

Enabling the NSW Health workforce to provide evidence-based smoking-cessation advice through competency-based training delivered via video conferencing

*Elayne N. Mitchell^{A,B}, Barbara N. Hawkshaw^A,
Carlie-Jane Naylor^A, Dias Soewido^A and
John M. Sanders^A*

^ACentre for Health Advancement, NSW Health

^BCorresponding author. emite@doh.health.nsw.gov.au

Abstract: Tobacco-related disease is estimated to cost the NSW health system more than \$476 million in direct health care costs annually. Population-based smoking-cessation interventions, including brief intervention by health professionals, are effective and cost effective. As the prevalence of smoking in the general community declines, more highly dependent ‘treatment-resistant’ smokers may present a challenge to the health system. International guidelines recommend that health systems invest in training for health professionals in best practice smoking cessation. As part of the NSW Tobacco Action Plan 2005–2009, NSW Department of Health developed national competency standards in smoking cessation, designed learning and assessment materials and delivered training to more than 300 health professionals via videoconference. Building the capacity of the NSW Health workforce to address smoking cessation as part of their routine practice is essential for addressing future challenges in tobacco control.

The harm caused by smoking

Tobacco smoking is recognised as one of the leading preventable causes of illness and premature death in Australia, particularly from cancer, cardiovascular disease and chronic obstructive pulmonary disease. In 2004, there were 6507 tobacco-related deaths and 55 591 tobacco-related hospitalisations reported in NSW.¹ Tobacco also causes harm to non-smokers through their exposure to environmental tobacco smoke (passive smoking).

Current smoking prevalence in NSW has steadily declined over recent decades, and reduced dramatically in one year from 20.1% in 2005 to 17.7% in 2006.² However, smoking prevalence in some population groups remains significantly higher than the NSW average. These groups include the most socially disadvantaged: Aboriginal people; some culturally and linguistically diverse groups; people with a mental illness; and inmates of correctional settings.³

Collins and Lapsley conservatively estimated the cost of treating tobacco-related illnesses in NSW hospitals in 1998–99 to be \$254 million in bed days alone (353 180 bed days).⁴ Annual NSW health-care costs, including medical, hospital, nursing homes, ambulance and pharmaceuticals, were estimated to cost \$476.8 million. The total annual social cost of tobacco smoking to NSW, including ‘tangible’ costs – such as premature death, sickness, labour in the workforce and the household – as well as ‘intangible’ costs – such as loss of life – was estimated to be more than \$6.5 billion (Table 1).⁴

Smoking cessation and population health

The World Health Organization (WHO) has forecast that most tobacco-related deaths projected to 2030 will be among people who currently smoke.⁵ Increasing cessation (quitting) in existing adult smokers is important because they die from tobacco-related disease in their most productive years. Adult smoking cessation is essential to improving public health relatively quickly. Due to the delay of 25–30 years between the onset of smoking and the development of serious disease, mortality rates from tobacco smoking would rise if there was only a reduction in uptake of smoking among young people without cessation among existing adult smokers.^{5,6}

Thus efforts to reduce adult smoking (increasing cessation) are likely to have a greater effect on mortality in the medium term than preventing the ‘take-up’ of tobacco smoking among young people, and international evidence demonstrates the need to address the balance between treatment and prevention.^{5,6} The best investment in population-based tobacco control is to implement broad-based policies for prevention and cessation simultaneously.⁵

Table 1. Comparison of smoking-attributable social costs in NSW and Australia 1998–99

	NSW (\$ million)	Australia (\$ million)	NSW as percentage of Australia
Tangible	1782.2	7586.7	23.5
Intangible	4794.0	13476.3	35.6
Total	6576.2	21063.0	31.2

Source: Collins DJ, Lapsley HM. *Counting the costs of tobacco and the benefits of reducing smoking prevalence in NSW*. Report prepared for the NSW Department of Health, Sydney: NSW Health, 2005.⁴

