



Smoking cessation education increases interventions in a New Zealand hospital: World No Tobacco Day revisited

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Abstract

Aim To review the impact of educational and other measures on smoking cessation interventions delivered in a New Zealand hospital setting.

Methods The usage of nicotine replacement therapy (NRT) for inpatients was assessed by data gathered from the hospital pharmacy for a period before and after these educational measures.

Results Quarterly teaching sessions for house surgeons, monthly Effective Brief Intervention sessions for clinical staff and quarterly respiratory nurse training were delivered based on The New Zealand Guidelines for Smoking Cessation. In addition the Hutt Valley District Health Board (HVDHB) Smokefree Policy was revised from a business model to a treatment model. Over the 18 months after the educational initiatives were commenced the numbers of NRT units used in Hutt Hospital rose from a baseline of 768 to 3712—a fourfold increase.

Conclusion The increase in NRT usage could be attributed to educative measures put in place. There is an opportunity for similar smoking cessation interventions to exist New Zealand wide; this could have a significant impact on reducing chronic disease.

Following ‘World No Tobacco Day 2007’, the *New Zealand Medical Journal* published an editorial by two Christchurch respiratory physicians, Lutz Beckert and Roland Meyer.¹ They drew attention to a marked lack of spending on smoking cessation aids (particularly nicotine patches) in Christchurch Hospital. For the year 2006, only \$759.60c was spent on nicotine replacement therapy (NRT) by the surgical services and \$5075.68c by the medical services, perhaps reflecting a lack of attention given to smoking cessation by clinical staff.

The problem of smoking is such a significant one in health terms that Beckert and Meyer compared failing to provide attention to a patient’s smoking to that of failing to provide attention to a patient’s elevated blood pressure. Beckert and Meyer advocated doctors to address smoking cessation as a part of their clinical practice and went on to ask that “health professionals to show a commitment to the issue of smoking cessation initiatives and tobacco control by acquiring the relevant knowledge and skills; and by influencing hospital managers, district health board chief executive officers (CEOs), and policymakers to continue to make further gains across the entire health sector.”

Tobacco smoking is a leading cause of preventable death and disease. Indeed, New Zealand’s Ministry of Health estimates 5000 people die from exposure to tobacco in New Zealand every year.² The cigarette is now a chemical cocktail filled with additives to enhance the rapid delivery of nicotine to the bloodstream and modify the

taste of burnt tobacco.^{3,4} By the time they reach the age of 17, teenage smokers in New Zealand already express regret at having taken up smoking.⁵

Despite declining smoking rates, healthcare professionals need to be aware that there is still a large population of smokers who are heavily addicted, and that there are new recruits being added everyday.

Māori, in particular, are affected by very high rates of smoking, with 43% of adult Māori currently smoking.² If smokers do not quit early enough, many will add themselves to the health burden of long-term conditions—defined as the chronic conditions—such as chronic obstructive pulmonary disease (COPD) and cardiovascular disease (CVD), “that have a significant impact on the lives of a person and/or their family, whānau (extended family), or other carers.”⁶

In 2007 a Health and Disability Commissioner’s (HDC) report recommended that district health boards (DHBs) review their smokefree policies and become more assertive in their treatment of smokers by providing nicotine patches on admission.⁷

Hutt Valley District Health Board (HVDHB) is resolute in its commitment to smoking cessation and tobacco control initiatives. Our health professionals and managers have responded to the HDC report and the Ministry of Health initiatives, to make attention to smoking a part of regular clinical practice. In 2007, HVDHB agreed to put smoking cessation training in place and to review its existing Smokefree Policy.

The aim of this paper is to review the usage of nicotine replacement therapy (NRT) at HVDHB as a reflection of the success of these measures.

Methods

Hutt Valley Hospital is a 290-bed district general hospital 15 km from Wellington. Junior doctor staffing includes 25 house surgeons, 17 first years and 8 second years. In June 2007, as part of a programme of educational and training initiatives, quarterly training sessions on smoking cessation commenced for all house surgeons.

