

# Taking a deep breath

The mental health implications  
of anti-smoking legislation



Mental Health Foundation

# CONTENTS

Foreword	3
Acknowledgements	4
Executive Summary	5
Recommendations	8
1 Introduction	9
Smoking and physical health	9
Smoking bans	9
2 Smoking and mental health	11
Trends in smoking and mental health	11
Why do people smoke?	12
Smoking to cope with stress and anxiety	13
Smoking and depression	15
Smoking and schizophrenia	16
Smoking and Alzheimer's Disease	17
Conclusions about smoking and mental health	18
3 Smoking cessation and mental health	19
Smoking cessation programmes	19
Smoking cessation programmes for people with mental health problems	21
4 Smoking bans and mental health	24
Smoking and UK legislation	24
Smoking bans and mental health services	24
Smoking bans in other countries	26
Challenges and strategies for smoke-free mental health units	27
5 Conclusion and recommendations	29
Conclusion	29
Recommendations	30
6 Further information and resources	31
Information about mental health problems	31
Information about smoking cessation	32
Information about smoke-free legislation	33
7 References	34



## FOREWORD

People with mental health problems face some of the greatest health inequalities. They are much more likely to suffer chronic physical ill-health and premature death than the general population. This is a fact that must be taken into account whenever public health initiatives are considered.

The ban on smoking in public places is a vivid example. People with mental health problems are far more likely to smoke than the general population, and far less likely to be able to give up smoking using the types of support which are widely on offer. The situation is even more complex for those people who are living for long periods in psychiatric units – where home is both a public place and a workplace, and therefore, in time, also subject to the smoking ban.

Furthermore, there is a very important interplay between smoking and common mental health problems, which is fundamental to understanding smoking habits and smoking cessation among the whole population, as well as those with diagnosable mental health problems.

The evidence examined in this report shows that care is needed to ensure that the smoking ban brings opportunities for people with mental health problems to give up smoking. They will not arise automatically as a result of the ban and access to standard treatments. It also shows that careful monitoring is needed to ensure that imposition of the ban does not cause unnecessary distress and harm in in-patient settings.

Only with careful consideration and action can this important initiative deliver on our public health imperative and apply to everyone.

Dr Andrew McCulloch  
Chief Executive  
Mental Health Foundation



## ACKNOWLEDGEMENTS

This report was written by Dr Deborah Cornah, Consultant to the Mental Health Foundation and commissioned by Dr Kam Dhillon, Head of Research at the Foundation. The work was edited by Celia Richardson, Director of Communications and Dr Andrew McCulloch, Chief Executive, with contributions and support from Isobel Booth, David Crepaz-Keay, Moira Fraser, Sarah Gillespie, Kathryn Hill, Louise Lingwood and Mark Peterson.

# EXECUTIVE SUMMARY

## Introduction

A smoking ban covering all public places and workplaces comes into effect in England on 1 July 2007. It has been the subject of fierce debate. Up to 15% of smokers have said they would quit in response to a smoking ban, and the Government predicts an estimated 600,000 people will give up smoking as a result of the change in the law.

The smoking ban is likely to bring many welcome health benefits for the whole population, but there are a number of concerns about the likely effects of the ban on people with mental health problems. Firstly, the ban will leave anyone whose temporary home is also a public place and/or workplace, unable to smoke in their own home. This applies to people living for long periods in mental health in-patient units. The Government has weighed the rights of smokers in mental health units against the rights of non-smokers and staff to breathe smoke-free air and have concluded that the ban should apply in mental health units.

The ban highlights a range of issues covering many more people living in the community, from those with common mental health problems such as anxiety and depression to people with severe and enduring mental health problems such as schizophrenia. Giving up smoking is widely acknowledged to be very difficult for the general population, but comparatively little consideration is given to the extra needs of people with mental health problems. Mounting evidence shows that people with mental health problems are more likely to smoke and less likely to be successful at quitting than the general population. Their needs can and should be addressed to help them to abide by the smoking ban as easily and positively as possible, and also to improve their chances of being among the 600,000 who are likely to quit successfully following the ban.

## The smoking ban and mental health

Because prisons, care homes and hospices are considered 'private dwellings' they do not have to conform to the smoke-free legislation. In some countries mental health units are also exempt. English legislation, however, will offer only a limited exemption to the smoking ban in residential mental health units, allowing smoking in bedrooms or rooms used only for smoking until the 1st July 2008, after which date all enclosed parts of the unit will be required to comply with the ban.

This decision has divided opinion amongst mental health service users, staff, policy makers and practitioners. Concerns have been expressed by many people about how a ban will work in mental health units. Major worries include the distress caused by stopping people from smoking when they are in a mental health crisis. Much research from other countries draws the conclusion that implementation of smoke-free policies in residential mental health units has not resulted in many of the negative outcomes anticipated in those countries, but concern remains high. Research has also highlighted the often inadequate availability or suitability of smoking cessation strategies and support in mental health units. This points to the need for services to develop useful and effective cessation strategies, where nicotine dependence is taken into account as a routine part of care planning, and help with quitting is routinely offered.

## Links between mental ill-health and smoking

Although adult tobacco use has shown a slight decline in the last decade among the general population, smoking amongst people with mental health problems has shown no appreciable reduction.

Current estimates show that approximately 26% of the adult population (or 13 million people) smoke. An estimated 40% of people with mental health problems smoke. Of the 26% of the general adult population who smoke, the proportion smoking more than 20 cigarettes a day (“heavy smokers”) has fallen, from 55% to 33% for males and 40% to 27% for females. In contrast, the figures for people with mental health problems remain stable, and high. Studies of psychiatric patients in mental health units show that up to 70% smoke and around 50% are heavy smokers. People with mental health problems living in the community smoke less, but still more than people in the general population, with up to 40% smoking and 30% smoking heavily.

The risk factors associated with smoking – social deprivation, stress, alcohol use and poverty, amongst others – are also associated with poorer mental health and therefore it is unsurprising that people with mental health problems smoke more. However, research has shown that smoking is more common amongst people with mental health problems, even when these other factors have been taken into account.

It is also important to point out that among people with undiagnosed or sub-clinical mental health problems, smoking is believed to be an important way of coping with stress, anxiety or low mood. Studies have shown that people who smoke report more feelings of stress. An increased number of people trying to give up smoking following the ban will need to look for alternative ways of coping with stress and anxiety such as exercise and social activities. They are likely to come into contact with providers of smoking cessation services and information should be available to meet their needs.

The biological factors involved in smoking relate to the physiology of the brain and its response to nicotine. Nicotine is bi-phasic, meaning that it first has a stimulating and then a depressing effect in the brain. When a person smokes, a dose of nicotine reaches the brain within about ten seconds of inhalation, producing a positive feeling. Initially, nicotine can produce effects such as improved mood and concentration, decreased anger and stress, relaxed muscles, increased heart rate and reduced appetite. However, this also leads to alterations in the neurotransmitter systems in the brain (especially dopamine pathways), which then leads to nicotine withdrawal symptoms, including headaches, irritability, difficulty in concentration, increased appetite and drowsiness. Then smoking can become cyclical because it temporarily reduces these withdrawal symptoms.

In the UK, one study put smoking amongst people with depression at around 56%, compared with 26% of the general population. People with depression report more severe withdrawal symptoms during attempts to give up smoking, and are at increased risk of developing a new episode of depression for up to six months after quitting. This may be due in part to the role that certain neurotransmitters such as dopamine play in both smoking and depression. Nicotine has been shown to stimulate dopamine release in the brain for a short time, and dopamine is often found to be depleted or inadequate in people with depression. The artificial supply of dopamine from smoking cigarettes eventually depletes the brain of its own resources and depression may worsen due to the diminishing supply.

People with schizophrenia are more likely to smoke, and smoke more heavily than other populations. Rates of smoking among people with schizophrenia remain stable at about 70-74%, regardless of whether they are living in mental health units or within the community. Many studies have explored the reasons why people with schizophrenia are more likely to smoke and suggestions have included the possibility that they find it harder to quit once they start and that they start smoking younger. There are also explanations that consider other associated risk factors involved in both smoking and schizophrenia, like substance or alcohol abuse and nutritional deficiencies. In addition, some studies argue that smoking is associated with the culture of inpatient psychiatric wards.