The WHO recommends that each time smokers have contact with the health system they should receive an evidence-based brief intervention.⁵ In order to develop smoking-cessation treatment services, the WHO recommends training specialist smoking-cessation counsellors to deliver support to health professionals, including those in primary care, to raise the issue of smoking, assess interest in quitting and then give brief advice and/or refer to specialist treatment where available. This model is reflected in the brief intervention approach known as the ‘5 As’: ask, advise, assess, assist and arrange. NSW Health published a guide for health professionals that outlines the brief intervention approach and summarises the evidence for treating nicotine dependence.⁷ The WHO recommends that basic standards should be set for training and an adequate training capacity should be ensured before developing treatment services.⁵

The involvement of health workers in offering smoking-cessation support should be based on their access to smokers and their level of training and skill in this area. Consequently, health workers are not constrained by their professional designation in providing this support.⁸ Raw et al. state ‘smoking cessation interventions are guaranteed to bring significant population health gains for relatively modest expenditure and in the long term reduce healthcare costs related to smoking’.⁹ However, to maximise the population health benefits, effective and cost effective interventions need to be integrated into routine clinical care throughout the health-care system.

The international treaty to which Australia is a full signatory nation, the WHO Framework Convention on Tobacco Control, reflects the necessity for a multi-strategic approach and outlines general obligations for signatory countries, including an obligation to: ‘develop and disseminate evidence-based guidelines and implement effective programs and services for treating tobacco dependence’.¹⁰ The Australian National Tobacco Strategy 2004–2009 states that ‘training for health professionals must be addressed as part of a comprehensive policy to treat tobacco dependence’ and outlines the national competency standards for smoking cessation developed by NSW Health.^{3,11} Supporting smokers to quit is a key focus area of the NSW Tobacco Action Plan 2005–2009 (the Plan) that sets out the NSW Government’s commitment to

the prevention and reduction of tobacco-related harm in NSW.³

A challenge for health systems

Contact with smokers through the health-care system provides an opportunity to offer support and advice in making a quit attempt.^{12–14} Smokers may be more likely to consider changing their behaviour and accepting advice from health workers during their contact with the health service. Evidence-based recommendations for Australian health services include: that all hospitalised smokers should be provided with effective smoking-cessation treatments; that hospital systems should be implemented to routinely identify and treat smokers; that hospitals should become completely smoke free; and that hospital staff as well as patients who are smokers should be provided with cessation assistance.¹⁴

As smoking prevalence declines in the general population, there may remain a group of highly nicotine-dependent smokers that finds it very difficult to quit and need more intensive support services and pharmacotherapies.¹⁵ Helping these smokers to quit is likely to present a major challenge for the health system in the future.

Within the community, there is a range of methods for smoking cessation that are not supported by evidence from peer-reviewed scientific literature. Examples of such ‘treatment’ include hypnotherapy, acupuncture, laser treatments, cigarette filter blockers and group-based methods that claim artificially high, unsubstantiated success rates. There is a risk with such programs that smokers who do not succeed using non-evidence-based treatments may delay further quit attempts. Therefore, ensuring equitable access and availability of evidence-based treatment is an important role for the health system.

In the NSW health system, the number of staff with the capacity to offer either brief or intensive smoking-cessation support is often limited by a lack of skills, knowledge and confidence. Smokers who come into contact with the health system have varying levels of nicotine dependence and readiness to quit; therefore health workers need to be familiar with the different types of evidence-based interventions. To ensure the health workforce has the relevant skills, knowledge and confidence to offer consistent, evidence-based interventions for smoking cessation,

NSW Health provided standardised training in smoking cessation.

Training in best-practice smoking cessation

The WHO published evidence-based recommendations on the treatment of tobacco dependence and states that support and treatment to help smokers quit is one of a range of approaches to tobacco control.⁸ This is an issue not just for individual health professionals in their work with smokers, but also for entire health systems. The WHO recommendation relating to training follows:

Health professionals should be trained to advise and help smokers stop smoking, and health care purchasers should ensure the provision of adequate training budgets and training programmes. Education and training for the different types of interventions should be provided not only at the post-graduate and clinical level, but should start at under-graduate and basic level, in medical and nursing schools and other relevant training institutions (WHO 2001).⁸

