What's new in smoking cessation?

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Summary

Tobacco smoking is the main preventable cause of morbidity and mortality in Australia. Recently published evidence-based guidelines for general practitioners recommend the 5As framework which is consistent with other international guidelines. Active follow-up of smokers by Quitline and the use of nurses to provide smoking cessation activities are two interventions that are likely to expand the reach of smoking cessation services and increase their effectiveness. Combination pharmacotherapies for nicotine dependence should be considered in smokers who have had difficulty quitting despite the concurrent use of brief behavioural counselling and pharmacotherapy.

Key words: nicotine, patient support.

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Introduction

Every year in Australia, tobacco smoking causes an estimated 19 000 deaths and up to 10% of hospital separations in people aged 35 years and over.[1] The 50-year follow-up of the British doctors study shows that up to 66% of lifelong smokers are likely to die from a tobacco-related disease with half these deaths occurring prematurely.[2] No other single avoidable factor accounts for such a high proportion of deaths.[1]

Health professionals have several strategies they can use to encourage patients to quit smoking. In addition to the publication of the first Australian smoking cessation guidelines for general practice in 2004[1], there have been a number of other developments. These include:

- increasing evidence for the effectiveness of:
  - active callback programs by the Quitline[3,4]
  - nurses providing smoking cessation in the primary care setting[5]
- the need to consider the use of combination pharmacotherapies in assisting smokers to quit.[6]

Smoking cessation guidelines for Australian general practice

The Australian general practice guidelines for smoking cessation follow the 5As framework (Table 1). To assist busy practitioners in summarising the effective smoking cessation activities a time-tiered synopsis of the 5As approach has also been published.* This intervention can be delivered in one minute or less.[7]

Active callback programs by telephone quit lines

Several recent randomised controlled trials in Australia and the USA have found an advantage in offering telephone follow-up to smokers referred to a quit line. Active follow-up (4–5 calls on average) in the first three months of quitting is associated with higher 12-month quit rates (between 22%[3] and 25.8%[4]) than more passive referrals to the Quitline. This represents four more people quitting for every 100 counselled.

Nurse-delivered smoking cessation strategies

A systematic review has found that nurses have a similar impact to doctors when providing smoking cessation in primary care.[5] The main findings of the systematic review were:

- smokers offered advice by a nurse had an increased likelihood of quitting compared to smokers without nursing intervention (3–4 extra quitters for each 100 counselled)
- smoking intervention in the 13 trials involving non-hospitalised adults gave an approximately 80% increase in the odds of success
- there was no evidence from indirect comparisons that higher intensity interventions were more effective in achieving successful quitting.

Overall, the results revealed that brief smoking cessation interventions provided by nurses significantly increase the odds of quitting compared to usual care.

Combination pharmacotherapies in assisting smokers to quit

With the slow fall in the prevalence of smoking, the current population of smokers represent a mix of 'hardened' smokers who have attempted to quit on a number of occasions and others, for example younger smokers.[8] Both groups are exposed to increasing community awareness of the harmful effects of smoking and expanding legislative changes to quit.

* A summary copy of the time-tiered 5As approach to smoking cessation can be found on the Cancer Council SA website http://www.cancersa.org.au/i-cms_file?page=544/GPdeskprompt.pdf [cited 2005 May 10]