One of the most popular explanations proposed to account for the increased smoking rates amongst people with schizophrenia is 'self-medication'. That is, people with schizophrenia use smoking – and the dose of nicotine it provides them with – to control or manage some of the symptoms associated with their illness and to reduce some of the side effects of their medication. There is some evidence to support this biological explanation of smoking and it centres around the role dopamine plays in mood and motivation. However a recent Cochrane review found no studies that support the theory that nicotine alleviates the symptoms of schizophrenia.

What is clear is that many smokers with mental health problems say that they would like to stop smoking, but struggle when they try to do so. They need effective support to help them stop smoking.

## Smoking cessation and mental health

Cessation rates among smokers with mental health problems are two to three times lower than in the general population. This, for reasons outlined above, points to the possibility that mainstream smoking cessation programmes are not adequately addressing the needs of people with mental health problems. A number of methods are analysed in this report, including talking and drug-based approaches, as well as approaches that combine the two, for example Nicotine Replacement Therapy combined with Cognitive Behavioural Therapy (CBT).

Some have argued that CBT is effective at helping people with depression give up smoking because it helps them challenge negative attitudes that stop them from quitting and helps them adopt alternative ways of coping with difficult feelings such as stress and anxiety that may lead them to turn to cigarettes. It has been argued that improvements can be made in quit-rates for heavy smokers with depression or with people whose depression is recurrent if the standard smoking cessation CBT includes a component directly concerned with the smoker's depression. Combined approaches have been found to work in studies of people with depression and also schizophrenia.

The report also examines good practice in mental health services which may help with the implementation of the smoking ban (see 'challenges and strategies for smoke-free mental health units'). Given the high rates of smoking among people with mental health problems there is still a comparative lack of evidence about which methods are most effective for them. If quit rates among people with mental health problems are to increase, both in in-patient services where smoking will be banned and within the community, we need to understand which cessation strategies recognise the different and related reasons for smoking among these groups and use them. These groups should be offered a combination of drug-based and talking therapies.

## Recommendations

In light of the evidence summarised in the report, the following recommendations are made:

1. Primary Care staff should be made aware of higher smoking rates and more reported difficulties in quitting among people with mental health problems and of any specialist help available, so they can refer effectively  
ACTION: Department of Health, Primary Care Trusts (PCTs)
2. People providing information on smoking cessation including helplines should be made aware of the needs of people with mental health problems, and should be able to signpost them to other help and support  
ACTION: Department of Health, PCTs
3. Commissioners need to ensure that smoking cessation services including group therapies are tailored to meet the needs of vulnerable groups including mental health service users  
ACTION: PCTs
4. Staff in mental health services must offer nicotine replacement therapy and other smoking cessation support  
ACTION: Mental Health Trusts (MHTs)
5. Mental health services need to commission specialist help with smoking cessation such as CBT  
ACTION: MHTs, PCTs
6. Patients in both in-patient and community services must be offered help with smoking cessation as part of their care package  
ACTION: MHTs
7. Staff in mental health services should understand nicotine withdrawal symptoms and how they can exacerbate mental distress, so that they can respond effectively  
ACTION: MHTs, education providers
8. Information should be made widely available to staff, service-users and visitors to mental health services about how their environment will change as a result of the smoking ban, and of any help that is available with smoking cessation  
ACTION: MHTs
9. In-patient units need to ensure that there is a sheltered outdoor space that smokers can access, and where necessary, regular escorted visits to these spaces should be offered as a priority  
ACTION: MHTs
10. Any aggression or violence toward patients and staff in in-patient settings that are believed to be linked to the smoking ban should be monitored and reported to senior managers in MHTs  
ACTION: MHTs

# 1 INTRODUCTION

## 1.1 Smoking and physical health

Most adults in the UK are aware of at least some of the health risks associated with cigarette smoking, which include cancer, heart and respiratory diseases, miscarriage, stomach ulcers, osteoporosis, cataracts and infertility. This awareness is, in part, due to a number of campaigns the Government has run in order to try and cut the £1.5 billion spent each year on treating and preventing smoking-related diseases in the NHS<sup>1</sup> as well as the additional costs it incurs through sickness and invalidity benefits and lost employment. Such campaigns increase the knowledge of risks associated with smoking, but are not always successful in enabling smokers to quit in the longer term. This is reflected in the statistics. Approximately 26% of people in the UK aged over 16 are smokers<sup>2</sup>, and recent estimates suggest that this figure is declining by as little as 0.4% each year<sup>2</sup>. Around 114,000 people die from smoking-related causes each year in the UK<sup>3</sup>, and more deaths are caused by smoking than from drug and alcohol misuse, fires, car accidents, suicides and murders combined<sup>3,4</sup>.

Smokers themselves are not the only ones whose health is threatened by cigarette smoke. Breathing second hand smoke (“passive smoking”) can have immediate and long-term health consequences for non-smoking adults and children. Many epidemiological studies have examined the relationship between passive smoking and diseases such as lung cancer, coronary heart disease and respiratory disorders. They consistently find that passive smoking increases the risk of these diseases in non-smokers by between 25 and 40%, compared to non-smokers not exposed to second-hand smoke<sup>5</sup>.

## 1.2 Smoking bans

In light of these risks, many countries have introduced nation-wide smoking bans that prohibit smoking in workplaces and enclosed public places. In March 2004, Ireland was the first country in the world to ban smoking in all indoor workplaces and enclosed public spaces, and this was followed by a number of other countries, as listed in Table 1.

COUNTRY	DATE OF IMPLEMENTATION
Norway	June 2004
New Zealand	December 2004
Bhutan	March 2005
Uruguay	March 2006
Scotland	March 2006
Singapore	July 2006
Lithuania	January 2007
Wales	April 2007
Northern Ireland	April 2007

**TABLE 1: LIST OF COUNTRIES WITH NATIONAL BAN ON SMOKING IN WORKPLACES AND PUBLIC PLACES, APRIL 2007<sup>6</sup>**

## INTRODUCTION

Although public debate has been extensive, many countries have reported high compliance with the ban and favourable responses from the general public. For example, 82% of Irish people were still in favour of the smoking ban five months after its implementation<sup>7</sup> and in Scotland, recent figures show that over 95% of workplaces are complying with the new regulations<sup>8</sup> and that the physical health of people previously exposed to second-hand smoke has improved dramatically<sup>9</sup>. A recent literature review also indicates that smoking bans have significant health and economic benefits<sup>5</sup>.

England is the last country in the United Kingdom to implement a full smoking ban in workplaces and enclosed public spaces, coming into effect on the 1st July 2007. Up to 15% of smokers have said they would quit in response to a smoking ban<sup>10</sup> and the Government predicts an estimated 600,000 people will give up smoking as a result of the law change<sup>11</sup>. As with other countries, the new legislation has provoked much discussion, not least concerning which places justify an exemption from the ban. Because prisons, care homes and hospices are considered 'private dwellings', they do not have to conform to the smoke-free legislation (although smoking areas in these establishments must meet certain requirements) and in some countries, residential mental health units are also exempt. For example, in Scotland smoking is allowed in hospital bedrooms and designated smoking rooms that have ventilation systems that do not ventilate into other parts of the building and are clearly marked as a room in which smoking is permitted. These smoking rooms are restricted to the use of residents, not staff or visitors. English legislation, however, will offer only a limited exemption to the smoking ban in residential mental health units, allowing smoking in bedrooms or rooms used only for smoking until the 1st July 2008, after which date all enclosed parts of the unit will be required to comply with the ban<sup>12</sup>.