In July 2007, monthly effective brief intervention (EBI) training for smoking cessation, open to all staff, commenced. Smoking cessation training was also provided on an ad-hoc basis as the need arose—e.g. when the HVDHB mental health unit went smokefree in March 2008. All smoking cessation education sessions are based on the *New Zealand Guidelines for Smoking Cessation*.⁸

In addition, the review process for the HVDHB Smokefree Policy began July 2007. During a year of consultation the Smokefree Policy went through a rigorous process of comment and critique from the clinical board, clinical heads of department, the nursing development unit and the executive management team. The original Smokefree Policy instructed the human resources personnel to inform staff and contractors that the hospital and its grounds were smokefree and suggested disciplinary action against staff who were found in breach of the policy.

The revised Smokefree Policy has become a treatment model, rather than a business model, targeting clinical staff interventions and suggesting best practice for smokers based on the New Zealand Guidelines. The new revised Smokefree Policy ensures that appropriate levels of care and support are in place for patients, staff and visitors who smoke and recommends treating the patient for acute nicotine withdrawal with NRT. In addition it provides clinical staff with the steps to be taken to keep a patient safe when they insist on smoking.

Many of the changes in the policy were a direct result of input from senior clinical staff and the management team, demonstrating a high standard of commitment to the treatment and care of people who smoke.

The new policy was approved in May 2008. The active engagement of staff appears to have contributed to a significant culture shift; one where staff became open to training and discussions about smoking, and are now routinely asking about and freely providing NRT to their patients.

Other contributing variables that were likely to have increased the delivery of smoking cessation were: the support of the senior medical staff responsible for adult teaching, the introduction of Quit Cards in February 2008 and the introduction of the subsidised NRT lozenge on 1 September 2008.

Quit Cards, which had been used by Quitline as a substitute prescription for NRT, were initially restricted for use by health professionals who had undertaken specific two-day training. From February 2008 Quit Cards were approved for use by anyone who had prescribing rights, including hospital doctors and midwives.

To assess the impact of these initiatives a review of the usage of NRT was made for a period prior to and following the above educative initiatives to see if any measurable change had occurred. Data was gathered from Hutt Hospital pharmacy showing the use of inpatient NRT. Rather than look at cost, we looked at the total number of NRT units used in each year. All forms of NRT, whether a patch or a lozenge, were counted as a single unit. The total numbers dispensed in the hospital were counted and as Hutt Hospital Pharmacy supplies NRT only for inpatients, the numbers dispensed were assumed to reflect inpatient use.

Results

In 2006, prior to the introduction of educational and training initiatives, 768 NRT units were provided to inpatients. After the training started in mid 2007, the volume of NRT units used rose by 85% for that year compared to 2006, as shown in Table 1. In 2008, patches, gum, lozenges and inhalers were provided, however the inhaler was not subsidised and was only offered to patients in the mental health unit. The volume of NRT used in 2008 rose by another 161% compared to 2007; a fourfold increase in NRT use over 2 years (Table 1).

Table 1. Combined annual inpatient units of NRT used by Hutt Valley Hospital

Year	Patches	Gum	Lozenge	Inhaler	Total (%)
2006	732	0	0	36	768
2007	1058	360	0	0	1418 (85%)
2008	1658	1466	480	108	3712 (161%)

Discussion

Teaching around smoking cessation started in mid-2007. Since that time each quarter's intake of new house surgeons has had the opportunity to attend a teaching session, and in total approximately 70 house surgeons have attended, this comprises more than 80% of all new house surgeon staff. Smoking cessation training for house surgeons is on their general roster of adult teaching and although not compulsory it is recommended that they attend. House surgeons received a 45-minute training session, which was a shortened version of the EBI training, with an emphasis on the delivery of NRT.

The aim of this training is to clarify that smoking is a significant health issue, that smokers are addicted to nicotine, and most will need treatment for abrupt withdrawal when admitted to hospital. For the same period 96 staff attended EBI sessions, 31 of these were clinical hospital staff and the remainder in allied health. Of the clinical staff one was a doctor, two were physiotherapists and the others nurses. Trainees are

recruited through a staff intranet bulletin, a circulated hard copy human resources bulletin and by word-of-mouth.

