Smoking cessation is a prolonged journey rather than a single trip
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Abstract
Smoking is the biggest cause of preventable death and ill health in the developed world, and of all health interventions, those that can reduce the prevalence of smoking will have the biggest impact on health. However, smoking is highly addictive and more effective ways to help people quit are urgently required if New Zealand is going to achieve its smokefree vision by 2025. While there is strong evidence that specialist smoking cessation clinics overseas substantially reduce smoking prevalence, similar treatment clinics is not a key feature of the healthcare system in New Zealand. This viewpoint outlines the reasons why New Zealand can ill afford not to have nationwide specialist smoking-cessation clinics.

Smoking is the biggest cause of preventable death and disability in New Zealand and other developed countries. Despite many decades of public health interventions, one-fifth of the adult New Zealand population remains addicted to smoking. Clearly a new and more intensive approach needs to be taken if New Zealand is to achieve its goal of being tobacco-free by 2025. While we are seeing a number of potential ‘new’ treatments such as electronic cigarettes, we should not lose sight of the fact that addiction to tobacco is highly individual and for many, successful quitting requires a personal approach.

Addiction to smoking needs to be considered as a chronic disease, requiring specialist care delivered by specialists, just like other chronic diseases such as chronic obstructive pulmonary disease, ischaemic heart disease, and diabetes. Although existing cessation initiatives in New Zealand do go some way to address this, they are more inclined towards a broader reach rather than individual tailored care.

The latest version of the New Zealand Smoking Cessation Guidelines published in 2007 provides a guide for health professionals on how to treat smokers. The Health Target, Better help for smokers to quit, introduced into the health system in 2007/2008 is based on the ABC model, designed to prompt providers to routinely Ask about smoking status as a clinical ‘vital sign’, then provide Brief advice and Cessation support to current smokers. Many District Health Boards (DHBs) and primary care providers deliver smoking cessation services, and there is a range of privately provided services. Additionally smokers have access to specialised services such as the freephone Quitline and Aukati Kai Paipa (Māori smoking cessation services). However, despite this suite of measures, only 18% of smokers remain quit 1 year after using current treatments in New Zealand.

Although there is strong evidence that specialist smoking cessation clinics substantially reduce smoking prevalence with long-term quit rates of 40% or more evident in overseas clinics, smoking treatment clinics are not a key feature of the healthcare system in New Zealand. Clinic-based treatment is a key component of the United Kingdom’s (UK’s) National Health Service (NHS) Guidelines, and smokers who use these services are four times more likely to quit than those who quit without such assistance.
If this country is going to achieve its Smokefree New Zealand vision by 2025 and prevent morbidity and mortality, successive governments will need to consider more intensive and effective treatment services including clinics, for its at-risk smoking populations. These populations include Māori, heavily nicotine-dependent smokers, treatment resistant smokers, particularly those with early smoking related cardiovascular or lung disease, and those with mental health issues.

**Smoking addiction requires specialist clinics just like other chronic diseases**

Smoking addiction is a chronic relapsing disease of brain reward, motivation, memory and related neuro-circuitry. Until we stop treating smoking as a lifestyle choice and start treating it as a chronic disease, we are unlikely to see much improvement in quit rates or the morbidity and mortality associated with smoking. Els and Kunyk make an analogy between the evidence for treating hypertension as a chronic disease to prevent serious health problems, and the evidence for treating tobacco use as a chronic disease, and point out the unjustifiable differences in the way these two chronic diseases are treated. Specialist clinics are in keeping with the philosophy of treating smoking as a chronic relapsing disease with people cycling in and out of abstinence. Like other chronic diseases, specialist knowledge is required to identify appropriate individually tailored interventions including the long-term (possibly lifelong) use of nicotine replacement therapy (NRT) as well as other multi-modal therapies for people who have relapsed after multiple attempts using conventional therapy.

**Clinics are very effective**

Clinics provide an ideal setting in which to deliver the latest evidence-based multi-modal treatment (psychotherapy and combination pharmacotherapy), enabling clinics to achieve long-term smoking cessation in almost half of all participants. A recent Cochrane Review concluded that multi-component smoking cessation interventions for hospitalised in-patients which continue for one month post-discharge, are highly effective, with an odds ratio for long-term smoking cessation of 1.65, 95% confidence interval (CI) 1.44 to 1.90.