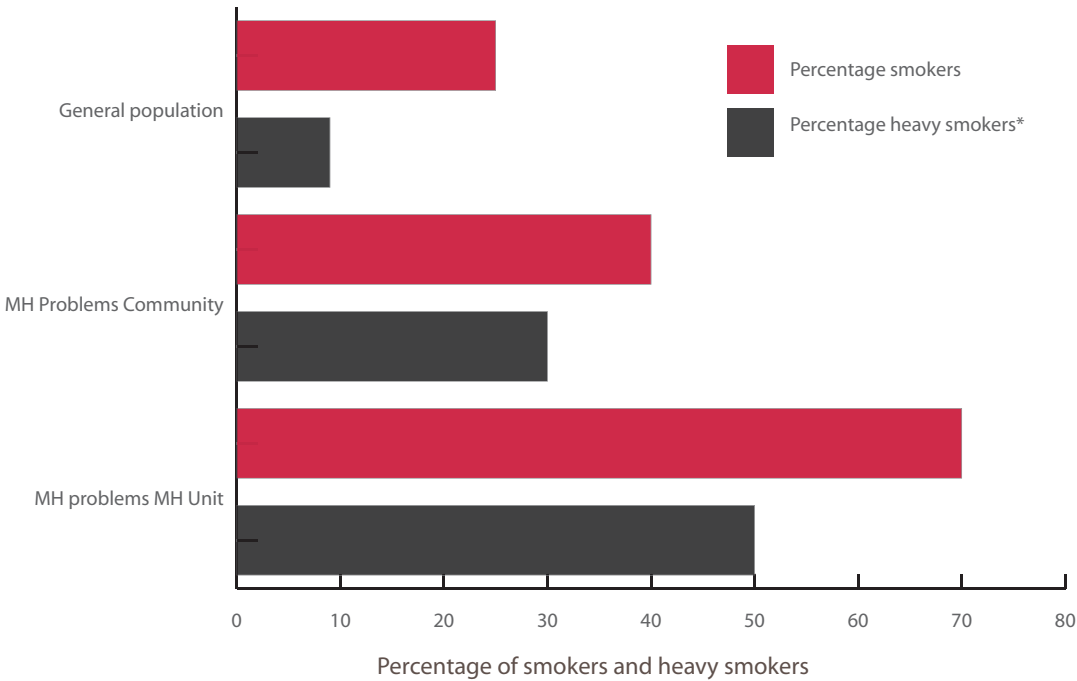
This decision has divided opinion amongst mental health service users, staff, policy makers and practitioners<sup>13</sup>. There is a need to balance the rights of staff and non-smoking service users to a smoke-free environment with the rights of service users living in residential units as their 'home' (sometimes against their own wishes). This resulted in a lengthy consultation between the Department of Health (DH) and various public stakeholders before a final decision was taken<sup>12</sup>. DH's summary of that consultation noted that a minority of submissions argued that a ban would run counter to smokers' rights, but a majority of submissions that believed that the "rights of non-smokers to breathe clean air" took precedence<sup>13</sup>.

Although this decision is far from universally welcomed, it has served to highlight another issue that is often overlooked in the public health arena. Whilst it is clear that the physical health risks associated with smoking are well publicised, less is known about the implications of smoking for mental health, despite a wealth of literature linking the two. This report explores that literature and identifies the links between smoking and mental health, both generally and in relation to stress, anxiety, depression, schizophrenia and other mental health problems. It then goes on to examine the implications that the new smoking legislation will have for those living and working in mental health units in England.

# 2 SMOKING AND MENTAL HEALTH

## 2.1 Trends in smoking and mental health

Although adult tobacco use has shown a slight decline in the last decade, smoking amongst people with mental health problems (like anxiety, depression and schizophrenia) has shown no appreciable reduction<sup>4</sup>. Recent analyses that examine trends in cigarette smoking between the years of 1972 and 2004-5 show that the proportion of the general population smoking cigarettes has fallen throughout that period, but that the rate of decline has been gradually slowing. Current estimates show that approximately 26% of the adult population (or 13 million people) smoke<sup>2</sup>. Of those, the proportion smoking more than 20 cigarettes a day (“heavy smokers”) has also fallen, from 55% to 33% for males and 40% to 27% for females. In contrast, the figures for people with mental health problems remain stable, and high. Studies of psychiatric patients in mental health units show that up to 70% smoke and around 50% are heavy smokers<sup>14-16</sup>. People with mental health problems living in the community smoke less, but still more than people in the general population, with up to 40% smoking and 30% smoking heavily<sup>17-20</sup> (see Figure 1).



**FIGURE 1: PERCENTAGE OF SMOKERS AND HEAVY SMOKERS IN THE GENERAL POPULATION, WITH MENTAL HEALTH PROBLEMS LIVING IN THE COMMUNITY AND LIVING IN MENTAL HEALTH UNITS. DATA BASED ON 2004/2005 DATA<sup>2,13</sup>.**

\*HEAVY SMOKING IS DEFINED AS SMOKING MORE THAN 20 CIGARETTES A DAY.

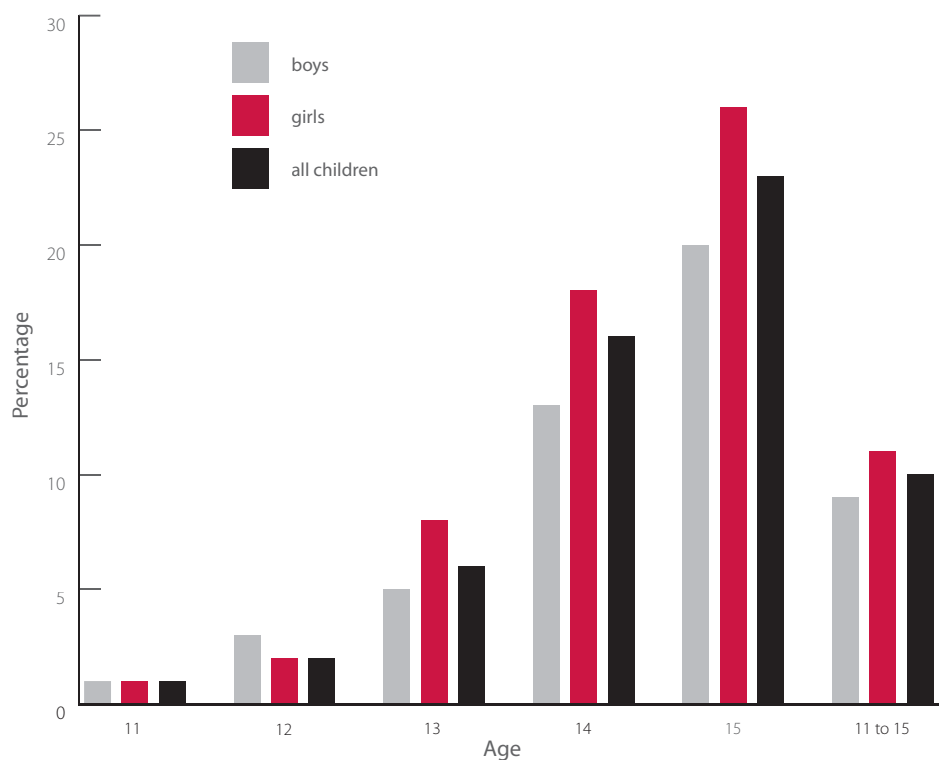
The risk factors associated with smoking – social deprivation<sup>21</sup> stress<sup>22</sup>, alcohol use<sup>14;19</sup> and poverty<sup>23</sup>, amongst others<sup>24;25</sup> – are also those that are associated with poorer mental health and therefore it is unsurprising that people with mental health problems smoke more. However, research has shown that smoking is more common amongst people with mental health problems, even when these other factors have been taken into account<sup>23</sup>. How then, can we start to explain the marked association between smoking and mental health?

## 2.2. Why do people smoke?

Although there are many factors that contribute to the association between smoking and mental health, there are some basic biological, social/cultural and psychological motivators for smoking that may help to explain at least some of the statistics outlined above.

The biological factors involved in smoking relate to the physiology of the brain and its response to nicotine. Nicotine is bi-phasic, meaning that it has a stimulating and then a depressing effect in the brain. When a person smokes, a dose of nicotine reaches the brain within about ten seconds of inhalation, producing a positive feeling. Initially, nicotine can produce effects such as improved mood and concentration, decreased anger and stress, relaxed muscles, increased heart rate and reduced appetite. These factors reinforce smoking and therefore it subsequently increases (e.g. a person smoking ten cigarettes a day self-administers about 100 times daily)<sup>4</sup>. However, this repeated use of nicotine also leads to alterations in the neurotransmitter systems in the brain (especially dopamine pathways), which then leads to nicotine withdrawal symptoms, including headaches, irritability, difficulty in concentration, increased appetite and drowsiness. Then smoking can become reinforcing simply because it temporarily reduces these withdrawal symptoms. Smokers therefore often smoke to alleviate or self-medicate these withdrawal symptoms and it is through this cyclical mechanism that most become nicotine dependent.

