automated systems, such as a mandatory field on hospital admission or primary care enrolment forms, can increase the number of smokers who are identified (Brinson and Ali 2009).
- Automated systems can also allow for easier and more consistent prescribing of stop-smoking medication for patients who need it, and allow performance management and timely feedback to staff.

Audit and feedback

- Auditing the performance of health care workers and reporting the results back to them are effective ways of changing clinical behaviour (Brinson and Ali 2009).
- Auditing could be a simple manual audit of patient records, or could be automated and provide 'real-time' feedback on performance.
- Audit and feedback mechanisms can be provided at an individual or departmental/practice level.

Financial incentives

- There is evidence that financial incentives, when coupled with performance targets, can change clinical behaviour (Brinson and Ali 2009).

Leadership

- Leadership is important in achieving and maintaining clinical behaviour change. Hospitals, for example, with a good track record of implementing stop-smoking strategies rely on a network of senior management and clinicians to develop relevant protocols and monitor how well staff follow them (Al-Alawy et al 2011).
- Changeover in management positions, particularly senior medical officers, has been reported to hamper implementation of stop-smoking programmes (Freund et al 2009).

Part 2 – Information for all health care workers

The ABC pathway

Ask about and document every person's smoking status

Key messages

- Ask all people attending any health care service if they smoke (or use) tobacco.
- Document their response in their clinical records, using the correct clinical codes where applicable.
- Update the records of anyone who smokes, or has recently stopped, regularly.
- Simple systems – such as computer prompts, stickers in the client chart or including smoking status as a vital sign in the person's clinical record – can remind health care workers to ask about and document smoking status.

Recommendation

- Ask about and document every person's smoking status. For people who smoke or have recently stopped smoking, check and update their smoking status regularly (at every admission to hospital and at least annually in primary care). All health care settings (general practice, medical centres, hospitals, etc) should have systems in place to ensure that smoking status is accurately documented. [**Grade A**]

Give brief advice to stop to every person who smokes

Key messages

- Brief opportunistic advice from a doctor increases long-term abstinence rates by 2 to 4 percent, compared with doing nothing (Stead et al 2013).
- Such advice can be given in 30 seconds (Jackson et al 2001).
- Brief advice appears to act by triggering a quit attempt (Russell et al 1979).
- Health care workers do not need to assess a person's 'stage of change' before offering advice. They should give advice to all people who smoke regardless of whether they want to stop smoking, or not.
- Advice can have a stronger effect if the health care worker links it to a person's existing smoking-related medical condition, presents it as a way of protecting the unborn child in pregnant women, or presents it as a way of protecting children and young people from exposure to second-hand smoke.
- All health care workers who have contact with pregnant women who smoke should give them brief advice to stop and offer cessation support as early in the pregnancy as possible. Where pregnant women continue to smoke, health care workers should repeat that advice regularly throughout the pregnancy.
- After giving brief advice, it is important to make an offer of cessation support.
- Offering cessation support is more effective than just giving brief advice (Aveyard et al 2011).

Recommendations

- All doctors should give brief advice to stop to all of their patients who smoke at every opportunity.¹ **[Grade A]**
- All other health care workers should also give brief advice to stop to every person they see who smokes at every opportunity.² **[Grade B]**
- In the person's records, note that brief advice was provided. Take care to use the correct clinical codes where applicable. **[Grade C]**
- Health care workers should seek appropriate training so that they can provide brief advice effectively. **[Grade B]**

Strongly encourage every person who smokes to use cessation support and offer them help to access it

Key messages

- The most effective components of cessation support are multi-session behavioural support³ and stop-smoking medicines. Using these components together is associated with the highest long-term abstinence rates.
- The available evidence suggests that a person who is trying to stop smoking needs at least four follow-up contacts if they are to have the best chances of stopping smoking.
- Behavioural support can be delivered face to face (individually or in a group), via the telephone, through text messaging or online.
- People delivering behavioural support should be competent in providing that support.
- Michie, Hyder et al's (2011) behaviour change techniques identify the specific knowledge and skills required to deliver effective behavioural support for stopping smoking (see box that follows).
- Stop-smoking medicines with proven efficacy⁴ should be recommended to all regular smokers. Please note that pregnant women and people aged 12 to 18 years should only use nicotine replacement therapy (NRT).
- At the very least, health care workers should refer people who want to stop smoking to services that provide effective interventions (eg, Quitline or Aukati KaiPaipa).
- Referral is most effective when it includes a brief description of the recommended service or treatment.

1 This would be at least annually in general practice and at each admission to hospital for secondary care staff.

2 This would be at least annually in general practice and at each admission to hospital for secondary care staff.

3 Behavioural support involves advice, discussion, encouragement and other targeted activities designed to: (1) maximise motivation to remain smokefree; (2) minimise motivation to smoke; (3) enhance the skills and capacity needed to avoid and resist urges to smoke; and (4) optimise effective use of stop smoking medication (West et al 2013).

4 Medicines include nicotine replacement therapy, bupropion, nortriptyline and varenicline.

Competencies required to deliver behavioural support for stopping smoking

For individual treatment, required competencies include:

- developing rapport and eliciting client views
- assessing current and past smoking behaviour, including past quit attempts
- assessing the person's current readiness and ability to stop
- facilitating goal setting and action planning (including the development of a treatment plan)
- providing advice on stop-smoking medication
- prompting and gaining commitment from the client there and then
- using a carbon monoxide monitor to measure carbon monoxide at each session (only applies to face-to-face services)
- providing information on withdrawal symptoms
- providing advice on changing routines, facilitating the identification of barriers to stopping and staying stopped, and problem solving
- providing rewards/praise for stopping smoking
- asking about the person's experience with stop-smoking medicines (current or previous). This includes monitoring for adverse effects
- facilitating coping and identifying relapse prevention strategies
- providing options for additional and later support
- assisting the client to strengthen their new ex-smoker identity
- providing appropriate written materials, as well as information on the consequences of smoking and stopping smoking.

Group-based treatment requires the competencies for individual treatment (identified above), plus encouraging:

- group discussions
- group tasks that promote group interaction or bonding
- mutual support.

Source: Based on Michie, Churchill et al 2011.

Part 3 – Information for stop-smoking practitioners

Providing behavioural support

Face-to-face support

Key messages

- There is evidence that face-to-face counselling, when given to smokers who are willing to set a quit date, increases abstinence rates compared with the rates for those who receive minimal support.
- Both individual and group-based interventions are effective.
- Individual face-to-face behavioural support can increase long-term abstinence rates by 2 to 5 percent compared with written materials or brief advice (West et al 2013).
- Group support can increase long-term abstinence rates by 4 to 8 percent compared with written materials or brief advice (West et al 2013).
- Among those behaviour change methods that are effective (for example, cognitive behavioural therapy, motivational interviewing and withdrawal-oriented treatment), there is no evidence that any one method is better than the others. However, the basic principles of setting a quit date, emphasising the importance of complete abstinence (not a single puff) and providing multi-session support are important.
- There is some evidence that more intensive stop-smoking support (ie, more frequent support and/or longer support sessions) is associated with higher abstinence rates (USDHHS 2008).
- Support is best delivered in a time set aside specifically for this purpose rather than as part of the general duties of a health care worker.
- The evidence indicates that abstinence rates are generally higher when medication is used in combination with face-to-face support.