In a specialist clinic in the United States of America (USA) that provided combination pharmacotherapy along with counselling, 6 month quit rates of up to 57% were achieved. Similarly when Brose and colleagues reviewed the United Kingdom’s (UK’s) National Health Service Stop Smoking Service (NHS SSS), they found smokers who used a combination of NRT, varenicline, and group sessions in specialist clinics were more likely to succeed than those who used primary care and single NRT.

Patients are much more likely to receive smoking cessation treatment in hospitals that have a dedicated smoking cessation program than hospitals that do not. In Christchurch, New Zealand, a pilot smoking cessation programme which provided face-to-face psychological and behavioural therapy, achieved a 15-month quit rate of 52% among those who completed the programme (none of these were biologically verified). This is a high success rate considering NRT was not used. Interestingly, of the 24 smokers who dropped out of their initial programme, all took up the opportunity to re-engage in subsequent courses. Another New Zealand study of a clinic in Wellington Hospital used behavioural interventions with
nicotine gum, which resulted in a biochemically verified 12-month quit rate of 32%. This clinic ended in the 1980s when its funding by a pharmaceutical company stopped.

Treatment clinics are also ideal for at-risk populations, such as pregnant smokers and those who require medical care for co-morbidities as part of the treatment for their smoking addiction. To illustrate, the NHS SSS targets pregnant smokers and during a national evaluation, 37.2% were biochemically verified as quit at their 4-week follow-up. In an American study, pregnant smokers who received smoking cessation therapy at antenatal clinics were twice as likely to be abstinent than those who received usual care. Even if pregnant smokers in these cessation programmes only quit for the period of their pregnancy, this will significantly reduce poor pregnancy outcomes such as low birth weight or preterm deliveries.

Similarly, smoking treatment clinics (as part of inpatient care) have proven to be effective in reducing the morbidity and the cost of inpatient care. Smokers who attended weekly counselling with optional NRT before their elective surgery had a significantly lower complication rate of 18% compared to 52% of smokers not attending a clinic, and the median length of stay was 11 days compared to 13 days.

**Smoking cessation treatment services are a priority**

Using simulation modelling to examine the effects of tobacco control and cessation treatment policies, Levy and colleagues found that treatment services to promote cessation among smokers will have the biggest impact on reducing the prevalence of smoking and smoking-related disease, compared to other policy options.

Treatment policies have an even greater impact (78.8%) on smoking rates than increased tobacco taxes (65.9%), smokefree environments (31.8%), and mass media educational campaigns. These authors concluded that combining public health and cessation treatment policies produce optimal quit outcomes but stronger policies to promote cessation treatments can have strong effects and “individually tailored/stepped care approaches merit further attention”.

A smoking cessation clinic can be an easy and effective way to treat tobacco use and dependence. It provides intensive treatments to smokers motivated to quit, ensuring a higher success rate, and it also treats "difficult" patients, such as those who have relapsed despite multiple treatments, or those with psychological co-morbidities.

Clinic-based treatment services are particularly effective among socioeconomically disadvantaged groups, and help to reduce health inequalities. UK services were more successful in attracting smokers from deprived areas than those from more affluent locations. “This is a remarkable finding which goes against previous research on health care and deprivation…”

**Clinics are ideal for delivering psychological therapy – a vital missing link**

High quality face-to-face psychological counselling increases the efficacy of smoking cessation interventions. Individual and group counselling are equally effective, and both are more effective than self-help programmes (RR = 1.98), with clinics especially suited to the delivery of both individual and group therapy.
Clinics are ideal for delivery of experimental and novel treatment

Clinics are an ideal setting for research into novel treatments which can inspire disillusioned smokers (smokers who failed to quit after using current treatments, and have lost self-efficacy); to try and make future quit attempts. The opportunity to conduct research at hospital-based clinics led to the establishment of 103 clinics in Iowa, USA. The UK’s NHS specialist smoking-cessation clinics have provided the setting for considerable research into the effectiveness of new treatment approaches.

A unique medical student-run smoking treatment clinic was established by volunteers at the Mayo Medical School in the USA. Not only did this clinic develop and implement a comprehensive intervention for treating smokers of lower socio-economic status (with quit rates comparable to other treatment programmes), but the medical students thought that this service-based learning programme broadened their knowledge and counselling skills around smoking cessation.