In addition to this biological process, social and environmental factors also play a part in creating dependence. The process of becoming addicted to nicotine usually proceeds through a series of stages, starting in late childhood or early adulthood, when individuals experiment with smoking with friends or peers. Although few 11 and 12 year old children smoke, by the age of 15 about a quarter are regular smokers. Young people in the UK have one of the highest smoking rates in Europe<sup>26</sup> and girls have consistently higher rates of smoking than boys. In 2002, 26% of 15-year old girls were regular smokers compared with 20% of boys<sup>27</sup>(see Figure 2).



**FIGURE 2: PERCENTAGE OF CHILDREN AND YOUNG PEOPLE SMOKING REGULARLY BY AGE, ENGLAND 2002<sup>27</sup>**

Although initial experimentation is common amongst a greater percentage of young people, other factors predict whether an individual will go on to become a regular smoker. These include having peers and relatives who smoke and lack of parental concern about smoking<sup>28-32</sup>. Tobacco advertising and promotion also increases the likelihood that children and young people will experiment with and continue smoking<sup>33</sup>. Advertising uses the media to create positive product imagery or associations and research demonstrates its success. For example, one study reports that up to 38% of young people who smoke believe that smokers have more friends<sup>34</sup> and others have shown that non-smoking young people who were more aware of tobacco advertising were more likely to become smokers later<sup>33;35</sup>.

Routine, habit and environmental context are also powerful social factors that keep people smoking, especially amongst people with mental health problems. One report that asked service users for their views on smoking and mental health said that a powerful reason for smoking was “that we often have nothing to do – smoking is a sociable way of passing the time”<sup>36</sup>. Other service users have also indicated that smoking is a way of regulating the day and “having something to look forward to”, and this is also a common reason given by people without mental health problems.

Much research has demonstrated the interaction of smoking with other psychological and social variables, including alcohol consumption, drug misuse, financial deprivation and singleness<sup>23;24;37</sup>. Associated with all of these factors is an increased likelihood of a person encountering stress, and therefore smoking may well be one strategy that people use to cope with stress in their lives.

## 2.3 Smoking to cope with stress and/or anxiety

The signs of stress vary from person to person, but some of the more common ones are listed in Table 2.

PHYSICAL SIGNS	EMOTIONAL SIGNS	BEHAVIOURAL SIGNS
Headaches Muscle tension or pain Stomach problems Sweating Feeling dizzy Bowel or bladder problems Breathlessness or palpitations Dry mouth Tingling in body Sexual problems	Feeling irritable Feeling anxious or tense Feeling in low mood Feeling of apathy Feeling low in self esteem	Temper outbursts Drinking or smoking too much Changes in eating habits Withdrawing from usual activities Becoming unreasonable Being forgetful or clumsy Rushing around

**TABLE 2: SIGNS OF STRESS<sup>38</sup>**

Stress is very common in the UK. Although it is hard to estimate exactly how many people are experiencing stress at any given time, a recent survey indicated that around 420,000 individuals in Britain believed that they were experiencing work-related stress at a level that was making them ill<sup>39</sup>. Stress is not only related to work. Many life events can increase stress, including death of a loved one, divorce or relationship breakdown, getting married, moving house, changes in employment, pregnancy, changes in leisure activities or spiritual habits, minor legal problems, financial pressure, lack of time and family gatherings. One of the common consequences of stress is mild to moderate anxiety, which is characterised by feelings of nervousness, worry, fear, panic or tension and which can often affect an individual's ability to concentrate or relax.

Some research has shown that smoking may be used as self-medication to counter stress and the effects of anxiety<sup>21,40</sup> and this is supported by the suggestion that smokers tend to have more stressful lives than non-smokers<sup>41</sup>, although other factors probably also contribute to this association. In one large study in Wales, smoking was associated with anxiety, being female, having lower income and educational qualifications, looking after the family or home and being aged over 25<sup>26</sup>, some of which are also factors associated with stress and anxiety<sup>42</sup>. Similarly, the 1995 British Household Survey found that 47% of people with a generalised anxiety disorder smoked, compared to 29% of the population with no anxiety disorder. The self-medication hypothesis has been explored in a number of populations and found to be a consistent explanation for smoking behaviours. For example, one study looked at the effects of loneliness on health behaviours<sup>43</sup>. People who found loneliness stressful were more likely to smoke and to smoke heavily than non-lonely individuals. Similarly, in a group of women with eating disorders, the strongest motivator for smoking was coping with stress, rather than to suppress appetite or to lose weight<sup>41</sup>. One Scottish study describes the barriers faced by women living in deprived circumstances if they want to give up smoking<sup>24</sup>. One of the most frequent reasons the respondents offered in explaining their smoking behaviours was that it was a coping mechanism. Many of the women displayed symptoms of anxiety, which they believed smoking helped with. Ironically, one of the key features of their anxiety was a feeling of guilt about their inability to stop smoking and its impact on their own and their children's health, and this anxiety itself exacerbated their smoking behaviour.

This last example shows the circular nature of using cigarettes to self-medicate. Although many smokers do report that smoking helps to relieve stress, studies show that tobacco does not offer real benefits in terms of stress control or management, nor does it reduce anxiety in anything other than the immediate term. This is partly because of the cyclical nature of nicotine use described earlier: smoking creates an immediate sense of relaxation or mental alertness, but this very soon then gives way to withdrawal symptoms, increased cravings and agitation, which in provoke the need to smoke more to calm these feelings of anxiety. One review examined the findings of over 30 international studies into smoking and stress and reached the conclusion that instead of helping smokers to relax, it actually increases anxiety and tension<sup>24,44-48</sup>.

This is recognised by many smokers. One report that asked 85 service users for their views on smoking concluded that often people "... use smoking as a way of calming down and relaxing. Even if physiologically it doesn't do this, in our minds cigarettes are a good way of dealing with a stressful environment."<sup>36"</sup>

This points to the need for smokers to adopt other ways of relaxing if they want to reduce or cut out entirely the number of cigarettes they smoke. There are many alternative strategies people can use to help them cope with stress and anxiety if they do not want to use cigarettes to do this (see 'Further information and resources' on page 31), but some strategies that have been consistently shown to help include meditation and breathing exercises<sup>38</sup>, regular exercise<sup>49</sup>, cutting down on alcohol<sup>50</sup> and eating a well-balanced diet<sup>51</sup>, counselling or talking things through with a supportive friend or family member<sup>38</sup>, identifying the source of the stress/anxiety and trying to find ways to reduce or overcome it<sup>52</sup>, religious or spiritual activities<sup>51</sup> and making time for leisure and/or entertainment pursuits.

## 2.4 Smoking and depression

Depression is another mental health problem that is associated with smoking. Many people in the UK have experienced one or more symptoms of depression at some stage in their lives and approximately 1 in 10 adults at any one time will experience levels severe and lasting enough to affect their quality of life and ability to function well<sup>14</sup>. Signs of depression are physical, emotional and behavioural and include the following:

- feeling miserable and sad
- feeling exhausted a lot of the time with no energy
- feeling as if even the smallest tasks are sometimes impossible
- not enjoying things that you used to enjoy, like sex, food, exercise or socialising
- feeling anxious or irritable
- finding social activity hard or impossible
- finding it difficult to think clearly
- feeling like a failure and/or feeling guilty a lot of the time
- feeling hopeless or that perhaps life isn't worth living
- spending time thinking about what has gone wrong, what will go wrong or what is wrong about yourself as a person
- difficulty sleeping or waking up very early in the morning, unable to sleep again
- physical aches and pains which appear to have no physical cause, such as back pain

International studies exploring the association of depression with smoking have shown that people with depression are more likely to smoke and smoke earlier in the day, as well as finding it harder to quit than people without depression<sup>53,54</sup>. In the UK, smoking amongst people with depression living at home is around 56% and is higher among women than men<sup>20</sup>. A more recent study in England, with a sample of 15,000 adults, found that smokers had higher rates of depression than non-smokers, especially amongst women<sup>55</sup>. Similar results have been found in Wales<sup>26</sup> and Scotland<sup>24</sup> as well as in acute mental health units across the UK<sup>53</sup>.

