

Models of smoking cessation brief interventions in oral health

**Greer M. Dawson^{A,C}, Jennifer M. Noller^B
and John C. Skinner^B**

^ANSW Public Health Officer Training Program, NSW Ministry of Health

^BCentre for Oral Health Strategy, NSW Ministry of Health

^CCorresponding author. Email: gdaws@doh.health.nsw.gov.au

Abstract: The links between tobacco smoking, and periodontal disease and oral cancer make the inclusion of smoking cessation interventions at dental visits an important prevention strategy in oral health services. The 5As (Ask, Advise, Assess, Assist, Arrange), which utilises a stages of change model, is the most commonly recognised framework for the provision of smoking cessation brief interventions and is advocated widely. While the popularity of the 5As continues, increasingly evidence suggests that staged-based interventions in smoking cessation may not be the best approach. Lack of time and expertise are also cited by health professionals as barriers to undertaking brief interventions and thus abbreviated forms of the 5As have been advocated. In 2009, NSW Health introduced a mandatory policy for public dental services in NSW to conduct smoking cessation brief interventions at the chairside based on a three-step approach, which is currently being evaluated. Given the debate and the pending evaluation results, this paper reviews models of smoking cessation brief interventions, to contribute to achieving a best practice model for public oral health in NSW.

Tobacco (smoking) is recognised as a leading preventable cause of morbidity and premature mortality. Smoking greatly increases the risk of many cancers and is a major cause of chronic obstructive pulmonary disease and cardiovascular disease.¹ As such, smoking continues to impose a significant burden on the health system and the economy and remains an important public health challenge. While

smoking rates in Australia have decreased substantially in recent years they remain unacceptably high, particularly among Aboriginal people and people from low socioeconomic and other disadvantaged groups.² Further reducing smoking is a key commitment of the NSW Government; robust targets have been set in order to combat chronic disease and rising health care costs.³

The causal links between tobacco smoking, and periodontal disease and oral cancer are well understood within the field of oral health.⁴ The inclusion of smoking cessation services in dental visits is therefore an important prevention strategy, and oral health professionals are well positioned to give cessation advice.⁵ In NSW, access to adult public dental care is for concession card holders only.⁶ The populations cared for by public oral health professionals are amongst the most disadvantaged groups in the community and have higher rates of smoking than the general population.³ As a result, smoking cessation is an issue of particular relevance to public dental services.

The World Health Organization (WHO) recommends that brief opportunistic interventions should be undertaken by all health professionals in the course of their routine work.⁷ Health professionals are well placed to deliver cessation advice to smokers because they are considered an important source of credible information⁸ and smokers also expect to receive quitting advice from health professionals.^{9,10} While the evidence base is stronger for some professional disciplines than others, it has been suggested that involvement of health professionals in smoking cessation should be based on factors such as access to smokers and level of brief intervention training, rather than their discipline *per se*.⁴ Moreover, the cumulative effect of smoking cessation interventions by more than one type of health professional has the potential to substantially increase readiness to quit and quitting in the population.¹¹

Given time is a limited commodity for health professionals, brief interventions are considered a suitable approach.⁵ The United Kingdom's (UK) National Institute for Health and Clinical Excellence deems that brief interventions for smoking cessation are cost effective and recommends that all health professionals should refer people who smoke to an intensive support service.¹²

In a systematic review of physician advice for smoking cessation, Stead et al. found that a brief advice intervention is likely to increase the quit rate by 1–3%.¹³ While this is a

Box 1. The 5As smoking cessation brief intervention^{7,14}

Ask about and record smoking status
Advise smokers of the benefit of stopping in a personalised and appropriate way
Assess motivation to quit (using stages of change^a model)
Assist smokers in their quit attempt
Arrange follow up

^aStages of change is a model for assessing an individual's readiness to change a variety of behaviours, including tobacco smoking. According to the theory, cessation is a process rather than a discrete event and smokers may cycle through the stages of being ready to quit, quitting and relapsing. Key questions to ask include: "How do you feel about your smoking at the moment?" and "Are you ready to quit now?" Interventions can then be tailored to an individual's stage of change.

modest effect for the individual, there is potential for substantial population benefit. In order to translate this into public health benefit, the frequency with which smokers are identified and offered advice and support needs to increase.¹³

The 5As (Ask, Advise, Assess, Assist, Arrange) (Box 1) is the framework most commonly referred to with regard to smoking cessation brief interventions and is considered by many authorities as the gold standard. Originally developed as part of the United States (US) Department of Health's Clinical Practice Guideline in 2000 and then updated in 2008, the model proposes that smokers should be given a brief intervention to address smoking at every health consultation.¹⁴

In 2002 WHO Europe⁷ developed evidence-based recommendations on the treatment of tobacco dependence informed by a number of authoritative reviews and guidelines (including the US Department of Health's Clinical Practice Guideline, 2000), and these reflect the 5As approach. In the UK, guidance around smoking cessation brief interventions proposes similar steps.¹² In Australia, the Royal Australian College of General Practitioners (RACGP) adopted the 5As as standard practice in 2004.¹⁵