Recommendations

- Providing face-to-face, stop-smoking support either to individual patients or to groups of people who smoke is an effective method of stopping smoking. **[Grade A]**
- Aim to see people for at least four support sessions. **[Grade A]**
- Health care workers providing evidence-based, stop-smoking support (that is, more than just brief advice) should be competent to do so (see requirements on the previous page). **[Grade C]**
- Health care workers trained as stop-smoking practitioners require dedicated time to provide stop-smoking support. **[Grade C]**

Telephone support

Key messages

- Telephone support is an effective method of encouraging people to stop smoking.
- Telephone support can be proactive (where the smoker receives calls from a telephone counsellor at set times) or reactive (where the smoker calls a helpline for information and advice). Evidence shows that proactive telephone support is the more effective approach (West et al 2013).

- Telephone cessation services are cost-effective and have a very wide reach (that is, they can be delivered to many people over a large geographical area). In New Zealand, Quitline provides a free telephone support service to callers from around the country.
- Receiving proactive telephone support increases long-term abstinence rates by 2 to 4 percent, compared with simply being offered reactive telephone support (West et al 2013).
- Proactive telephone support adds to the effectiveness of face-to-face behavioural support (West et al 2013).

Recommendation

- Offer telephone counselling as an effective method of stopping smoking. **[Grade A]**

Text messaging support

Key messages

- Automated text-messaging support delivers a mix of information, advice and motivational messages. It can also provide messages to help cope with urges to smoke when needed.
- Receiving text messages related to smoking can increase long-term abstinence rates by 3 to 5 percent compared with receiving non-specific text messages (West et al 2013).
- The New Zealand Quitline currently provides a text message support programme (Txt2Quit). See www.quit.org.nz for more details.

Recommendation

- Offer text message support as an effective method of stopping smoking. **[Grade B]**

Internet-based support

Key messages

- Internet-based support typically aims to use the same strategies as telephone and face-to-face support.
- Internet-based interventions include text-based support, user forums and blogs.
- Internet-based interventions can be tailored to individual preferences based on the information that users supply at registration.
- Internet-based interventions have been shown to increase long-term abstinence rates, but there are insufficient data to estimate the effect size (West et al 2013).
- The New Zealand Quitline currently provides online support. Evaluation data show an association between online blog use and higher abstinence rates (The Quit Group 2012).

Recommendation

Internet-based support can be offered to people who want help in stopping smoking, although there is currently insufficient evidence to determine what degree of support is required to increase long-term abstinence rates. **[Grade ✓]**

Written self-help materials

Key messages

- Self-help materials, such as leaflets and books, are a relatively inexpensive means of communicating stop-smoking advice to a potentially large number of smokers. However, the quality of their content varies widely (Lancaster and Stead 2005).
- Self-help materials have only a small effect on long-term abstinence rates in comparison with no intervention: that is, they increase long-term abstinence rates by 0 to 1 percent (West et al 2013).

- Adding self-help materials to other effective interventions (such as brief advice, face-to-face or telephone support, or stop-smoking medication) does not appear to increase the effectiveness of those interventions (Lancaster and Stead 2005).
- Self-help materials that are tailored to the individual are likely to be more effective than general materials (Lancaster and Stead 2005).

Recommendation

- Make self-help materials available, particularly those that are tailored to individuals, but do not make them the main focus of efforts to help people stop smoking. **[Grade ✓]**

Relapse prevention

Key messages

- Although several good-quality studies have tested relapse prevention interventions, they have produced no evidence that this form of intervention is effective (Hajek, Stead et al 2013).
- Most interventions have tried a skills-based approach, in which people who have recently stopped smoking are taught to recognise high-risk situations and develop the skills to withstand the temptation to smoke. Many interventions have been brief and of a one-off nature. Given the characteristics of tobacco dependence, this limited approach is unlikely to be sufficient.

Recommendation

- There is insufficient evidence to recommend any specific relapse prevention interventions.⁵ However, services should offer ongoing support to people who need further help to remain smokefree. **[Grade ✓]**

Providing stop-smoking medicines

Nicotine replacement therapy (NRT)

Key messages

- NRT provides some of the nicotine a person would have otherwise received from tobacco, but without the harmful toxins contained in tobacco smoke.
- NRT is effective and can increase long-term abstinence rates by 5 to 7 percent compared with a placebo (West et al 2013).
- Combining the patch with a faster-acting NRT product (eg, gum or lozenges) can increase long-term abstinence rates by 1 to 6 percent compared with using a single product (West et al 2013). There are no safety concerns with combining NRT products.
- There are five different NRT products available in New Zealand.⁶ They deliver nicotine in different ways, but there is no evidence that they differ in their effectiveness.
- There is no evidence that matching particular products with particular types of people who smoke makes any difference to the outcome. The person's preference should guide which product they use.

⁵ Relapse prevention interventions are those designed to help prevent people who have managed to stop smoking from either lapsing (an episode of smoking) or progressing from lapsing to relapse (a return to regular smoking).

⁶ The NRT products available in New Zealand are patches, gum, lozenges, inhalators and mouth spray. At the time of writing only the patches, gum and lozenges were subsidised in New Zealand. Subsidised products can be obtained via Quit Cards (the nicotine replacement exchange card system).

- Evidence suggests that the higher-dose NRT products are more effective than lower-dose products (eg, 4 milligram gum versus 2 milligram gum) (West et al 2013), especially in people who are more highly dependent.⁷ For more information on NRT dosing, go to the Ministry of Health's website www.health.govt.nz
- Most people should use NRT for 8 to 12 weeks, but a small number of smokers may need to use it for longer (5 percent may continue to use it for up to a year) (Hajek et al 2007). There are no known safety concerns about long-term NRT use.
- NRT appears to be as effective as bupropion, nortriptyline and varenicline.
- People with cardiovascular disease can use NRT safely (Woolf et al 2012).
- Randomised controlled trials of NRT use in pregnant women who smoke have not shown NRT to be effective (Coleman et al 2012). However, in all of these studies the rate of treatment compliance was low. Correlational data from the UK show that pregnant women who used combination NRT were more likely to stop smoking compared with women who did not use a stop-smoking medicine. Single-product NRT use, compared with no medicine, was not associated with higher abstinence rates (Brose et al 2013).
- The use of NRT in pregnancy carries a small potential risk to the fetus, but using NRT is far safer than smoking while pregnant. Blood nicotine levels are typically lower when using NRT, and NRT delivers nicotine more slowly compared with smoking. Furthermore, NRT delivers nicotine without the other harmful substances contained in tobacco smoke.
- Expert opinion suggests that pregnant women can use NRT once they have been advised of the potential risks and benefits (Benowitz and Dempsey 2004). If a patch is judged to be the most appropriate NRT product, then the pregnant woman should remove it overnight (Benowitz and Dempsey 2004).
- There is no clear evidence on whether NRT improves abstinence rates for young people, people with a mental health disorder or people with a severe physical illness (West et al 2013). However, expert opinion is that NRT should be considered for people in these groups if they want help to stop smoking.
- There is evidence that NRT is effective at helping people reduce the number of cigarettes they smoke before stopping and that this is an effective method of stopping smoking long term (known as the 'cut down then quit' approach). If this strategy is used, the person should aim to reduce cigarette consumption by at least 50 percent in the first six weeks. Then over the next 18 weeks, this reduction can either be maintained, or the person can continue to reduce or can quit completely. The person should aim to stop smoking completely within six months. If a reduction of at least 50 percent is not achieved in the first six weeks, then little may be gained from continuing this treatment strategy (McRobbie et al 2006).