Our results show that NRT usage has increased from 768 units in 2006 to 3712 units since education and training structures have been put in place. It is interesting to note that the combined use of nicotine gums and lozenges is greater than the patch for 2008. This is somewhat against the data from Quitline and might be due to the emphasis provided in training that the oral nicotine preparations provide much more immediate relief from withdrawal than the patches.⁹

These data suggest that smoking cessation awareness has grown and that more staff are undertaking more smoking interventions with their patients. Further, as interventions only started midway in 2007, the increase for that year shows that rapid improvements can be achieved. As the main interventions in 2007 were educational, prior to changes in smokefree policy, we can see that a smoking cessation programme for house surgeons can significantly impact on NRT usage. However, the total spend on NRT for 2008 was only \$3676.63, out of a pharmacy budget close to 3 million, a very small cost for a large gain, and clearly there is potential for further gains to be made.

We have not used Quit Cards as a measure of smoking cessation activity, though they may have contributed to staff awareness of this issue. Quit Card activity has been difficult to measure because Quit Cards have been directly distributed to health professionals and therefore given to both outpatients as well as discharged inpatients.

We attribute the overall increase in use of NRT to the delivery of smoking cessation education, the success we have had with changing the emphasis of our Smokefree Policy to a treatment model, our mental health unit becoming smokefree and also to a positive work environment where the staff have actively engaged with these measures. Although it may be difficult to demonstrate, one aspect of our success might have been the removal of barriers to smoking cessation, by suggesting smoking cessation as a treatment option, rather than a counselling session.

An earlier in-house pilot study had shown that perceived barriers did exist, e.g. a lack of time to do cessation counselling. Previously brief interventions for smoking cessation had been modelled on the Stages of Change and smokers readiness to quit.

This model appeared too detailed, we therefore took view that the smoking cessation approach to patients should be made from a clinical treatment model—i.e. providing treatment for abrupt nicotine withdrawal, rather than providing smoking cessation counselling. We were also of the view that the responsibility for treating patients for nicotine withdrawal was the duty of all clinical staff rather than a specific smoking cessation person or team.

Evidence suggests that advice from a health professional will help a smoker to quit; that NRT is an effective aid to quitting, and that spontaneous quit attempts are often more likely to succeed than planned quit attempts and it is this evidence and the New Zealand Guidelines that has guided our approach.^{10,11,12}

On a national scale, if all health providers were to apply the New Zealand Guidelines approach to smoking cessation and increase the use of NRT, this could have a significant impact on reducing chronic disease in New Zealand. The Ministry of

Health supports this approach and has developed the ABC Framework for Tobacco. ¹³ The aim of the **ABC** framework is to assist all health professionals to **A**sk about smoking, offer **B**rief advice to quit and provide **C**essation options including NRT and referrals to cessation services such as Aukati Kai Paipa and Quitline.

At a local level ABC training that includes the “relevant knowledge and skills” for smoking cessation, will be made widely available this year to all health professionals, both online and through the Smokefree DHB Coordinators.

More recently the Ministry of Health published the first results of the Health Target report and HVDHB came bottom of the table for target 5; “Better help for Smokers to Quit”. The measure for the Health Target is the number of admitted patients who are documented, and then identified and coded, as smokers who have received advice to quit.

The HVDHB Health Target result appears to reflect a lack of documenting and coding of smoking status rather than a lack of will to engage with the process of helping smokers, as evidenced by our increasing NRT usage. For the year 2009 our NRT usage has continued to increase (by another 47%), suggesting the issue with our Health Target is the capture of information regarding smokers receiving advice to quit.

As a result HVDHB has revised its electronic discharge summary to better capture patient smoking information and advice to quit, although this still cannot ensure the complete accuracy of documented and coded data.

At HVDHB we plan to continue to monitor NRT usage not only to assess the ongoing impact of educational and policy changes, but to help interpret our Health Target. This year we will broaden the delivery of our work to include our primary care services.

It is important not only to acknowledge World No Tobacco Day 31 May, but also to address smoking cessation throughout the year by providing a strong level of care and support to patients who smoke and provide the resource that enables them to quit.

Competing interests: None.

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