The association of smoking with depression is not restricted to adults. One international study demonstrated that depression was strongly associated with smoking in young people (aged 15-19 years)<sup>37</sup> and British data is similar. Children aged 11-15 years who smoke are 5 times more likely to experience emotional disorders than their non-smoking peers<sup>56</sup> and this trend is likely to continue into adulthood<sup>33</sup>.

Studies have also shown that people with depression have difficulty when they try to stop and that the severity of depression predicts how long it will take someone to start smoking again when attempting to quit<sup>57</sup>. People with depression also tend to report more severe withdrawal symptoms during attempts to give up smoking<sup>58-60</sup> and are also at increased risk of developing a new episode of depression for up to six months after quitting<sup>61</sup>.

This may be due in part to the role that certain neurotransmitters play in both smoking and depression. As mentioned earlier, nicotine has been shown to stimulate dopamine release in the brain. Dopamine is particularly involved in feelings of reward and reinforcement and is often found to be depleted or inadequate in people with depression. When the brain is 'flooded' by an artificial supply of a neurotransmitter (for example, dopamine triggered by a cigarette), the brain's receptors respond by 'closing down' until the excess has been absorbed or 'metabolised' by the brain. This can create a vicious circle, where the brain receptors close down in response to nicotine in cigarettes, which then prompts the smoker to increase their smoking to get the receptors to 'open up' again. However, because smoking is cyclical, this self-medicating strategy doesn't really work. The artificial supply of dopamine from smoking cigarettes eventually depletes the brain's own resources and the depression may worsen due to the ever diminishing supply. This may explain the increased difficulties people with depression encounter when they try to quit.

Stress, anxiety and depression are common mental health problems in the UK<sup>2</sup> and many people experience some of the symptoms without ever receiving a formal diagnosis from a health practitioner. It is possible that many people in the general population smoke to self-medicate mild to moderate levels of these problems, as they do with other substances like alcohol and caffeine (for further information, see Mental Health Foundation's publications on the role of alcohol and diet in mental health<sup>50,62</sup>). The self-medication hypothesis is one that has also been proposed to account for the very high number of people with severe and enduring mental health problems who are also smokers.

### 2.5 Smoking and schizophrenia

Schizophrenia is a severe and often enduring mental health problem, characterised by hallucinations, delusions and disordered thinking ("positive symptoms") as well as under-activity, low motivation and social withdrawal ("negative symptoms"). It occurs in approximately one in every hundred people, usually developing between age 15 and 25 in men and 25 and 35 in women. People with schizophrenia are more likely to smoke, and smoke more heavily, than other populations<sup>21,63-65</sup>, including those with neurotic (mood) or other psychiatric disorders<sup>66</sup>. Rates of smoking amongst people with schizophrenia remain stable at about 70-74%, regardless of whether they are living in mental health units or in the community<sup>67</sup> and on all the indicators of nicotine dependence (number of cigarettes smoked per day, perceived difficulty in stopping and time to first cigarette after waking up), people with schizophrenic illnesses show signs of extremely high dependence<sup>53</sup>.

Given these figures, it is not surprising that people with schizophrenia are more likely to die from a smoking-related disease than other people<sup>53,65</sup>. One study showed that the high rate of smoking amongst people with mental illness, alongside a diet lower in fruit and vegetables and higher in saturated fats, means that the risk of death from heart or respiratory diseases is greater than the risk posed by suicide, traffic accidents or natural (non smoking-related) causes<sup>68</sup>. Furthermore, smokers with schizophrenia are more likely to die of smoking-related diseases even when other relevant factors are taken into account<sup>13</sup>.

Many studies have explored the reasons why people with schizophrenia are more likely to smoke and suggestions have included the possibility that they find it harder to quit once they start and that they start smoking younger<sup>69</sup>. There are also explanations that consider other associated psychosocial risk factors involved in both smoking and schizophrenia, like substance or alcohol abuse<sup>64</sup> and nutritional deficiencies<sup>68,70</sup>. In addition, some studies argue that smoking is associated with the culture of inpatient psychiatric wards and that smoking rates amongst people with mental illness reflect factors such as boredom, lack of alternative activities, peer pressure, using cigarettes as reward, punishment or currency and lack of smoking policies within such settings<sup>53,71</sup>. Service users themselves have said that smoking is a "sociable way of passing the time" because they "often have nothing else to do"<sup>36</sup> when staying in psychiatric hospitals.

One of the most popular explanations proposed to account for the increased smoking rates amongst people with schizophrenia is the self-medication hypothesis<sup>61,64,72-74</sup>. That is, people with schizophrenia use smoking – and the dose of nicotine it provides them with – to control or manage some of the symptoms associated with their illness and to reduce some of the side effects of their medication<sup>73</sup>. There is some evidence to support this biological explanation of smoking and it centres around the role dopamine plays in mood and motivation. The positive symptoms of schizophrenia appear to be more responsive to medication than the negative symptoms, which are suggested to be associated with reduced activity in the prefrontal cortex of the brain<sup>75</sup>. The medication, however, works by blocking dopamine receptors in the brain, thus blocking the passage of nerve signals by dopamine and, as a byproduct, reducing feelings of pleasure and reward. In addition, antipsychotic drugs can also cause side effects, which may include unusual body movements, such as dystonia (prolonged muscle spasms), akathisia (restlessness and agitation), and Parkinsonian movement disorders (including stiffness, shakiness and feeling

drowsy). Nicotine use promotes the release of dopamine and this release could, theoretically, reduce the negative symptoms associated with schizophrenia and some of the side effects of medication.

There is plenty of research looking at the self-medication hypothesis<sup>61,64,72,73,76</sup>, although only a few studies have asked people with schizophrenia and service users themselves why they smoke. One Canadian study that interviewed 100 people with schizophrenia found that the strongest motivators for smoking were relief of negative symptoms and reducing side effects of medications<sup>75</sup> and these were consistent across the group regardless of how severe their symptoms were. Others have also found that the major motivators for smoking were habit and routine, socialisation, relaxation, addiction<sup>77</sup> and to calm nerves<sup>78</sup>. Other studies have also found that relief from the side effects of medications is a popularly cited reason for smoking amongst people with schizophrenia<sup>53,79</sup>. Service users in Scotland have said that smoking is a comfort that enables them to relax in an otherwise stressful and confined environment<sup>36</sup>.

One reason that the self-medication hypothesis needs further investigation is that whilst it proposes that people with schizophrenia smoke to decrease their symptoms, they usually start smoking before the onset of their illness and heavy smoking is not consistently associated with fewer symptoms of schizophrenia<sup>72</sup>. In other words, the direction of effects between smoking and schizophrenia is unclear: does smoking increase the chances of becoming ill or does being ill increase the chances of smoking or does something else contribute to both? A recent Cochrane review found no studies that support the theory that nicotine alleviates symptoms of schizophrenia<sup>80</sup>. Therefore, greater attention is needed to understand how a complex interaction of biological, social, environmental and psychological factors<sup>64</sup> serve to maintain dangerously high smoking rates in people with schizophrenia.

## 2.6 Smoking and Alzheimer's Disease

Alzheimer's Disease (AD) is the most common form of dementia and there are an estimated 400,000 people in the UK who have it<sup>81</sup>. AD is a progressive, physical disease of the brain, in which there is a gradual and continual death of brain cells. Symptoms include loss of memory, confusion, mood swings and withdrawal. It has become more common in the past fifty years and is believed to be the result of a combination of factors, including age, genetics and environmental factors<sup>82</sup>.

Whilst smoking has been reported in some studies to be a risk factor that may increase the likelihood of a person developing AD<sup>83,83-87</sup>, other research has shown a tentative inverse relationship between smoking and Alzheimer's. For example, one English study comparing 198 people with AD to 164 people with other dementias and 176 people with no dementia, found that smoking lowered the risk of Alzheimer's disease, but only in people who had not already died of a smoking-related disease and only in males. The finding was also more common amongst people with a familial disposition to the disease<sup>81</sup>.