Recommendations

- Offer NRT routinely as an effective medication for people who want to stop smoking. **[Grade A]** NRT can be provided on prescription or via a Quit Card.⁸ In hospitals, NRT can also be supplied via a standing order.
- Personal preference should guide which NRT product (eg, patches, gum, lozenges, inhalator or spray⁹) a person uses. **[Grade ✓]**
- People should use NRT for at least eight weeks. **[Grade A]**
- Combining two NRT products (eg, patch and gum are a popular combination) increases abstinence rates. **[Grade A]**

⁷ To assess someone's level of dependence, ask, 'How soon after you wake up do you usually have your first cigarette?' If the person smokes within 30 to 60 minutes of waking, then they have a higher degree of nicotine dependence and are likely to benefit from more intensive cessation support.

⁸ A Quit Card is a voucher that a person can exchange for subsidised NRT.

⁹ Currently only patches, gum and lozenges are subsidised. The inhalator and mouth spray can be purchased over the counter.

- NRT can be used to encourage a person to reduce their smoking before they try to stop. **[Grade B]**
- People who need or want NRT for longer than eight weeks (eg, people who are highly dependent) can continue to use it. **[Grade ✓]**
- People with cardiovascular disease can use NRT. **[Grade B]**
- Pregnant women can use NRT after they have been informed of and have weighed up the risks and benefits. If they use patches, they should remove them overnight. **[Grade ✓]**
- Young people (12–18 years of age) who are dependent on nicotine can use NRT if the health care worker believes that NRT may help them to stop smoking. **[Grade ✓]**

Things to tell your patients

- NRT is not a magic cure, but it will make quitting easier.
- Nicotine (the main ingredient in NRT products) does not cause smoking-related diseases, so NRT is safe for smokers to use. (It should be kept out of the reach of children.)
- Make sure you use enough NRT and use it for at least eight weeks.
- The oral products (such as the gum and lozenges) do not taste pleasant initially, but you will soon get used to the taste.

Bupropion (also known as Zyban)

Key messages

- Bupropion is an atypical antidepressant medication that helps people to stop smoking by reducing the severity of withdrawal symptoms via a number of different mechanisms, including dopamine and noradrenaline pathways.
- Bupropion is effective. Its use can increase long-term abstinence by 6 to 14 percent compared with a placebo (West et al 2013).
- Bupropion appears to be as effective as NRT and nortriptyline, but evidence from three randomised controlled trials suggests that it is less effective than varenicline (West et al 2013).
- Bupropion can increase smoking abstinence rates in smokers with schizophrenia without jeopardising their mental state (Tsoi et al 2013).
- There is insufficient evidence to recommend using bupropion with any other stop-smoking medication.
- There is insufficient evidence to recommend bupropion to pregnant women or adolescents who smoke.
- There is insufficient evidence to recommend bupropion in preventing smoking relapse.
- Bupropion is only available on prescription and is fully subsidised. People should use bupropion for at least seven weeks.

Prescribing information

Please refer to the datasheet, which can be found on the MedSafe website www.medsafe.govt.nz/profs/datasheet/z/zybantab.pdf, for full prescribing information. A summary is provided below.

- Bupropion should be started at least one week before the person's quit date.
- Days 1 to 3: take one tablet per day.
- Day 4 onwards: take one tablet twice daily, keeping at least eight hours between each dose.
- Patients should continue treatment for at least seven weeks. Discontinuation should be considered if the person has not made significant progress towards abstinence by the seventh week.

Contraindications

- Current seizure disorder or any history of seizures
- A known central nervous system tumour
- Abrupt alcohol or sedative withdrawal
- Use of monoamine oxidase inhibitors in the last 14 days
- Hypersensitivity to any ingredients in bupropion
- Bulimia or anorexia nervosa (or history)

Cautions

- Use with extreme caution in patients with severe hepatic cirrhosis; a reduced dosing frequency is recommended.
- Initiate treatment of patients with renal impairment at reduced frequency and/or dose.
- Bupropion must not be used in patients with predisposing risk factors for seizures unless there is a compelling clinical justification where the potential medical benefit of smoking cessation outweighs the potential increased risk of seizure. In these patients, a maximum dose of 150 mg should be considered for the duration of treatment. Predisposing risk factors for seizures include: use of medicines known to lower the seizure threshold (eg, antipsychotics, antidepressants, antimalarials, tramadol, theophylline, systemic steroids, quinolones and sedating antihistamines); excessive use of alcohol or sedatives; history of head trauma; diabetes treated with hypoglycaemics or insulin; use of stimulants or anorectic products.
- Depression, rarely including suicidal ideation, has been reported in patients undergoing a smoking cessation attempt, including during early stages of treatment. Patients should be advised accordingly.
- The safety of bupropion for use during pregnancy has not been established. Use of bupropion should only be considered during pregnancy if the expected benefits are greater than the potential risks.
- Bupropion is excreted in human breast milk; mothers should be advised not to breastfeed while taking bupropion.
- The safety and efficacy of bupropion in patients under 18 years of age have not been established.

Drug interactions

- Anorectic drugs
- Citalopram
- Carbamazepine
- Phenobarbitone
- Phenytoin
- Levodopa
- Amantadine
- Ritonavir
- Alcohol
- Drugs affecting CYP2B6 (eg, orphenadrine, cyclophosphamide, ifosfamide, ticlopidine, clopidogrel)
- Drugs affecting CYP2D6 substrates (eg, antidepressants, antipsychotics, metoprolol, flecainide)

Adverse effects

- Dry mouth, insomnia, headache and rash.
- Seizure has been rarely reported. The risk of seizure is similar to other antidepressants.
- Refer to the New Zealand datasheet for bupropion www.medsafe.govt.nz/profs/datasheet/z/zybantab.pdf for a complete list of known adverse effects.

Recommendations

- Bupropion can be offered as an effective medication for people who want to stop smoking. **[Grade A]**
- The decision to use bupropion should be guided by the person's preference along with contraindications and precautions for use. **[Grade ✓]**
- Monitor people using bupropion for adverse effects. **[Grade ✓]**

Things to tell your patients

- It is not a magic cure, but it will make quitting easier.
- Smoke as normal for the first week, then aim not to have a single puff after your quit date (day 8 onwards).
- Headache, dry mouth and difficulty sleeping are the most common side effects, but these are usually tolerable.
- Sometimes people experience drowsiness when they start taking medications like bupropion. People should be advised not to drive or use heavy machinery if they experience this effect.

Nortriptyline

Key messages

- Nortriptyline is a tricyclic antidepressant that helps people to stop smoking by reducing the severity of withdrawal symptoms via its actions on noradrenaline pathways.
- Its action in helping people to stop smoking is independent of its antidepressant effects. Therefore, it also helps people without a history of depression to stop smoking.
- Nortriptyline is effective. Its use can increase long-term abstinence rates by 5 to 18 percent compared with a placebo (West et al 2013).
- There are a number of contraindications and precautions with its use.
- There is insufficient evidence to recommend using nortriptyline with any other stop-smoking medication.
- There is insufficient evidence to recommend nortriptyline to pregnant women or adolescents who smoke.
- People with cardiovascular disease should use nortriptyline with caution.
- Nortriptyline is only available on prescription and is fully subsidised. The course of treatment is 12 weeks.