While the 5As approach remains popular, there is growing evidence that suggests the use of stage-based (stages of change) interventions in smoking cessation may not be the best approach. Stage-based models of behaviour change propose that interventions that consider an individual's readiness to change will be more effective than a 'one size fits all' model.¹⁶ A systematic review of stage-based interventions for influencing smoking behaviour found that despite their widespread, uncriticised use in promoting smoking cessation there is limited evidence for their effectiveness.¹⁶ West suggests that the use of the stages

of change model is likely to lead to effective interventions not being offered to people who might have responded otherwise, because the approach fails to acknowledge that behaviour change can arise from a response to a trigger, even in apparently unmotivated individuals.¹⁷ Similarly, Aveyard et al. found that when smoking cessation treatment has been offered routinely to patients, a much higher proportion accept than would be predicted by surveys of smoker's willingness to quit immediately.¹⁸

In New Zealand, this evidence has been taken into account and a three-step approach has been adopted in the form of ABC (Ask, Brief Advice, Cessation Support), which states that all people who smoke should be advised to stop smoking and supported to stop, regardless of whether or not they are interested in quitting.¹⁹ More recently the RACGP, in their smoking cessation guide for health professionals, have reviewed the 5A approach to shift the emphasis away from the stages of change model because there is limited evidence to support it.²⁰

Although the 5As remain the most widely accepted model for smoking cessation brief interventions internationally, in practice, there are limitations. Lack of time and expertise are consistently reported by health professionals as barriers to providing smoking cessation interventions.^{21–23} In response to this, abbreviated forms of the 5As have been adopted. The American Dental Hygienists Association has advocated the use of a three-step approach (Ask, Advise, Refer), theorising that a referral to a tobacco Quitline could replace the need for oral health professionals to assist and provide follow-up to patients who smoke.²⁴ A study comparing this approach with the 5As found little conclusive evidence as to which approach was more effective.²⁴ Trotter and Worcester found that Australian dentists are willing to ask and advise patients about smoking, but are less inclined to provide assistance or follow-up to help patients quit, and are more likely to be opportunistic rather than systematic in their approach to prevention.²⁵ A lack of protocols or guidelines for best practice smoking cessation interventions was identified in one study as an important systemic barrier within the private dental profession.²⁶

The NSW Health policy directive (released in 2009), *Smoking cessation brief intervention at the chairside: role of public oral health/dental services*²⁷ sets out the minimum requirements for public oral health staff to ask about and record smoking status, and to provide and record cessation advice and referral as appropriate. This model follows a 3As approach (Ask, Approach, Advise) (Box 2) but still advocates undertaking a stages of change assessment. Developed under the auspices of the NSW Oral Health Promotion Network, the policy is accompanied by a comprehensive training package which has been rolled out in public dental services across NSW. The Australian Schedule of Dental Services and Glossary,²⁸ which is the

Box 2. The 3As smoking cessation brief intervention²⁷

Ask about and record smoking status

Approach smokers about their interest in quitting (using stages of change^a model)

Advise of NSW Quitline and refer as appropriate

^aStages of change is a model for assessing an individual's readiness to change a variety of behaviours, including tobacco smoking. According to the theory, cessation is a process rather than a discrete event and smokers may cycle through the stages of being ready to quit, quitting and relapsing. Key questions to ask include: "How do you feel about your smoking at the moment?" and "Are you ready to quit now?" Interventions can then be tailored to an individual's stage of change.

universally accepted coding system for dental treatment in Australia, currently has no item number for provision of smoking cessation advice. Item number 191 was therefore introduced alongside the policy to record 'smoking cessation advice given' in the Information System for Oral Health (ISOH), an integrated database to support service delivery in NSW public dental clinics. This item number could potentially be used as a measure of how the policy is being implemented.

A policy implementation evaluation is currently being undertaken by the Centre for Oral Health Strategy, NSW Ministry of Health. The evaluation will review the delivery of the training package and the implementation of the policy, with a particular focus on the factors that mediate policy utilisation and outcomes. While the evaluation does not have the capacity to tell us how effective the 3As approach is compared with the 5As, it will offer important insights into the previously unexplored area of chairside smoking cessation interventions in public oral health in NSW.

Review of the literature indicates that smoking cessation interventions in health care are varied, but tend to follow either a three- or five-step model. However, as there is little in the way of conclusive evidence demonstrating the effectiveness of one intervention over the other it is difficult to draw a definitive conclusion about what a best practice model should look like. As illustrated in this paper, there are several factors to consider in constructing an intervention model that is both theoretically sound and practically useful, but in order to have any significant impact on population quit rates interventions need to be implemented with high frequency. As clinical time priorities are often a constraint for oral health professionals, keeping interventions brief and simple is critical and the literature suggests that less emphasis should be placed on the staged approach. The results from the pending evaluation should provide insight into the tensions and realities

of delivering chairside smoking cessation interventions and further contribute to refining a best practice model that is relevant to public oral health in NSW.

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