This is consistent with the argument that nicotine may have a neuroprotective effect in AD, as it appears to alleviate the neurological impairment associated with the disease<sup>83,85,88</sup>. It has been hypothesized that nicotine from smoking may compensate for the loss of nicotinic receptors reported in AD, hence the observed relatively reduced risk in smokers compared to non-smokers<sup>85-87</sup>. However, the increased risk of other smoking-related diseases still outweighs any evidence of the use of nicotine to reduce symptoms of Alzheimer's. A decade later, a Cochrane review concluded that there was still "no evidence on which to recommend nicotine for Alzheimer's disease"<sup>89</sup> and the debate appears no less controversial today<sup>88,90-92</sup>.

## **2.7 Conclusions about smoking and mental health**

With all of the associations identified between smoking and mental health, it is hard to determine the direction of effects. Does smoking lead to poorer mental health, does poorer mental health lead to smoking, or do other underlying and psychosocial factors contribute to both? It is still not entirely clear. This is partly because the research required to disentangle and answer these questions is lengthy, expensive and hard to design. Although research is increasing our understanding of the complexities and interactions between biological, physical, mental, emotional and spiritual dimensions of being human, we still do not have all the answers.

What is clear is that many smokers with mental health problems say that they would like to stop smoking, but struggle when they try to do so. For example, the proportion of smokers with schizophrenia who say that they would like to quit is between 40 and 50%, and those with depressive disorders even higher, although quit rates in the two populations are significantly lower than those in the general population<sup>13</sup>. Therefore, it is important that intervention and cessation strategies are effective in supporting smokers with mental health problems that want to quit. Some of these are summarised in the following section.

## 3 SMOKING CESSATION AND MENTAL HEALTH

### 3.1 Smoking cessation programmes

Whilst smokers would have been once left to quit smoking through will-power alone, there is now recognition that sudden withdrawal (or going “cold turkey”) is the least effective route to quitting smoking in the long term<sup>4</sup>. As such, there are now a vast number of smoking cessation programmes aimed at helping the 70% of the smoking population who say that they would like to quit<sup>93</sup>, to do so. Programmes vary in their approaches, with some emphasising psychosocial or cognitive techniques and others encouraging the use of pharmacological (e.g. drug and chemical) interventions. Such is the array of potential strategies that the Government has recently requested that the National Institute for Health and Clinical Excellence (NICE) develop guidance for the NHS and other organisations on the effectiveness of different types of smoking cessation services<sup>94</sup>. They have already published guidance on brief interventions and referrals for cessation in primary care and other settings<sup>95</sup> and a review of smoking behaviour initiatives that address socially disadvantaged populations<sup>96</sup>. Their most recent (draft) guidance on smoking cessation recommends the use of varenicline (Champix), a drug shown to help people who want to quit, which should normally be offered in conjunction with counselling and support. After final consultation of these draft recommendations, varenicline should be available on the NHS from July 2007<sup>97</sup>.

In addition, the Cochrane Collaboration has published over 100 reviews of different smoking intervention and cessation programmes, the most recent of which are summarised in Table 3.

<b>Title</b>	<b>Authors' Conclusions</b>
Nicotine receptor partial agonists for smoking cessation <sup>98</sup> , 2007	“The evidence on cytisine is limited at present, and no firm conclusions can yet be drawn about its effectiveness as an aid to quitting.”
Antidepressants for smoking cessation <sup>99</sup> , 2007	“Selective serotonin reuptake inhibitor antidepressants (for example, fluoxetine) have not consistently been shown to help smoking cessation.”
Opioid antagonists for smoking cessation <sup>100</sup> , 2006	“The effects of some opioid antagonists (e.g. naltrexone, naloxone) on withdrawal symptoms and the pleasurable effects of smoking are as yet unclear.”
Clinical and cost-effectiveness of nicotine replacement therapy for new licensed indications and combination therapy: A summary of best evidence <sup>101</sup> , 2006	There is a need for more robust primary research and regular review of the evidence base of the clinical and cost-effectiveness of NRT use.”
Telephone counselling for smoking cessation <sup>102</sup> , 2006	“Our review of trials found telephone counselling to be effective; multiple sessions are likely to be most helpful.”

### 3 SMOKING CESSATION AND MENTAL HEALTH

Title	Authors' Conclusions
Acupuncture and related interventions for smoking cessation <sup>103</sup> , 2006	"The review did not find consistent evidence that active acupuncture or related techniques increased the number of people who could successfully quit smoking. However, acupuncture may be better than doing nothing, at least in the short term; and there is not enough evidence to dismiss the possibility that acupuncture might have an effect greater than placebo."
Competitions and incentives for smoking cessation <sup>104</sup> , 2005	"Competitions and rewards may attract more people to make a quit attempt than might otherwise do so, but cessation rates remain the same as for non-contestants."
Quit and Win contests for smoking cessation <sup>105</sup> , 2005	"International quit and win contests are often well supported, especially in developing countries, but there is no clear evidence from trials that they are effective."
Healthcare financing systems for increasing the use of tobacco dependence treatment <sup>106</sup> , 2005	"There is not enough evidence to show whether offering financial incentives to healthcare providers for identifying and treating smokers is effective in increasing the number of smokers who quit."
Individual behavioural counselling for smoking cessation <sup>107</sup> , 2005	"The review found that individual counselling could help smokers quit, but there was not enough evidence about whether more intensive counselling was better."
Self-help interventions for smoking cessation <sup>108</sup> , 2005	"Advice and behavioural counselling can help smokers to quit."
Exercise interventions for smoking cessation <sup>109</sup> , 2005	"There is evidence from only one trial that an exercise programme helps more smokers quit in the long term than smoking cessation support alone."

**TABLE 3: SUMMARY OF RECENT COCHRANE REVIEWS ON SMOKING CESSATION PROGRAMMES**

It is clear from Table 3 that cessation programmes for smokers in the general population vary in their effectiveness. Some approaches seem to work better than others – for certain people – and some require further research to determine if and how they can become more useful to people wanting to quit.

## 3.2 Smoking cessation programmes for people with mental health problems

Approximately half of smokers with mental health problems would like to stop smoking<sup>53,67</sup> and yet cessation rates remain around two to three times lower than those seen in people without mental health problems<sup>110</sup>. As well as the physical addiction of smoking, it involves many psychosocial risk factors (e.g. stress, poverty, social deprivation, unemployment, poor diet, etc.) that cannot be changed quickly, and which may serve to maintain smoking, or at least hinder efforts to stop. Smokers with mental health problems may also have less support than others or be living in an environment (e.g. an inpatient psychiatric unit) where smoking is the norm and to try to give up would involve isolation, or a dramatic reduction in social contact with other people, which in itself can be stressful or unpleasant<sup>38</sup>. One service user in Scotland reported being “totally isolated” in hospital because she avoided the smoking room and others have suggested that they would refuse to be admitted if they couldn’t smoke or that they would be more inclined to leave earlier if stopped from smoking<sup>36</sup>.

This points to the possibility that mainstream smoking cessation programmes may not adequately address and meet the needs of people with mental health problems. If quit rates amongst people with mental health problems are to increase, we need to understand which cessation strategies recognise the different and inter-related reasons for smoking and identify those that adopt an integrated approach that empower people to stop.

Smoking cessation is not likely to be successful when a person with mental health problems is experiencing a crisis or when psychotropic medications are being changed<sup>4</sup>. However, if a person decides that they want to quit smoking when they are feeling stable, there are two broad approaches that may empower them to do so, especially if techniques from both approaches are combined to best meet the needs of the individual. Psychosocial strategies, like counselling and cognitive therapy, and pharmacological interventions, like nicotine replacement therapy (NRT) or medication, are available to smokers wanting to quit and research examining the efficacy of both approaches is summarised below.

### 3.2.1 Psychosocial approaches to smoking cessation

Although some therapeutic techniques (e.g. acupuncture and hypnotherapy) may benefit some individuals wishing to quit smoking, there is not sufficient evidence of their efficacy for them to be routinely offered within the NHS<sup>103,111</sup>. Therefore, this section focuses on those approaches that are more widely available.