Prescribing information

Please refer to the datasheet, which can be found on the Medsafe website

www.medsafe.govt.nz/profs/datasheet/n/Norpresstab.pdf or

www.medsafe.govt.nz/profs/datasheet/n/nortriptylinenrimtab.pdf, for full prescribing information.

A summary is provided below.

- Nortriptyline should be started 10 to 28 days before the person's quit date.
- Initially, the person should take 25 milligrams per day.
- Their dose should be increased gradually to 75 to 100 milligrams per day over the next 10 days to 5 weeks.
- Patients should continue to use nortriptyline for a total of 12 weeks. The dose should be tapered at the end of treatment to avoid withdrawal symptoms that may occur if it is stopped abruptly.
- There is limited evidence of any benefit of extending treatment past three months.

Contraindications

- Hypersensitivity to other tricyclic antidepressants
- Transfer from monoamine oxidase inhibitors (within 14 days)
- Acute recovery phase following myocardial infarction
- Lactation
- Children aged under 12 years

Precautions

- Suicidal ideation
- Bipolar disorder, agitated, overactive patients
- Cardiovascular disease
- Hyperthyroidism
- Glaucoma
- History of urinary retention, head trauma, seizures
- Diabetes
- Poor CYP2D6 metabolisers
- Surgery
- ECT
- Abrupt withdrawal
- Older people
- Women of childbearing age
- Pregnancy
- Lactation
- People aged under 18 years

Drug interactions

- Alcohol
- Sedatives
- Cimetidine
- Reserpine
- Anticholinergics
- Sedating antihistamines
- Sympathomimetics
- Stimulants
- Anorectics
- Guanethidine
- CYP2D6 substrate inhibitors (eg, other antidepressants, phenothiazines, carbamazepine, type 1C antiarrhythmics, quinidine)
- Drugs lowering seizure threshold (eg, antipsychotics, tramadol, theophylline, steroids, quinolones; insulin, oral hypoglycaemics; thyroid hormones)

Adverse effects

- Drowsiness, gastrointestinal upset, bone marrow depression, anticholinergic effects, confusion, delusions, hallucinations, restlessness, anxiety, incoordination, convulsions, extrapyramidal symptoms, allergic reactions, syndrome of inappropriate antidiuretic hormone secretion, blood glucose changes, hypo/hypertension, myocardial infarction, arrhythmias, stroke, hepatitis and serotonin syndrome

Recommendations

- Nortriptyline can be offered as an effective medication for people who want to stop smoking. **[Grade A]**
- The decision to use nortriptyline should be guided by the person's preference as long as they have discussed the risks of use with a health care worker. **[Grade ✓]**
- Monitor people using nortriptyline for adverse effects. **[Grade ✓]**

Things to tell your patients

- Nortriptyline works by reducing your craving for cigarettes, making stopping smoking a little easier and increasing your chance of stopping for good. However it is not a magic cure and effort is still required.
- You need to start nortriptyline before your quit date to give it time to start working. You can smoke as normal before your quit date. But after your quit date you should aim not to have a single puff.
- Dry mouth, tiredness and constipation are common side effects, but these side effects are usually mild to moderate.

Varenicline (also known as Champix)

Key messages

- Varenicline is a nicotinic acetylcholine receptor (nAChR) partial agonist; it also has antagonist properties, competing with nicotine for the same receptor site. The main receptor it targets is the alpha-4 beta-2 subtype but it also acts as a full agonist at alpha-7 neuronal nicotine receptors. The agonist effect on the nAChR produces dopamine release, but less than that seen with nicotine.
- Varenicline helps people to stop smoking primarily by reducing the severity of tobacco withdrawal symptoms, but it also reduces the rewarding properties of nicotine.
- Varenicline is effective. Its use can increase long-term abstinence rates by 12 to 19 percent compared with a placebo, and by 2 to 10 percent compared with bupropion (West et al 2013).
- There is insufficient evidence to recommend using varenicline with any other stop-smoking medication.
- Varenicline can be used by people with mental illness. There is evidence (from one randomised controlled trial) that varenicline increases long-term abstinence rates in adults with stably treated, current or past major depression, compared with placebo (Anthenelli et al 2013). There is also evidence from randomised controlled trials that varenicline can increase short-term abstinence rates in people with schizophrenia, but no evidence that it increases long-term abstinence rates in this population group (Tsoi et al 2013).
- In New Zealand, varenicline is a fully funded stop-smoking medicine, subject to Special Authority criteria, for patients who have previously had two trials of NRT or one trial of bupropion or nortriptyline. It is only available on prescription and the course of treatment is 12 weeks.

Prescribing information

Please refer to the datasheet, which can be found on the Medsafe website

www.medsafe.govt.nz/profs/datasheet/c/Champixtab.pdf, for full prescribing information.

A summary is provided below.

- Varenicline should be started at least one week before the person's quit date.
- Days 1 to 3: take 0.5 milligrams per day.
- Days 4 to 7: take 0.5 milligrams twice daily.
- Day 8 onwards: take 1 milligram twice daily.
- Patients should continue treatment for a total of 12 weeks. They should be followed up regularly to check on progress and adverse events.

Contraindications and cautions

- Varenicline should not be used in people who have experienced a hypersensitivity reaction.
- There is insufficient evidence to recommend varenicline to pregnant women, adolescents or anyone with an unstable cardiovascular disease.
- Varenicline is excreted in urine, almost completely unchanged. While no dosing adjustment is necessary for patients with mild to moderate renal impairment, a reduced dosing frequency of 1 milligram once daily is recommended for patients with severe renal impairment.
- There are no known clinically meaningful drug interactions.
- It is important to discuss the possibility of serious neuropsychiatric symptoms in the context of the benefits of stopping smoking.

Adverse effects

- The most commonly reported adverse event is nausea, which is experienced by up to a third of people.
- Other common adverse effects include headache, insomnia and abnormal dreams.
- Since varenicline came on the market, a number of serious adverse events – such as depression, suicidal ideation and suicide – have been reported. Although there is no evidence that varenicline was the cause, caution is warranted and people using varenicline should have regular follow-up and be monitored for adverse events.

Recommendations

- Varenicline can be offered as an effective medication for those who want to stop smoking. **[Grade A]**
- The decision to use varenicline should be guided by the person's preference, and the criteria of the Special Authority for prescribing, as long as the person has discussed the contraindications and precautions for use with a clinician. **[Grade ✓]**
- Monitor people using varenicline for adverse effects. **[Grade ✓]**

Things to tell your patients

- Varenicline works by reducing your craving for cigarettes, making stopping smoking a little easier and increasing your chance of stopping for good. However, it is not a magic cure and effort is still required.
- You need to start varenicline one to two weeks before your quit date. You can smoke as normal before your quit date. But after your quit date you should aim not to have a single puff.
- Nausea, insomnia and vivid dreams are common side effects, but are usually mild to moderate. Taking the tablet with food will reduce the nausea.
- Some people experience changes in their mood when using varenicline and stopping smoking more generally. It is important to let me (your health care professional) know if this happens to you.

The effect of stopping smoking on the metabolism of other drugs

- Both smoking and stopping smoking affect the metabolism of a number of medicines.
- Tobacco smoke contains substances, such as polycyclic aromatic hydrocarbons, which increase the activity of a number of liver enzymes that are responsible for breaking down a range of medicines (Zevin and Benowitz 1999; UK Medicines Information 2012). Therefore, medicines metabolised by these enzymes are broken down faster, which can result in reduced blood concentrations. When a person stops smoking, the enzyme activity slows down which **may** result in increased blood levels of these medicines.
- Although stopping smoking can affect a range of medicines, not all of these changes are clinically relevant (UK Medicines Information 2012). The table on page 20 summarises the medicines that require particular attention.
- Note that smoking also increases the metabolism of caffeine. Therefore, people may also want to consider reducing their consumption of caffeinated drinks when they stop smoking.

