Brief interventions to reduce tobacco-related diseases


Summary
Tobacco-related diseases are a major threat to public health in the UK. High levels of morbidity and mortality for users of tobacco and those exposed to tobacco smoke are associated with such diseases. This article outlines a socioeconomic overview of tobacco use in the UK and the associated risk factors. A summary of brief interventions is presented, which has the potential to form the core elements of a community-based smoking cessation initiative and reduce the threat of tobacco-related diseases to public health.

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THE WORLD HEALTH ORGANIZATION (WHO 2003) has asserted that 'the spread of the tobacco epidemic is a global problem with serious consequences for public health'. The realisation, accompanied by robust evidence, that tobacco seriously compromises the health of its users and the health of those exposed to tobacco smoke is well established (Doll 1998). In the 20th century 100 million people died, and an estimated one billion people will die worldwide in the 21st century, from smoking-related diseases (Mackay and Eriksen 2002).

This article aims to educate and inform community nurses by placing in context the threat of tobacco-related diseases to public health security in the UK. In the absence of an agreed definition of the term ‘security’ in public health (Ingram 2004), Fidler (2007) used the Oxford English Dictionary to define the concept as ‘the condition of being protected from or not exposed to danger’. By applying regular, skilled use of brief interventions for smoking cessation to clinical practice caseloads, community nurses have the potential to make a considerable effect on public health security.

The UK perspective
Despite the decline of tobacco use in the developed world, smoking continues to be the greatest preventable cause of premature death (Simpson 2000). In the UK, smoking in men (defined as males aged over 15 years) has gradually declined from 61% in 1960 to 22% in 2007, and smoking in women (defined as females over 15 years) has similarly declined from 42% in 1960 to 20% in 2007 (Robinson and Lader 2007). Additionally, 56% of people setting a smoking cessation date had still quit after four weeks (Department of Health (DH) 2004). The level of tobacco use in the UK has the potential to severely compromise public health security.

Tobacco as a security threat
Fidler (2007) offered some compelling arguments that certain diseases, such as those related to tobacco use, pose considerable security threats to public health. He argued that this affects states, communities and individuals and has been influenced by the globalisation of trade, lifestyle choices and product consumption. Tobacco-related disease is cited as a growing pandemic that is difficult to manage because ‘in most cases, voluntary participation in behaviour that is bad for one’s own immediate health and the health of others’, does not fit comfortably in a human rights framework.

Feldbaum and Lee (2004) developed a decision tree framework that overcomes this conceptual difficulty by showing how tobacco-related diseases emerge as an acute security threat causing high levels of morbidity and mortality, including acute and long-term health problems. As community nurses engage with populations, they are well placed to play a major and active role in reducing the security threat of tobacco-related diseases to public health in the UK.
A socioeconomic perspective

There are regional variations in smoking prevalence. In 2007, Scotland had a smoking prevalence of 24%, England and Wales each had a prevalence of 21%, while Northern Ireland had a prevalence of 23% (Robinson and Lader 2007). Some regions in England – the north east, north west, West Midlands, and Yorkshire and the Humber – had prevalences of 22-23%, similar to those in Scotland (Robinson and Lader 2007).

Levels of educational attainment are linked to smoking prevalence. Low attainment in children has been found to be associated with increased smoking (Barton 1998).

The number of nurses in the UK who are smokers, ex-smokers or non-smokers is similar to the number of people in each category among the general population. In a study of nurses’ smoking prevalence, McKenna et al (2001) found that 25.8% of the sample were smokers, 19% were ex-smokers and the rest, 55.2%, had never smoked. By comparison, just 8% of male and 6% of female physicians in the UK smoke (Mackay and Eriksen 2002). Healthcare staff, seen as sources of reliable information and advice, are also exemplars to the rest of the community (Simpson 2000).

Physicians and nurses who were smokers were, however, more active in delivering smoking cessation counselling and advice to patients, when they themselves had taken part in a smoking cessation programme (Puska et al 2005). Having healthcare teams with representation from ex-smokers can add value to the successful introduction of smoking cessation interventions.

Risk factors

Tobacco is the largest preventable cause of ill health in the developed world (Simpson 2000).

It is claimed that three risk factors – tobacco use, lack of physical activity and an unhealthy diet – are responsible for the four chronic diseases (type 2 diabetes, heart disease, stroke and 40% of cancers) that cause more than half of all deaths worldwide (Oxford Health Alliance 2007).

Smokers can often be recognised by nicotine staining of the fingers, a husky voice, sometimes accompanied by a productive cough, breathlessness and wheezing, facial wrinkling unrelated to chronological age, and a general aura of smoke carried on clothes and the breath.

The most commonly used tobacco products are cigarettes, pipes and cigars but other products are available (Box 1).

The ban on smoking in public places across the UK might have a negative consequence if smokers begin to use some of the other tobacco-based smoke-free products such as nasal snuff and chewing tobacco, and tobacco manufacturers might begin to market these alternatives more intensively.

Approximately 106,000 people die from smoking-related diseases each year in the UK, which equates to about 12 deaths every hour (Twigg et al 2004). The Royal College of Physicians (2000) outlined the proportions of deaths attributed to smoking (Box 2).