Clinics are cost-effective

Treating smokers is one of the most cost-effective interventions a health system can deliver and it has been argued that these treatment services will eventually free up resources that are no longer needed to treat smoking related disease such as lung cancer. Even the most expensive smoking cessation programs are more cost-effective than most medical care interventions. In the UK, the cost per quality-adjusted life years (QALY) from a very intensive group-based smoking cessation treatment was 80% below the National Institute of Clinical Excellence’s willingness to pay threshold.

Outpatient smoking cessation services are cost-effective, even for seriously depressed patients whose mental illness might be expected to worsen as a consequence of quitting smoking. A New Zealand model of the number of lives that would be saved by increased smoking cessation services led to increased government funding of these services.

Barriers to promoting cessation treatment

While smoking treatment services are a priority, a number of barriers to promoting cessation treatment among health professionals have been identified, with these difficulties having their roots in both a historical and cultural context. Until very recently healthcare professionals have not included smoking cessation treatment or promoted NRT use in their routine practice, often citing time constraints, their perception that smokers were unreceptive to cessation advice, lack or poor training about smoking cessation and that they are smokers themselves.

To illustrate, despite the strong evidence that NRT is a safe and effective method of helping smokers to quit, the greatest barriers cited by health professionals not recommending this treatment is their lack of training and their own lack of confidence. As a result, it is vital to educate and update staff on smoking cessation as well as providing special smoking cessation programmes directed at the staff themselves, with the clinic environment providing an ideal setting for these activities to take place.

What makes a successful clinic?

The internationally renowned UK’s NHS network of stop smoking services is amongst the best value for money, life-preserving clinical interventions in the NHS. Modelled on the
Maudsley Hospital Smokers Clinic, this treatment model has evolved since its 1969 inception into a service that delivers a model of treatment for smokers motivated to quit. These smoking services focus on the use of NRT to ease the discomfort of withdrawal symptoms, other pharmacotherapy (varenicline and bupropion) to assist in quitting and behavioural interventions delivered at both an individual and group setting. Since its establishment in 1999, the service has supported over 2 million people to quit smoking in the short term, 500,000 in the long term and has been responsible for saving 70,000 lives.

Evidence-based NHS stop smoking support is effective both in cost and clinical terms and these services remain a key part of tobacco control and health inequalities policies both at local and national levels in the UK.

What could a New Zealand clinic look like?

Funded by DHBs, via PHOs, these community-based specialty clinics would be housed in outpatient medical practices and staffed by multidisciplinary quit coaches with specialist knowledge. Fundamental to achieving long term cessation is the ability of these clinics to provide on-going evidence based pharmacological and psychological interventions delivered in both an individual and group setting.

A major feature of these specialised clinics will be the tailored pharmacological therapy provided to individual smokers who have had a long and complicated history of unsuccessfully using many of the commonly prescribed NRTs. This individual approach could for example include using pre-cessation NRT, long duration NRT as well as combinations of NRT with other interventions such as the electronic cigarette and would include therapies such as bupropion and varenicline. While cessation is always the most desired outcome, a further role of these clinics would be to offer options needed to reduce harm for smokers not yet ready or able to quit.

Conclusion

The establishment of specialist smoking cessation clinics across New Zealand, to complement the service provided by Quitline, is likely to greatly reduce the prevalence of smoking, particularly among treatment-resistant smokers, groups with very high levels of smoking (50% of Māori woman smoke), and vulnerable population groups such as smokers with co-morbid psychiatric conditions. It is important that such clinics take on smokers for the long term rather than for a quick treatment ‘fix’ and that for some, who are unable to quit, to consider managing their addiction with long term nicotine replacement in whatever form best suits them.

At present such strategies and long term individual help are unavailable in New Zealand. Appropriately designed treatment clinics may help to increase the relatively low access of treatment services by minority groups, and ensure they get intensive multi-modal therapy, face-to-face counselling, and individually tailored pharmacotherapy (including prescription medicines such as varenicline as required). Smoking cessation clinics have been shown to be cost-effective overseas. In the current economic climate, the most appropriate question is not “can we afford to have nation-wide specialist smoking-cessation clinics?” the most appropriate question is “can we afford not to have specialist smoking-cessation clinics?”
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