Medicine	Use	Clinical relevance	Action to take
Theophylline	Theophylline is a drug that is used for the treatment of respiratory disease such as asthma. It acts to dilate the airways, making breathing easier.	High Smoking and quitting smoking affect theophylline levels (Lee et al 1987; Mayo 2001). Smoking speeds up the metabolism of theophylline and stopping smoking has the opposite effect; meaning that theophylline levels could rise and clients may start experiencing adverse effects.	Advise the person to tell their doctor they are stopping smoking. Blood theophylline levels should be monitored and dose adjusted as necessary.
Warfarin	Warfarin is an anti-coagulant medicine and used for 'thinning the blood'.	High There is evidence that stopping smoking can lead to an increase in the blood level of warfarin, with an associated increase in international normalised ratio (INR) (Bachmann et al 1979; Kuykendall et al 2004; Evans and Lewis 2005). The INR is a test of blood clotting, which is used to monitor warfarin therapy. If the INR rises too much, there is a risk of bleeding and haemorrhage.	Advise the person to tell their doctor they are stopping smoking. The INR should be monitored and warfarin dose adjusted as necessary.
Clozapine	Clozapine is antipsychotic medicine that people with schizophrenia might be using.	High There is evidence to show that blood levels of clozapine can increase after stopping smoking. Some experts have recommended the dose of clozapine needs to be reduced by approximately 35% when people stop smoking (Wenzel-Seifert et al 2011). A reduction in cigarette consumption does not require dosage adjustment.	Advise the person to tell their doctor they are stopping smoking. Monitor blood clozapine levels closely after the person has stopped smoking. Advise the person to watch for an increase in side effects associated with clozapine. Adjust clozapine dose as necessary.
Olanzapine	Olanzapine is antipsychotic medicine that people with schizophrenia might be using.	High There is evidence that blood levels of olanzapine can increase after stopping smoking. Some experts have recommended the dose of olanzapine needs to be reduced by approximately 35 percent when people stop smoking (Wenzel-Seifert 2011). A reduction in cigarette consumption does not require dosage adjustment.	Advise the person to watch for an increase in side effects associated with olanzapine (eg, dizziness, sedation, hypotension). If an increase in side effects is reported, the dose should be decreased accordingly.
Chlorpromazine	Chlorpromazine is antipsychotic medicine that people with schizophrenia might be using.	Moderate Blood levels of chlorpromazine have been found to be lower in smokers compared with non-smokers and there is some evidence to suggest that chlorpromazine plasma levels can increase when people stop smoking.	Advise the person to watch for an increase in side effects associated with chlorpromazine (eg, dizziness, sedation). If an increase in side effects is reported, the dose should be decreased accordingly.
Insulin	Some people with diabetes may be using insulin.	Moderate–low There are inconsistent data regarding the interaction between subcutaneous insulin and smoking. Some data suggest that smokers may need a reduction in insulin when they quit, but this may be balanced by the increase in appetite and food consumption when people quit.	Advise people who use insulin to monitor their blood glucose levels closely when they stop smoking and to be aware of signs of hypoglycaemia (low blood glucose).

Other treatments and interventions

There are many other treatments and interventions that people may ask about, or want to use, to help them stop smoking (see the list below). Some of these are effective at helping people to stop smoking, but are not licensed in New Zealand (eg, cytisine). Others are not used because of common, unpleasant or concerning side effects (eg, clonidine and cannabinoid type 1 receptor antagonists). There is also evidence that some of the treatments listed below are ineffective in helping people to stop smoking (eg, silver acetate and anti-anxiety medication), while for others there is not enough evidence to make a clear recommendation.

Acupuncture – there are data to show that acupuncture is ineffective in helping people stop smoking.

Anti-anxiety medication (eg, diazepam) – there are data to show that these medicines are ineffective in helping people stop smoking.

Aversive smoking – this technique pairs smoking with an unpleasant stimulus (often nausea from over-smoking) with the aim of reducing the desirability of smoking. There are insufficient data to recommend this intervention to help people stop smoking.

Cannabinoid type 1 receptor antagonists (eg, rimonabant) – there are data to show that these medicines were effective in helping people stop smoking, but they were removed from the market very early due to safety concerns.

Clonidine is usually used to treat high blood pressure. However, it has also been shown to increase long-term abstinence from smoking by 3 to 17 percent when compared with a placebo. There is no published information on clonidine's effectiveness outside of clinical trials, but it is unlikely to be suitable for widespread use due to its side effects (West et al 2013).

Competitions and incentives – although competitions and incentives have not been shown to increase long-term abstinence rates, they may encourage people to keep to treatment programmes. There are data to show that incentives may help pregnant women to quit smoking, but more data are needed.

Cytisine is very similar to varenicline. Studies show that it increases long-term abstinence rates by 2 to 15 percent compared with a placebo (Cahill et al 2012; Hajek, McRobbie et al 2013; West et al 2013). There is also evidence of its 'real-world' effectiveness (Zatonski et al 2006; Prochaska et al 2013). Available data suggest that cytisine is well tolerated. The most common issue associated with use is gastrointestinal problems (Hajek, McRobbie et al 2013). Cytisine has been licensed for use in a number of Eastern and Central European countries for more than 40 years and is available, in some countries, over the counter and over the internet. Although there is good evidence for cytisine's effectiveness, it is currently not licensed for use in New Zealand.

Electronic cigarettes that contain nicotine are currently classified as medicinal products under New Zealand's Medicines Act 1981. Therefore, they are illegal to sell without regulatory approval. As no electronic cigarettes have received regulatory approval in New Zealand, the Ministry of Health does not recommend their use for stopping smoking. For the latest evidence and advice on electronic cigarettes, go to www.health.govt.nz/our-work/preventative-health-wellness/tobacco-control/electronic-nicotine-delivery-systems-ends-including-e-cigarettes

Glucose tablets were found to suppress urges to smoke, but not to increase quit rates, at least when used on their own. There are insufficient data to recommend glucose as a smoking cessation aid on its own.

Hypnotherapy – there are insufficient data to recommend this intervention to help people stop smoking.

Lobeline is a 'nicotine-like' substance derived from the plant *Lobelia inflata*. There are insufficient data to recommend this product to help people stop smoking.

Mecamylamine is a nicotinic acetylcholine receptor antagonist initially used to treat high blood pressure. There are insufficient data to recommend this medicine to help people stop smoking.

NicoBloc is a liquid dropped in the filter of a cigarette and said to form an occlusive barrier to nicotine. There are insufficient data to recommend this product to help people stop smoking.

Nicobrevin, a remedy developed in Germany in the 1960s, is composed of menthyl valerate, quinine, camphor and eucalyptus oil. There are insufficient data to recommend this product to help people stop smoking.

Nicotine vaccines act to limit the amount of nicotine that reaches the brain as so reduces the reward associated with smoking. Nicotine vaccines are still in development. There are insufficient data to recommend this intervention to help people stop smoking.

Opioid antagonists (eg, naloxone and naltrexone) – there are insufficient data to recommend these medicines to help people stop smoking.