Different types of counselling have been shown to be effective in helping people stop smoking. A recent review of the literature looked at trials of individual counselling by a trained therapist providing one or more face-to-face sessions, separate from medical care. All the trials involved sessions of more than 10 minutes, with most also including further telephone contact for support. The review found that individual counselling could help smokers quit, but there was not enough evidence about whether more intensive counselling was better<sup>107</sup>. Equally effective is group counselling. In a review of studies of group therapy where individuals have the opportunity to provide each other with mutual support, it was found that group therapy is better for helping people stop smoking than self-help programmes, and other less intensive interventions. There was not enough evidence to evaluate whether groups are more effective, or cost-effective, than intensive individual counselling, although both are better than some other forms of treatment<sup>112</sup>. Even telephone counselling helps smokers interested in quitting. One recent review examined how useful telephone counselling is in helping smokers to quit and remain abstinent for at least 6 months<sup>102</sup>. They found that although one or two brief calls are less likely to provide a measurable benefit, three or more calls increased the odds of quitting compared to a minimal intervention such as providing standard self-help materials, brief advice, or compared to nicotine replacement therapy alone.

Many counselling programmes incorporate cognitive behavioural therapeutic techniques and social skills into their training. Cognitive behavioural therapy (CBT) aims to try and change both a person's cognitions (mental processes, perceptions and assumptions) and their behaviour, and several studies have shown that it may be particularly effective in smokers with depression or schizophrenia. For example, one study compared the effectiveness of CBT with health education (HE) as a smoking cessation tool in smokers with major depressive disorder (MDD)<sup>113</sup>. It found that smokers with a history of recurrent MDD had higher rates of abstinence in CBT compared with HE even when taking into account other relevant factors. Further improvements can be made in smoking cessation for heavy smokers with depression or with people whose depression is recurrent, if the standard smoking cessation CBT includes a component directly concerned with the smoker's depression<sup>114</sup>. Some have argued that CBT is effective as a smoking cessation technique in people with depression because it empowers individuals to change unhelpful attitudes, decrease the use of inappropriate coping techniques, increase their use of adaptive coping and improve negative mood in a way that other techniques may not<sup>115</sup>. Furthermore, continuous abstinence after a programme of CBT has been associated with short- and long-term reductions in depressive symptoms. This suggests that depression affects smoking behaviour, smoking affects depression and both affect the likely success of trying to quit<sup>116</sup>.

CBT has also proven to be an effective technique in smokers with schizophrenia who want to quit, although studies have only examined such programmes in combination with pharmacological interventions<sup>117-119</sup>. Some of these are described below.

### 3.2.2 Pharmacological approaches to smoking cessation

Broadly speaking, there are three types of pharmacological intervention associated with smoking cessation: nicotine replacement therapy (NRT, in the form of gum, transdermal patches, nasal spray or vapour inhaler), antidepressants (specifically Bupropion (also called Zyban) and nortriptyline) and other medications. All of these have been shown to be effective in helping smokers without mental health problems to stop smoking<sup>99,120,121</sup>. There are few studies that explore the efficacy of these interventions in people with different mental health problems, although those that have show some promising results. For example, NRT has been shown to be safe and effective with inpatient psychiatric populations<sup>122</sup>, although higher strength patches (21 mg per day) may require supplementation with gum or spray because individuals in acute care tend to be heavier smokers. Similarly, smokers with depression are likely to benefit from treatment with Bupropion or nortriptyline in attempts to quit, although the medication needs to be prescribed for longer than the recommended 8 week duration for non-depressed smokers<sup>123-125</sup>. The remaining studies that have considered the effectiveness of pharmacological interventions in people with mental health problems have usually considered them in combination with another approach.

### 3.2.3 Combined approaches to smoking cessation

Nicotine replacement therapy has proven benefit for smokers wishing to quit, but appears to be more effective when combined with a psychosocial intervention, such as counselling or CBT<sup>101,117</sup>. One study has also shown that this combination is effective among individuals with psychotic disorders<sup>118</sup>. It compared routine care (NRT only) with NRT, CBT and motivational interviewing combined. At three months follow up, smokers who completed all treatment sessions were also more likely to have achieved continuous abstinence than those in the other group or those who did not attend all sessions. CBT also seems to improve quit rates amongst smokers with schizophrenia when used in combination with other pharmacological interventions. For example, one randomized controlled trial looked at the effect of including sustained-release Bupropion alongside CBT on

smoking behaviour and stability of symptoms in people with schizophrenia<sup>117</sup>. The combined intervention was associated with significantly greater reduction in smoking during the 3-month active treatment period and the 3-month follow-up period. It was also associated with improvement in negative symptoms and greater stability of psychotic and depressive symptoms during the quit attempt.

One study has shown that a combined approach may also be effective in smokers with depression who want to stop smoking<sup>126</sup>. It compared smoking cessation rates amongst people who had received 10 weeks of CBT and fluoxetine together with those who had just received the antidepressant. Results showed that smoking rates in the combined group were greater than those in the control group for people experiencing moderate (but not mild) levels of depression. Another study, however, did not find any improvement in smoking cessation rates using fluoxetine with CBT, either for those with or without depressive disorders<sup>127</sup>.

Given the high rates of smoking amongst people with mental health problems and the contrasting lack of evidence identifying which cessations may most empower them to quit, the Government needs to prioritise research in this area. Although one review is underway that will evaluate the effectiveness of smoking cessation interventions in people with schizophrenia and other psychotic disorders<sup>128</sup>, research is also needed that better understands the way in which genetic, neurobiological, social, environmental and psychological factors interact to maintain smoking in vulnerable populations<sup>4</sup>.

Some have argued that implementing smoke-free bans in inpatient mental health units will go some way in helping smokers with mental health problems to quit<sup>4</sup>, although others have responded by suggesting that such bans do not recognize individuals' rights and are not an appropriate environment in which to enable smokers to stop smoking, should they want to<sup>74</sup>. The introduction of new smoking legislation in England has fuelled much debate about the possible consequences of a ban in mental health settings<sup>129-134</sup>.

## 4 SMOKING BANS AND MENTAL HEALTH

### 4.1 Smoking and UK Legislation

In 1998, the UK White Paper 'Smoking Kills' outlined a Code of Practice on passive smoking in workplaces in order to prevent workers being exposed to the risks created by second-hand smoke<sup>135</sup>. It was followed by the Government White Paper 'Choosing Health: Making Healthier Choices Easier', which promised new action to tackle smoking<sup>136</sup>. Since then, the Department of Health has introduced a tobacco programme consisting of six strands<sup>137</sup>:

1. legislation to introduce measures reducing exposure to second-hand smoke
2. tobacco media and education campaigns
3. reducing availability and regulating supply of tobacco
4. NHS stop smoking services and nicotine replacement therapy
5. regulating tobacco products
6. international issues

The most recent legislation to progress through Parliament – the Health Act 2006 – introduces smoke-free public places and workplaces throughout England and Wales (legislation in Scotland was introduced in 2006). Although the NHS has been working towards smoke free hospitals for a few years now<sup>21</sup> and aimed to be completely smoke free by the end of 2006<sup>136</sup>, exceptions for inpatient mental health service users were allowed to be made on a case-by-case basis. This changes under the regulations of the new Act. Only mental health units that normally provide long-term residential accommodation for over 6 months will be exempt and permitted to provide designated smoking rooms. Those not meeting this criteria are not exempt from the ban and are obliged under the new regulations to implement a full smoking ban within one year of the Act becoming law.