Table 1

5As smoking cessation framework *

5As	Strategy	Suggested approach
Ask	Identify and document smoking status at least every 12 months	Hand out brief patient survey in the waiting room to identify smoking status
Assess	Interest in quitting	How do you feel about your smoking at the moment? How would you rate your interest in quitting right now on a scale of 1–10 where 10 equals very interested in quitting? What do you like and dislike about smoking?
	Barriers to quitting	What would be the hardest thing about quitting?
	Level of nicotine dependence	Time to first cigarette from waking (less than 30 minutes) Smokes 15 or more cigarettes a day Evidence of withdrawal symptoms with previous quit attempts
	Quitting history	What has worked before? What hasn't worked?
	High risk situations	What would be the hardest cigarette to give up?
Advise	Provide clear, brief and non-judgemental advice to quit	As your doctor, I strongly suggest that you stop smoking Quitting is the most important thing you can do to stay healthy
	Address the three domains	Nicotine dependence Habit Psychological aspects of smoking
Assist	Quit services	Refer to Quitline 131 848 † Offer Quit book Enrol in Quitline callback program
	Pharmacotherapy	Discuss pharmacotherapy e.g. nicotine replacement therapies and bupropion
	Address barriers to quitting	Commonly: – stress – weight gain – negative emotions – lack of support – fear of failure – low self-confidence
Arrange	Follow-up	Review pharmacotherapy Advise about relapse prevention Review progress
	Support	Offer your support Enlist support of significant others

* adapted from 'Smoking cessation guidelines for Australian general practice'[1], GPs Assisting Smokers Program (GASP)[7] and 'Treatment of tobacco use and dependence'[9]

† in all states except Queensland

Identification of readiness to change, level of nicotine dependence and number of previous quit attempts will assist the practitioner in the approach to cessation, especially the use of pharmacotherapy.

Like other pharmacological treatments, combination therapy using drugs with different modes of action has been tried with differing degrees of success.[6] Combination therapy can include two alternative forms of nicotine replacement therapy (NRT) or nicotine replacement and buproprion when 'the smoker has not been successful on an adequate trial of one of these therapies'.[1] Most formulations of NRT provide doses of nicotine that are below that achieved by smoking.[1] Combination NRT includes a formulation that provides basal levels of nicotine (for example nicotine patch) with 'top up' doses when withdrawal and craving

are more likely to be a problem, for example first thing in the morning. Top up doses can be provided by a nicotine inhaler, lozenge or gum. Combination therapies should be considered in smokers who have failed despite behavioural intervention and a reasonable trial of a single formulation.

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Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 79)

7. Telephone follow-up by a quit line service increases the chance of a smoker successfully quitting smoking.
8. Patients should not use two forms of nicotine replacement therapy at the same time.

New drugs

Some of the views expressed in the following notes on newly approved products should be regarded as tentative, as there may have been little experience in Australia of their safety or efficacy. However, the Editorial Executive Committee believes that comments made in good faith at an early stage may still be of value. As a result of fuller experience, initial comments may need to be modified. The Committee is prepared to do this. Before new drugs are prescribed, the Committee believes it is important that full information is obtained either from the manufacturer's approved product information, a drug information centre or some other appropriate source.

Bivalirudin

Angiomax (CSL)

vials containing 250 mg lyophilised powder for reconstitution

Approved indication: percutaneous coronary intervention

Australian Medicines Handbook section 7.1

Patients having procedures such as percutaneous transluminal coronary angioplasty need to be anticoagulated. While heparin can be used, some patients still develop ischaemia and there is a risk of major bleeding.

Bivalirudin is a direct inhibitor of thrombin related to the anticoagulant protein produced by leeches. By reversibly binding to thrombin, bivalirudin stops the conversion of fibrinogen to fibrin and inhibits platelet aggregation.

The anticoagulant effect begins within a few minutes of intravenous administration. The clotting time, activated partial thromboplastin time (APTT), prothrombin time and thrombin time are all increased. Bivalirudin is given as a bolus dose followed by an infusion. It has a half-life of approximately 25 minutes, with most of the dose being metabolised into amino acids. As 20% of the dose is excreted unchanged in the urine impaired renal function prolongs the half-life.

An early study of bivalirudin found that it caused less bleeding but had no greater efficacy than high-dose heparin in preventing ischaemic complications in patients having coronary angioplasty.[1] Development of the drug did not proceed, however when the results were reanalysed several years later they showed a statistical advantage for bivalirudin.[2] As the drugs used during the procedure had changed in the intervening years, there was a need to evaluate bivalirudin with the new approaches.

The REPLACE-2 trial randomised 6010 patients to receive bivalirudin or heparin plus a glycoprotein IIb/IIIa inhibitor. All patients also received aspirin and the use of clopidogrel was