Promoting physical activity – there are insufficient data to recommend this intervention to help people stop smoking, but exercise has well-documented health benefits.

Silver acetate is a type of aversive therapy, usually a mouthwash or spray that produces an unpleasant taste when it comes into contact with cigarette smoke. There are data to show that silver acetate is ineffective in helping people stop smoking.

St John's Wort is a natural remedy that has mild antidepressant effects. There are insufficient data to recommend this product to help people stop smoking.

Providing stop-smoking support to priority population groups

The Ministry of Health has identified a number of priority population groups. These groups have been given priority for one of the following reasons:

- they have particularly high smoking prevalence rates (eg, Māori and users of mental health services)
- they need to stop smoking for other reasons (eg, socioeconomic deprivation, barriers to accessing services)
- they are likely to obtain significant benefit from stopping smoking (eg, pregnant women).

Such priority population groups are discussed briefly in the following sections. In general, interventions that are effective in the general population are also effective in these population groups. However, when delivering interventions to these groups, health care workers may need to change their approach to make sure the intervention is as acceptable, accessible and appropriate as possible.

Providing stop-smoking support to Māori

Key messages

- Māori (aged 15 years and over) have a high smoking rate at 33 percent (Statistics New Zealand 2013).
- Māori women have a higher smoking rate (35 percent) than Māori men (30 percent). Māori men and women are also much more likely to be current smokers than men and women in the general population (30 percent versus 16 percent and 35 percent versus 14 percent, respectively) (Statistics New Zealand 2013).
- Over time, smoking prevalence among Māori has not declined at the same rate as it has in the general population.

- Interventions that work in the general population (eg, behavioural support and stop-smoking medicines) appear to be at least as effective for Māori (Ministry of Health 2003). For example, one well-conducted randomised controlled trial showed bupropion was effective in assisting Māori to stop smoking (Holt et al 2005).
- Data from 2009 show that Māori smokers who had seen a health care worker in the last 12 months were more likely than non-Māori to have been referred to a stop-smoking service or to have been given stop-smoking medication (42 percent for Māori versus 36 percent for non-Māori) (Ministry of Health 2011).
- In general though, Māori are slightly less likely to use stop-smoking support in their quit attempts than non-Māori (33 percent versus 38 percent), but this difference is not statistically significant (Ministry of Health 2011).
- Data suggest that financial cost, effort, pervasive smoking among family and peers, environments accepting of smoking and perceived cultural inappropriateness of treatments are all barriers to Māori accessing stop-smoking support (Thompson-Evans et al 2011).
- Cytisine, if presented as a rongoā Māori (traditional Māori healing method), could be an attractive treatment option for Māori (Thompson-Evans et al 2011).
- Stop-smoking interventions for Māori need to address nicotine dependence, provide support and be delivered in a way that is culturally appropriate and inclusive of whānau as much as possible (Fernandez and Wilson 2008). It is also important to give Māori who smoke a choice of different treatment options (Glover and Cowie 2010).

Recommendations

- Offer Māori smokers support that incorporates components known to be effective (such as stop-smoking medication). **[Grade ✓]**
- Where available, offer culturally appropriate stop-smoking services to Māori. **[Grade C]**
- Health care workers should be familiar with the stop-smoking services that are available for Māori locally (such as local Aukati KaiPaipa providers) and nationally (such as Quitline), so they can refer appropriately. **[Grade ✓]**
- Stop-smoking practitioners who provide support to Māori smokers should seek training so that they are technically and culturally competent in this role. **[Grade ✓]**

Providing stop-smoking support to Pacific peoples

Key messages

- Pacific peoples in New Zealand have a high smoking rate at 23 percent (currently smoking, 15 years of age and over) (Statistics New Zealand 2013). By gender, 26 percent of Pacific men and 21 percent of Pacific women are current smokers (Statistics New Zealand 2013). Pacific adults are 1.5 times more likely to be current smokers than adults in the general population (23 percent versus 15 percent) (Statistics New Zealand 2013).
- There are limited data on effective interventions for Pacific smokers. However, interventions known to work in the general population (for example, behavioural support and stop-smoking medicines) are likely to be just as effective for Pacific peoples.
- Stop-smoking interventions for Pacific peoples need to address nicotine dependence, provide support and be delivered in a way that is culturally appropriate and inclusive of fānau as much as possible. It is also important to give Pacific smokers a choice of different treatment options.

Recommendations

- Offer all Pacific smokers stop-smoking interventions that incorporate components known to be effective (such as those identified in the previous sections). **[Grade ✓]**
- Offer culturally appropriate services where available. **[Grade C]**
- Stop-smoking practitioners who provide support to Pacific smokers should seek training so that they are technically and culturally competent in this role. **[Grade ✓]**

Providing stop-smoking support to Asian peoples

Key messages

- The prevalence of smoking among Asian peoples living in New Zealand is lower than for most other ethnic groups, with 8 percent currently smoking (Statistics New Zealand 2013). However, the prevalence of smoking varies widely within the 'Asian' ethnic group depending on country of origin. It also varies significantly by sex, with 13 percent of Asian males and 3 percent of Asian females currently smoking (Statistics New Zealand 2013).
- Evidence on Asian-specific stop-smoking interventions is insufficient to draw any conclusions. However, interventions known to work in the general population (for example, behavioural support and stop-smoking medicines) are likely to be just as effective for Asian peoples.
- Stop-smoking interventions for Asian peoples need to address nicotine dependence, provide support and be delivered in a way that is culturally appropriate (Asian Public Health Project Team 2003).

Recommendations

- Offer all Asian smokers stop-smoking interventions that incorporate components known to be effective (such as those identified in the previous sections). **[Grade ✓]**
- Offer culturally appropriate services where available. **[Grade C]**
- Stop-smoking practitioners who provide support to Asian people who smoke should seek training so that they are technically and culturally competent in this role. **[Grade ✓]**

Providing stop-smoking support to pregnant and breastfeeding women

Key messages

- For many young women, smoking remains a social norm. Smoking rates in women are highest in the age range where most women have children (Statistics New Zealand 2013). Rates of smoking during pregnancy are estimated to be around 18 percent in New Zealand (NZCOM and MMPO 2010).
- Smoking during pregnancy poses substantial risks to the pregnancy (eg, miscarriage, stillbirth, premature delivery, placenta previa and placental abruption), the newborn baby (eg, low birthweight) and the infant (eg, sudden unexplained death in infancy (SUDI), otitis media and learning difficulties) (Haustein 1999).
- Stopping smoking as early as possible during the pregnancy can reduce the above risks.
- When pregnant women stop smoking, both mother and child benefit. All women of childbearing age should be encouraged to stop smoking and women who are already pregnant should be encouraged to stop smoking continuously throughout their pregnancy (from as early in the pregnancy as possible into the post-partum period).
- Pregnant women expect clear, honest, non-judgemental communication about smoking (Prileszky and Eddy 2012).
- Individual behavioural support for pregnant smokers has been found to be effective (West et al 2013). Preventing harm to their unborn baby is a strong motivator for pregnant women to become smokefree (Synovate 2009).
- Individual empowerment (belief that they can stop smoking completely) may be important in motivating change in smoking behaviour (Prileszky and Eddy 2012).
- Recommend referral to a stop-smoking service to every pregnant woman who smokes (Allen et al 2012).
- Pregnant women need services that are appropriate and meaningful and that deliver support in a timely manner. Offering the partner and wider whānau referral to a stop-smoking service will also help the pregnant woman to stop (Allen et al 2012).