In general, training and accreditation in international programs is ‘tiered,’ with training in brief intervention for health workers to use in their routine role, as well as training in more intensive interventions for those treating smokers who need more support to quit. Provision of both levels of treatment are required to maximise access, quality and cost effectiveness, and to match the complexity of smokers’ needs.^{5,8,16}

Until recently, there was an unco-ordinated approach to the provision of quality training in smoking-cessation best practice in NSW. There are individual experts who offer intensive, high-quality training to small numbers of health professionals. Another training provider in NSW is the NSW Quitline telephone service that employs one statewide trainer to conduct smoking-cessation training for groups of health professionals across NSW. Training in tobacco-related knowledge and skills is also provided in the curriculum of a small number of medical schools.¹⁷

The total number of health workers who can be trained using these models is insufficient to provide adequate smoking-cessation expertise across NSW. Consequently smokers who came into contact with a NSW health service were unlikely to receive evidence-based advice and support to make a quit attempt. A co-ordinated approach to training in smoking cessation in NSW could increase the number of health workers who have improved knowledge and skills to provide brief intervention and/or specialised cessation advice. Training can assist in embedding responsibility for best practice intervention for tobacco dependence in clinical systems.

Competency standards for smoking cessation

In October 2005, following a national consultation process,

the National Training Quality Council (previously Australian National Training Authority) and all state and territory education departments endorsed the national vocational education and training (VET) Population Health Qualifications Framework. The national package includes two elective units of competency in tobacco use and treatment of nicotine dependence developed by the former Tobacco and Health Branch of the NSW Department of Health, with the assistance of smoking-cessation experts.

The competency standards can be used to guide training and participants can be assessed for their competency in the two units. Those assessed as competent are eligible to receive two VET Statements of Attainment. The electives can be used towards a Certificate IV in Population Health or other relevant vocational qualifications. They can also be used to recognise current competency; guide other professional development activity and measure and benchmark performance according to best practice.

Using telehealth technology to deliver training

There are approximately 230 public hospitals in NSW, and the health workforce is dispersed over a vast distance in a range of settings, from rural and remote outreach clinics to metropolitan-based tertiary hospitals. Fahey et al. found that time was the most significant barrier to professional development for health workers.¹⁸ Cost, travel and lack of knowledge about training opportunities were also barriers.

Improved training, especially for staff located in rural and remote communities, is one of the aims of NSW Health Telehealth Funding Initiative. Telehealth is ‘the transmission of images, voice and data between two or more health units via digital telecommunications’. The purpose of the NSW Telehealth program is to link health services and provide local access to clinical advice, consultation, education and training services. The telehealth technology provides the capacity to deliver standardised training quickly and effectively to a large number of health workers simultaneously. This may increase the potential for workforce development goals to be achieved more rapidly and therefore allow the health system to respond to health priorities more efficiently.

In 2005, the Tobacco and Health Branch was successful in attracting funding from the NSW Telehealth Funding Initiative to deliver smoking-cessation training to health workers across NSW using video-conference technology. The ‘assisting smokers to quit’ training project was developed to incorporate the new national competency standards into learning and assessment materials designed to fit the videoconference medium.

In early 2007, more than 300 health workers at 27 video-conference sites across NSW were trained in evidence-based smoking-cessation interventions. Results of the

evaluation of the project demonstrate that this training achieved its goals of increasing the knowledge and skills of the participants, and that they were satisfied with the training, resources and delivery method. The results will be reported in a separate publication.

Ensuring that the health workforce can provide evidence-based smoking-cessation advice to smokers meets the strategic directions outlined in the NSW State Health Plan 'Towards 2010', particularly 'Make prevention everybody's business'; 'Strengthen primary health and continuing care in the community'; and 'Make smart choices about the costs and benefits of health services'.¹⁹ The NSW Telehealth smoking-cessation training project and the national competency standards in smoking cessation will assist NSW Area Health Services to meet a performance indicator in the NSW Chief Health Officer's Population Health Service Level Agreement 2007–08. The performance indicator refers to 'number of staff trained in smoking cessation' (Personal communication, Office of the NSW Chief Health Officer, December 2007).