People who smoke are 15 times more likely to develop lung cancer than those who do not smoke (Boffetta et al 1999). The negative side of smoking cessation for smokers is that they will experience nicotine withdrawal symptoms (Box 3), which require sensitive anticipation and careful management from healthcare teams. Understanding these symptoms will greatly enhance the success of any smoking cessation interventions offered by community nurses.

Health gain from smoking cessation

Smoking cessation is the most important action that can be taken to improve current and future health (US Department of Health and Human

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**BOX 1**

**Less common tobacco products**

- Nasal snuff – a fine tobacco powder that is snorted. It should not be confused with cocaine.
- Chewing tobacco – sometimes called ‘spit’ tobacco because it requires saliva to activate the ingredients, such as betel leaves and lime.
- Hookahs – a water pipe that draws smoke through flavoured water. These are common in the Middle and Far East, but are also used in large cities, such as London.
- Bidis, gutka and paan masala – tobacco products commonly used by the South Asian community.

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**BOX 2**

**Proportions of deaths attributed to smoking**

- Lung cancer – 25%.
- Other cancers – 13%.
- Cardiovascular disease – 31%.
- Chronic obstructive pulmonary disease – 20%.
- Pneumonia – 9%.
- Digestive disorder – 2%.

(Royal College of Physicians 2000)
Sciences 1990). It is more beneficial before the age of 35 years, before any smoking-related diseases become apparent. However, smokers who smoke longer and stop when they are older will still improve their life expectancy. It is never too late to give up smoking. Health benefits of smoking cessation are described in Table 1.

**The community nurse’s role**

Community nurses are well placed to provide brief opportunistic smoking cessation interventions. Specialist and generic community nurses who are ex-smokers have the potential to be particularly effective in reducing the smoking security threat to public health by tempering factual information with sensitive advice drawn from their personal experience.

The overview of nursing careers is clear that all nurses should ‘help people to promote their own health’ (DH 2006a). The current programme of healthcare reform is aimed at transforming the way health care is provided by placing greater emphasis on prevention, health promotion and supporting self-care and ‘moving more care outside acute hospitals into the community and people’s homes’ (DH 2006a).

Bowler and Blake (2007) noted the progress in the development of specialist community nurses since the 1980s. The white paper *Our Health, Our Care, Our Say: A New Direction for Community Services* (DH 2006b) outlined four main goals in its vision to:

- Ensure better prevention services with earlier intervention.
- Give people more choice in their health options and a louder voice to articulate their needs.
- Do more to tackle inequalities and improve access to community services.
- Offer more support to people with long-term needs.

It is clear from the detail of the white paper (DH 2006b) that the government expects that community nurses, both specialist and generic, will have a major role in achieving these goals. There is a demand for more innovative practices, such as the development of a mobile clinic for men by the district nursing team in Blackburn, Lancashire, and the nurse practitioner-led outreach services in Huddersfield, West Yorkshire, which included smoking cessation services (DH 2006b). The potential for the community nursing sector across the UK to make a major contribution to achieving this public health vision is vast.

**Brief interventions in smoking cessation**

There is evidence to suggest that smokers are more motivated to accept advice about smoking when it is related to an existing condition that might not be related to smoking (Butler *et al.* 1998). An initial assessment should include routinely establishing the smoking status of patients, including child patients who may already be acquiring the addiction or be living in domestic situations where passive smoking is a health hazard. Patients can be described as either a smoker, a non-smoker, or a recent ex-smoker.

The way in which the initial assessment is managed is important to the success of any brief

**BOX 3**

**Nicotine withdrawal symptoms**

- Light-headedness – normally for less than 48 hours.
- Insomnia – normally for less than one week.
- Poor concentration – normally for less than one week.
- Cravings – can be greater than two weeks.
- Depression – normally less than four weeks.
- Restlessness – normally less than four weeks.
- Irritability – usually less than four weeks.
- Increased appetite – can be greater than ten weeks.

(Action on Smoking and Health 2007a)

**TABLE 1**

**Health benefits of smoking cessation**

<table>
<thead>
<tr>
<th>Time since quitting</th>
<th>Health benefits</th>
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<tr>
<td>20 minutes</td>
<td>Blood pressure and pulse return to normal.</td>
</tr>
<tr>
<td>8 hours</td>
<td>Nicotine and carbon monoxide levels in blood are reduced by 50%, oxygen levels return to normal.</td>
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<tr>
<td>24 hours</td>
<td>Carbon monoxide is eliminated from the body. Mucus and other smoking debris reduce in the lungs.</td>
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<tr>
<td>48 hours</td>
<td>The body is nicotine free. There is considerable improvement in sense of taste and smell.</td>
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<tr>
<td>72 hours</td>
<td>Respiration is less laboured. Airways relax and energy levels increase.</td>
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<tr>
<td>2-12 weeks</td>
<td>Circulation improves.</td>
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<tr>
<td>3-9 months</td>
<td>Coughs, wheezing and respiratory problems improve as lung function increases by up to 10%.</td>
</tr>
<tr>
<td>1 year</td>
<td>Risk of myocardial infarction falls to approximately half that of a smoker.</td>
</tr>
<tr>
<td>10 years</td>
<td>Risk of lung cancer falls to half that of a smoker.</td>
</tr>
<tr>
<td>15 years</td>
<td>Risk of myocardial infarction falls to the same as that of someone who has never smoked.</td>
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(Adapted from Action on Smoking and Health 2007a)
intervention. However, the decision to stop smoking can only come from patients themselves. Once smoking status has been confirmed, a good opening question could be: ‘Have you ever thought of giving up cigarettes?’ This kind of question will probably elicit one of the following responses:

- ‘I don’t want to stop smoking.’
- ‘I’ve tried to stop unsuccessfully in the past.’
- ‘I’m not interested in stopping smoking now, but might be in the future.’
- ‘I would like to try to stop smoking now.’

Whatever the response, it should be documented to reassess the situation in the following year. Patients who are not interested in stopping smoking might take a little longer to embark on the cessation journey. Such patients should be informed of the wide range of support that can be accessed through the NHS and the comprehensive treatment options available. If the patient has not recently tried to quit he or she might be unaware of new pharmacological approaches and ways of using nicotine replacement products, such as nicotine transdermal patches, nicotine gum or other oral nicotine products.

Most people want to stop smoking. The way that this first encounter is organised is important for the success of completing the cessation cycle. A suggested way forward is to:

- Discuss the risks of smoking, particularly in relation to the current health scenario.
- Discuss the general effects on health and longevity.
- Discuss the risks to other family members, for example young children, pregnant women, and older people.
- Highlight the amount of money that can be saved. For example, a moderate smoker on ten cigarettes a day can save around £1,000 a year.

Once an assessment of interest in quitting has been carried out, a more detailed evaluation needs to be completed about the patient’s tobacco use. This can include information about:

- The age at which smoking commenced.
- The reason or ‘trigger’ for starting to smoke.
- The type of tobacco product smoked, for example cigarettes, pipe or roll ups.
- The number of times the patient smoked each day when he or she first began smoking.

- Whether the habit has changed since then, for example whether the patient smokes the same number of cigarettes.
- The reason for the change in habit.

An important element of the initial assessment is establishing the level of tobacco dependence. An acceptable measure is the Fagerstrom Test for Nicotine Dependence (Heatherton et al 1991), which offers a scoring system up to 16 points. A threshold score of seven is used to divide smokers into high and low dependence categories.

A score of seven or above indicates a high level of addiction that is likely to need more robust interventions. The WHO Europe (2001) recommendations for the treatment of tobacco dependence defined brief interventions as the five ‘As’: ask, advise, assess, assist and arrange (Box 4).

Percival et al (2003) advised the inclusion of the following elements to taking a quick smoking history:

- Review past attempts to stop smoking. For example, what helped and what hindered the cessation process?
- In light of this experience, discuss strategies to overcome problems, such as withdrawal symptoms.
- Advise the smoker to inform his or her social group (family, friends and colleagues) to obtain support. Request that those who smoke do not subvert attempts at cessation.
- Set a quit date and negotiate an agreement to adhere to it.
- Plan the management of social occasions when temptation to smoke can be high.
- Encourage the use of nicotine replacement therapy, for example buproprion (Zyban®) or varenicline (Champix®), nicotine patches, nasal sprays and chewing gum (Action on Smoking and Health 2007b, Potts and Garwood 2007).

### BOX 4

**The five ‘As’ for providing interventions in smoking cessation**

- **Ask** about smoking at every opportunity.
- **Advise** all smokers to stop in a personalized and appropriate manner.
- **Assess** motivation to change.
- **Assist** the smoker to stop.
- **Arrange** a follow up if possible.

(Adapted from World Health Organization Europe 2001)
Successful smoking cessation takes time, motivation and sensitive support. Good planning will increase the likelihood of success. Extra support can be obtained from the NHS Helpline (0800 169 0 169) or by visiting the website: www.smokefree.nhs.uk

The free NHS booklet Stop Smoking, Start Living (DH 2007) has a useful list for helping smokers to prepare for their quit date. This includes: avoiding temptation, getting support, reminders about why they are stopping and creating activities for coping with the first week.

Carry out initial carbon monoxide monitoring to provide baseline for regular audit to check progress and/or covert smoking.

Arrange a follow up for one week later to monitor, evaluate and provide further advice.

**Conclusion**

Community nurses are ideally placed to reduce the security threat of tobacco to the health of individuals, communities and the UK as a whole. They have legitimate access to people’s homes, schools, clinics and places of work, where brief smoking cessation interventions can be effectively used.

Community nurses also need to reflect on what they can bring to smoking cessation in terms of their own smoking status (smoker, ex-smoker, non-smoker). Nurses who are smokers should have access to a comprehensive cessation programme and nurse education should take an active role in health education and smoking prevention among student nurses. “If successful this will have a positive effect on the health of nurses, their role as health promoters and the perceptions held by the public and other professionals on nurses as smokers” (McKenna et al 2001) NS

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