- Randomised controlled trials of NRT use in pregnant women who smoke have not shown NRT to be effective (Coleman et al 2012). However, in all of these studies the rate of treatment compliance was low. Correlational data from the UK show that pregnant women who used combination NRT were more likely to stop smoking compared with women who did not use a stop-smoking medicine. Single-product NRT use, compared with no medicine, was not associated with higher abstinence rates (Brose et al 2013).
- The use of NRT in pregnancy carries a small potential risk to the fetus, but using NRT is far safer than smoking while pregnant. Blood nicotine levels are typically lower when using NRT, and NRT delivers nicotine more slowly compared with smoking. Furthermore, NRT delivers nicotine without the other harmful substances contained in tobacco smoke.
- Expert opinion suggests that pregnant women can use NRT once they have been advised of the potential risks and benefits (Benowitz and Dempsey 2004). If a patch is judged to be the most appropriate NRT product, then the pregnant woman should remove it overnight (Benowitz and Dempsey 2004).
- Nicotine freely passes in and out of breast milk, depending on the concentration of nicotine in the maternal blood (which is affected by cigarette consumption, frequency of breastfeeding and the time between smoking and breastfeeding). Where a breastfeeding mother is using NRT, it is unlikely that the very low level of exposure will be harmful to the infant due to the relatively low oral availability of nicotine (Benowitz and Dempsey 2004). Either way, it is important to emphasise the importance of continuing to breastfeed, regardless of smoking status.
- Second-hand tobacco smoke is also known to have harmful health effects on young children.
- Although a number of women manage to stop smoking during pregnancy, rates of relapse after birth are high (Fang et al 2004). There are no data indicating that any specific intervention is more effective at preventing relapse than others (Myers et al 2009). However, women should still be offered ongoing support to remain smokefree after birth.

Recommendations

- All health care workers should briefly advise pregnant and breastfeeding women who smoke to stop. **[Grade A]**
- Offer all pregnant and breastfeeding women who smoke multi-session, behavioural, stop-smoking interventions without delay from a dedicated stop-smoking service. **[Grade A]**
- Women can use NRT in pregnancy and during breastfeeding. Discuss with them the risks versus benefits of using NRT during pregnancy. **[Grade C]**
- Where women have had a smokefree pregnancy, offer them help to remain smokefree after birth. **[Grade ✓]**
- Advise on the benefits of having smokefree homes and cars. **[Grade C]**

Providing stop-smoking support to children and young people

Key messages

- Younger adults (aged 20 to 29 years) are more likely to be current smokers compared with older adults (Statistics New Zealand 2013). The current rate of daily smoking in people aged between 15 and 19 years is 11 percent, compared with 18 percent in 2006 (Statistics New Zealand 2013). However, the rate of smoking among young people varies considerably by gender and ethnicity.
- There is insufficient evidence to confirm the effectiveness of interventions specifically aimed at helping young people stop smoking, or to recommend integrating any particular models into standard practice (Grimshaw et al 2006).
- It is likely that, to be effective, interventions aimed at young people need to differ from those developed for adults, given that these two groups differ in lifestyle and in attitudes to smoking and stopping smoking. Interventions that may be acceptable for young people who smoke include support from family, friends and community, incentives, physical activity and group support (Marsh et al 2013).

- There is insufficient evidence to state that using NRT improves long-term abstinence rates among young smokers (West et al 2013). Nevertheless, expert opinion is that NRT may be considered for use by young people who want help to stop smoking.
- Health care workers should be aware of the risks of second-hand smoke to children and young people exposed to smoking by their families in their homes. On these grounds alone, health care workers should offer brief advice and cessation support to family members who smoke.

Recommendations

- Offer stop-smoking interventions that incorporate components known to be effective (such as those identified in the previous sections) to young people who smoke. **[Grade ✓]**
- Young people (aged 12–18 years) who are dependent on nicotine can use NRT if it might help them stop smoking. **[Grade C]**

Providing stop-smoking support to hospitalised and preoperative patients

Key messages

- Hospitalisation provides an important opportunity to assist people to stop smoking. These people include not only patients who smoke but also the parents and other family members of hospitalised children.
- Cessation support (behavioural support and stop-smoking medicines), when given to hospital inpatients, is effective in promoting long-term abstinence regardless of patient diagnosis, but only if it continues for at least one month after discharge (West et al 2013).
- Randomised controlled trials show that preoperative smoking interventions, combining behavioural support and NRT, improve short- and long-term abstinence rates. Intensive interventions that begin four to eight weeks before surgery appear to have the greatest impact on perioperative complications and long-term abstinence (Thomsen et al 2010).
- Stopping smoking before surgery decreases the risk of wound infection, delayed wound healing, and post-operative pulmonary and cardiac complications (Thomsen et al 2010).
- Although people gain the greatest benefits from stopping for at least eight weeks before surgery, there is no evidence that stopping within a shorter period before surgery increases risk, compared with the risk of continuing to smoke (Myers et al 2011).

Recommendations

- Provide brief advice to stop smoking to all hospitalised people who smoke. **[Grade A]**
- Provide NRT to hospitalised people who smoke to help manage tobacco withdrawal symptoms. **[Grade ✓]**
- Arrange multi-session intensive support and medication for all hospitalised patients who smoke and want help with stopping, and follow them up for at least one month after discharge. **[Grade A]**
- Advise smokers awaiting surgery to stop smoking and offer them cessation support before surgery. **[Grade A]**
- All hospitals should have systems for helping patients to stop smoking. These include routinely providing advice to stop smoking, offering cessation support and referring those who want help to a stop-smoking service. **[Grade B]**
- Advise parents and family members of hospitalised children to stop smoking and offer them support to help them quit. **[Grade ✓]**

Providing stop-smoking support to people who use mental health services

Key messages

- People with mental health disorders have particularly high smoking rates. They smoke approximately one-third of all cigarettes smoked in New Zealand (Tobias et al 2008).
- Smokers with mental illness are motivated to stop smoking (Siru et al 2009).
- Smokers with mental illness are typically more dependent and smoke more cigarettes than smokers without mental illness (de Leon and Diaz 2005). People who are more highly dependent benefit from more intensive support (eg, a face-to-face programme) to help them stop smoking.
- More intensive stop-smoking interventions appear to work well with this group. Such interventions should include multi-session support and stop-smoking medication (Royal College of Physicians and Royal College of Psychiatrists 2013).
- Short-term abstinence from smoking is associated with a number of tobacco withdrawal symptoms, including low mood and irritability. However, long-term abstinence is associated with statistically significant improvements in psychological wellbeing. Stopping smoking does not appear to be associated with an increase in anxiety or stress and may reduce the incidence of depression (Taylor et al 2013). Stopping smoking can cause a relapse of depression in some people, but this is rare and is not a sufficient reason to withhold support for stopping smoking. Instead, it is a reason to more closely monitor the mental health of people in this group when they are trying to stop smoking.
- Evidence is insufficient to conclude that using NRT improves long-term abstinence rates among people with mental illness who smoke (West et al 2013). Nevertheless, expert opinion is that NRT may be considered for use by people in this group who want help to stop smoking.
- Bupropion can increase smoking abstinence rates in smokers with schizophrenia, without jeopardising their mental state (Tsoi et al 2013).
- Varenicline can be used by people with mental illness. There is evidence from one randomised controlled trial that varenicline, compared with placebo, increases long-term abstinence rates in adults with stably treated current or past major depression (Anthenelli et al 2013). There is evidence from randomised controlled trials that varenicline can increase short-term abstinence rates in people with schizophrenia, but no evidence that it increases long-term abstinence rates in this population of smokers (Tsoi et al 2013).
- Since varenicline came on the market, a number of serious adverse events – such as depression, suicidal ideation and suicide – have been reported. Although there is no evidence that varenicline was the cause, caution is warranted and people using varenicline should have regular follow-up and be monitored for adverse events.
- Smoking tobacco can alter the metabolism of a number of medicines, primarily because substances in tobacco smoke increase enzyme activity (Kroon 2007). When a person stops smoking, the enzyme activity returns to ‘normal’ (slows down) which may result in increased blood levels of these medicines. Monitor the level of the medication; it may be necessary to reduce the dosage, but this is not always the case.