A comprehensive tobacco control program is in place in NSW to reduce the prevalence of smoking in NSW.³ The evidence suggests that there may be challenges ahead in addressing smoking in subgroups of the population with higher prevalence of smoking and higher nicotine dependence. Smoking-cessation interventions implemented throughout the health system are both effective and cost effective when compared with other routine prevention measures.⁵ Building the skills of the NSW Health workforce to address smoking cessation as part of their routine practice is an essential strategy to meet the challenges ahead in tobacco control. A health workforce educated in evidence-based best practice in cessation is well placed to provide brief, or more intensive interventions, in response to future demand for services.

References

- Population Health Division. *The health of the people of New South Wales - report of the Chief Health Officer*. Sydney: NSW Department of Health, 2007. Available at: <http://www.health.nsw.gov.au/public-health/chorep/toc/choindex.htm>. Accessed 12 September 2007.
- Centre for Epidemiology and Research. *2006 Report on adult health from the New South Wales population health survey*. Sydney: NSW Department of Health, 2007.
- NSW Department of Health. *NSW Tobacco Action Plan 2005–2009: A vision for the future*. Sydney: NSW Department of Health, 2005.
- Collins DJ, Lapsley HM. *Counting the costs of tobacco and the benefits of reducing smoking prevalence in NSW*. Sydney: NSW Department of Health, 2005.
- World Health Organization. *WHO European strategy for smoking cessation policy*. Copenhagen: World Health Organization Regional Office for Europe, 2003.
- The World Bank. *Curbing the epidemic governments and the economics of tobacco control*. International Bank for Reconstruction and Development, Washington DC, 1999.
- NSW Department of Health. *Let's Take a Moment – quit smoking brief intervention – a guide for all health professionals*. Sydney: NSW Department of Health, 2005.
- World Health Organization. *WHO evidence based recommendations on the treatment of tobacco dependence*. Copenhagen: World Health Organization European Partnership Project to Reduce Tobacco Dependence, 2001.
- Raw M, McNeill A, West R. Smoking cessation: evidence based recommendations for the healthcare system. *BMJ* 1999; 318: 182–5.
- World Health Organization. *WHO framework convention on tobacco control*. Geneva: World Health Organization, 2003.
- Commonwealth of Australia. *National tobacco strategy, 2004–2009: the strategy ministerial council on drug strategy*. Canberra: Commonwealth of Australia, 2005. Available at http://www.fwabs.health.nsw.gov.au/public-health/health-promotion/tobacco/pdf/national_tobacco_strategy_2004-2009.pdf
- Emmons KM, Goldstein MG. Smokers who are hospitalized: A window of opportunity for cessation interventions. *Prev Med* 1992; 21: 262–9. doi:10.1016/0091-7435(92)90024-C
- Fiore MC, Bailey WC, Cohen SJ, Dorfman SF, Goldstein MG, Gritz ER et al. *Treating tobacco use and dependence: clinical practice guideline*. Rockville, MD, USA: US Department of Health and Human Services, Public Health Service, 2000.
- Miller M, Wood L. *Smoking cessation interventions: Review of evidence and implications for best practice in health care settings*. Canberra: Australian Government, Department of Health and Ageing, 2001.
- Emery S, Gilpin E, Ake C, Farkas A, Pierce J. Characterizing and Identifying "Hard-Core" Smokers: Implications for Further Reducing Smoking Prevalence. *Am J Public Health* 2000; 90: 384–94.
- Pbert L, Ockene J, Ewy B, Sachs Leicher E, Warner D. Development of a state wide tobacco treatment specialist training and certification programme for Massachusetts. *Tob Control* 2000; 9: 372–81. doi:10.1136/tc.9.4.372
- Richmond R, Debono D, Larcos D, Kehoe L. Worldwide survey of education on tobacco in medical schools *Tob Control* 1998; 7: 247–52.
- Fahey A, Day N, Gelber H. Tele-education in child mental health for rural allied health workers. *J Telemed Telecare* 2003; 9: 84–8. doi:10.1258/135763303321327939
- NSW Department of Health *A new direction for NSW: State Health Plan, Towards 2010*. Sydney: NSW Department of Health, 2007.