Recommendations

- Provide brief advice to stop smoking to all users of mental health services who smoke. **[Grade A]**
- Offer effective interventions (such as those identified in the previous sections) to people with mental health disorders who smoke. **[Grade ✓]**
- Carefully monitor people with mental health disorders who stop smoking while still using medication for their mental health disorder, as the dosage of their medication may need to be reduced. **[Grade A]**

Providing stop-smoking support to users of addiction treatment services

Key messages

- A high proportion of people with substance use disorders smoke tobacco, with rates of daily smoking as high as 73 percent (Adamson et al 2006).
- Overall, evidence indicates that stop-smoking interventions can increase short-term abstinence rates in people with substance use disorders (Prochaska et al 2004).
- There is concern that stopping smoking may undermine a patient's treatment for alcohol or drug addiction. Data from randomised controlled trials generally show that stop-smoking treatments do not make alcohol and drug treatments less effective (Prochaska et al 2004).
- Users of addiction treatment services should have access to stop-smoking services that combine multi-session support and medication.
- Evidence is insufficient to conclude that using stop-smoking medicines improves long-term abstinence rates among users of addiction treatment services who smoke. Nevertheless, expert opinion is that these medicines may be considered, where appropriate, for use by people in this group who want help to stop smoking.

Recommendations

- Provide brief advice to stop smoking to all users of addiction treatment services who smoke. **[Grade A]**
- Offer effective stop-smoking interventions (such as those identified in the previous sections) to smokers who use addiction treatment services. **[Grade ✓]**

Providing stop-smoking support to people who make repeated quit attempts

Key messages

- The majority of successful quit attempts are unplanned or spontaneous, so support people to stop whenever they are ready. Learn lessons from previous quit attempts and at the next attempt address factors associated with previous failures (such as high nicotine dependence).
- People who make repeated unsuccessful quit attempts are likely to be highly dependent smokers (Partos et al 2013) and may require more intensive support to succeed.
- There is evidence from randomised controlled trials that people who have tried medication in the past can use bupropion and NRT together successfully (Shiffman et al 2004; Society for Research on Nicotine and Tobacco 2006).
- Treatment choice should be guided by learning from prior failures and by individual preference. It is likely that a more intensive treatment is required on a subsequent quit attempt.

Recommendations

- Provide brief advice to stop smoking to all people who have relapsed. **[Grade A]**
- Offer effective stop-smoking interventions (such as those identified in the previous sections) to people making another quit attempt. **[Grade A]**
- Services should be able to offer support to people who have relapsed as soon as they request support. They should take past stop-smoking attempts into account when formulating a treatment plan. **[Grade ✓]**

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Appendix 1: The Guidelines development process

The *New Zealand Smoking Cessation Guidelines* were first published in 1999 and later revised in 2002. In 2006 the Ministry of Health commissioned a consortium led by The University of Auckland's Clinical Trials Research Unit to update those Guidelines, which were published in 2007.

2014 Guidelines development

The *New Zealand Guidelines for Helping People to Stop Smoking* provide an update of the 2007 *New Zealand Smoking Cessation Guidelines*. This update was led by Dr Hayden McRobbie and reviewed by members of the 2007 Guidelines group (see below). The update was based on a recent review of stop-smoking interventions, which produced specific recommendations for use in developing national guidelines (West et al 2013). The Guidelines and the *Background and Recommendations* document were also sent to key stakeholders in the health and tobacco control sectors for external consultation.

2007 Guidelines development

The following people contributed to the development of the 2007 *New Zealand Smoking Cessation Guidelines*. The list below identifies their affiliations and competing interests at the time when the Guidelines were being developed.

- Haikiu Baiabe, Pacific Islands Heartbeat
- Denise Barlow, National Heart Foundation of New Zealand
- Kaaren Beverley
- Dr Chris Bullen, Clinical Trials Research Unit, The University of Auckland
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- Dr Hayden McRobbie, Clinical Trials Research Unit, The University of Auckland
- Professor Doug Sellman, University of Otago School of Medicine and Health Sciences, Christchurch
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- Dr Robyn Whittaker, Clinical Trials Research Unit, The University of Auckland

Declaration of competing interests

Haikiu Baiabe, Kaaren Beverley, Dr Chris Bullen, Stewart Eadie, Trish Fraser and Professor Doug Sellman have no competing interests to declare.

Denise Barlow has provided smoking cessation advice and training for both GlaxoSmithKline (GSK) and Pfizer.

Dr Marewa Glover has undertaken research and consultancy for, and received honoraria for speaking at meetings for, the manufacturers of smoking cessation medications. She has also provided smoking cessation training for Novartis and Te Hotu Manawa Māori for the Aukati KaiPaipa pilot programme and Quitline.

Dr Hayden McRobbie has undertaken research and consultancy for, and received honoraria for speaking at meetings for, the manufacturers of smoking cessation medications.

Dr Mark Wallace-Bell has undertaken research and consultancy for, and received honoraria for speaking at meetings for, the manufacturers of smoking cessation medications.

Dr Robyn Whittaker has undertaken consultancy for, and received honoraria for speaking at meetings for, the manufacturers of smoking cessation medications.

Consultation and peer review

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- Associate Professor Joanne Barnes, Herbal Medicines, School of Pharmacy, The University of Auckland
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- Stephanie Cowan, Director, Education for Change
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- Barbara Anderson, Te Korowai Aroha
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- Judi Clements, Chief Executive Officer, Mental Health Foundation

New Zealand Guidelines Group representative

- Professor Cindy Farquhar, Chair, New Zealand Guidelines Group

Guidelines peer review group

- Dr Ron Borland, Co-Director VicHealth (The Victorian Health Promotion Foundation) Centre for Tobacco Control, Australia
- Professor John Hughes, Human Behavioural Psychopharmacology, Department of Psychology, The University of Vermont, USA
- Dr Karl Fagerström, Smokers Information Center, Fagerström Consulting, Sweden

Stakeholder Interest Group

- Self-selecting tobacco control, smoking cessation and health practitioners

Other key stakeholders

- Ministry of Health
- District health boards
- Non-governmental health organisations
- Primary health organisations

Appendix 2: Additional resources

The resources named below offer additional information or guidance on specific topics. These documents are regularly updated and are subject to change without notice. The documents can be found on the Ministry of Health's *New Zealand Guidelines for Helping People to Stop Smoking* web page www.health.govt.nz

- Guide to prescribing nicotine replacement therapy (NRT)
- The ABC Pathway: Key messages for frontline health care workers