### 4.2 Smoking bans and mental health services

The Health Act has divided opinion amongst practitioners, health professionals and service users. Some have argued that a total ban on smoking will help to lower the exceptionally high rates of smoking seen amongst inpatient mental health service users, including amongst young service users<sup>138</sup>. One study that supports this view asked psychiatric inpatients their views and beliefs on smoking and found that over 77% cited "seeing staff and other patients smoking, as well as the smoky atmosphere" as the greatest barrier they faced in quitting<sup>139</sup>. Participants in another study argued that non-smoking policies in mental health units would help individuals to avoid the isolation or social exclusion that often comes with attempting to quit (or being a non-smoker), as smokers usually congregate within a designated area and use their time smoking to engage socially with others<sup>79</sup> or pursue other leisure activities (e.g. reading the newspapers or watching TV, both of which are often situated in the smoking room). Others have also argued that smoking bans in inpatient units are essential because "it is very difficult to motivate patients to quit ... where smoking is permitted."<sup>4</sup>

In light of these arguments, clinicians and researchers in the UK have strongly endorsed the new legislation and also called for a reconsideration of the proposal to exempt mental health units where service users stay for more than six months<sup>140</sup>. They argue that exemption from the Act will "exclude mental health patients from mainstream health improvement strategies and exacerbate the inequalities they already experience" and that similar arguments apply to those living in prisons, who also have a higher rate of mental health and substance abuse problems<sup>140</sup>. Furthermore, as many as one third of all inpatient units have people who live there for a year or more, which implies that the ban cannot be implemented. Service users have themselves picked up on this issue and argued that it is unfair to implement a ban when for some people "hospital ... literally is home"<sup>36</sup>.

Some employees of the NHS seem ideally placed to help smokers stop smoking. Recent Cochrane Reviews have found that advice from nurses and doctors helps smokers quit, especially if they are in hospital<sup>141;142</sup>. However, NHS staff working in acute mental health services are some of the more vocal critics of the new legislation, perhaps because it may be a more challenging and controversial issue in mental health care<sup>143</sup>. One study asked 2574 NHS staff working in England about their attitudes towards the smoking ban and about their role in smoking interventions<sup>143</sup>. Results were analysed according to whether the staff were general hospital staff or worked in a mental health setting. The analyses showed that staff members working in a mental health setting were significantly less in favour of smoke-free health care settings (60%) than general staff (82%) and that these differences remained even when controlling for age, sex, smoking status and professional group. These results are consistent with a previous survey of staff in an English psychiatric hospital, which found that 60% of staff believed that they should smoke with patients, 54% believed that smoking had a therapeutic role and 93% believed that patients would deteriorate without access to cigarettes<sup>144</sup>.

The fear that banning smoking would lead to deterioration in patients' mental state has also been reported in other surveys<sup>13;61;132;145</sup>. For example, a recent King's Fund survey of 151 mental health units<sup>13</sup> found that respondents repeatedly stated that smoke-free regulations would provoke aggressive and agitated behaviour, verbal abuse and violence from patients. Others, meanwhile, have found that non-smoking policies are generally accepted as necessary by nursing staff working in psychiatric hospitals, but that such policies are not effective in motivating staff themselves to stop smoking and/or that insufficient support is given to help staff implement them<sup>146</sup>. The intensity of the debate amongst mental health nurses may also be a reflection of the high rates of smoking amongst mental health nurses both in the UK<sup>144</sup> and internationally<sup>145</sup>. Given that service users say that one of the barriers to stopping smoking is seeing other patients and staff smoking<sup>4;139;147</sup>, then nurses' own smoking behaviour and attitudes need to be fully taken into account during the implementation phase of the new smoking legislation.

Service users have also recorded other barriers to stopping smoking, such as weight gain<sup>21</sup>, fear of isolation or exclusion from the 'smoking culture' prevalent in psychiatric settings<sup>139</sup>, impact of quitting on medication<sup>148</sup> and lack of awareness that Nicotine Replacement Therapy was available on prescription<sup>21</sup>. Alongside these fears and perceptions of the implementation of a smoking ban in mental health units is the argument that it is unrealistic and unfair to require people to stop smoking at the time of admission to hospital, due to their level of distress at this time<sup>74</sup>. One report summarised service users' views by saying that smokers with mental health problems "need to be helped to find ways to give up when we are ready and prepared to do so. This would probably not be at a point in our lives where we are already dealing with a host of other problems"<sup>36</sup>. One UK mental health charity has argued that inpatient units should have "a designated, enclosed but well ventilated place where smoking is permitted"<sup>74</sup> (such as they have in Scotland and Ireland, for example) and another has suggested that a complete smoking ban was difficult to imagine as a "significant portion of patients will be there under compulsion"<sup>149</sup>. Both of these organisations underline the right of residential mental health service users to choose their lifestyle, a right which would enable them to smoke in their home, if they so desired.

The right of smokers with mental health problems was considered during the consultation phase of the Bill, but the Department of Health concluded that the "rights of non-smokers to breathe clean air" took precedence<sup>149</sup>. In light of this, and the subsequent decision to deny mental health units an exemption from the smoking ban, it is worth considering how such legislation has been implemented in other countries.

### 4.3 Smoking bans in other countries

The smoke-free legislation in England and Wales could be an asset to staff and users of psychiatric services who want to quit smoking. Studies from around the world have shown that it is possible to introduce smoking bans in psychiatric units without negative consequences. One review of the international literature looked at 26 studies concerned with partial or full smoking bans in psychiatric inpatient settings<sup>132</sup>. The conclusion it drew was that clear and simple policies implemented in a consistent manner to all patients were more effective than partial or gradual bans, which often led to increased possibilities for conflict, complaints and verbal aggression. The review found no increase in violence or aggression in 90% of the sites imposing a total ban and attitudes to a smoking ban often became more positive after implementation. Similar results were found in an earlier review of 22 studies from around the world<sup>150</sup>.

Because smoking is still allowed in designated rooms in psychiatric units in Scotland, it is not possible to gain an idea of how the smoking ban will affect English mental health units by examining how Scottish mental health units have fared in the last year, although initial reports seem to suggest a general tolerance of the ban<sup>36</sup>. However, a few units in England have introduced smoke-free policies ahead of the legislation and have found them to provide the staff with an opportunity to take seriously the physical health of patients and embrace a more holistic approach to their care<sup>151</sup>. Although staff did get some complaints from patients, these did not result in overt defiance of the ban, especially when the reasons for the ban had been explained and understood. Some of the staff indicated that the removal of cigarettes as bargaining tools encouraged them to find other ways of interacting with patients and smoking rooms were being used for activities that benefited the entire community of people living there<sup>151</sup>.

It seems likely that smoking bans in mental health units are not destined to result in the increased levels of aggression, verbal abuse or deterioration in service users' mental states that some staff anticipate. However, little research has examined whether smoke-free policy improves rates of quitting or relapse amongst service users or staff. One review concluded that whilst "policies have had no major longstanding untoward effect in terms of behavioural indicators of unrest or compliance ... they appear to have had little or no effect on smoking cessation."<sup>150</sup> An earlier study found that "abrupt cessation of smoking did not significantly affect either the severity or the improvement of psychopathological symptoms during hospitalisation"<sup>152</sup>, although others have argued that users of inpatient mental health services can only be expected to limit their smoking if given adequate and appropriate support<sup>13;61;132</sup>.

This is well illustrated by a study that examined delivery of tobacco cessation services in a smoke-free inpatient psychiatric setting<sup>148</sup>. It reviewed the medical records of 250 psychiatric inpatients, of whom 105 were identified as current smokers. None of the smokers received a diagnosis of nicotine dependence or withdrawal, and smoking status was not included in treatment planning for any patient. Nicotine replacement therapy (NRT) was prescribed for 59 smokers (56%), of whom 54 used it. The results showed that smokers who were not given NRT were more than twice as likely as nonsmokers and smokers given NRT to be discharged from the hospital against medical advice. Only one smoker was encouraged to quit smoking, referred for cessation treatment, or provided with nicotine replacement therapy on discharge. Other studies have also shown that abrupt withdrawal of cigarettes without support ("cold turkey") is the least effective method of smoking cessation<sup>4</sup> and that mental health service users respond well to NRT, especially if used in combination with psychosocial techniques like cognitive behavioural therapy<sup>53</sup> (see Section 3.2).

If smoking bans in mental health units are to succeed in helping those who want to quit to do so, a good understanding of the challenges and some clear strategies to overcoming them are required. The final section explores some of the main challenges encountered by staff and service users in the inpatient setting and presents some strategies for addressing them.

#### 4.4 Challenges and strategies for smoke-free mental health units

Many of the challenges facing staff and service users of mental health services have been outlined above. Challenges for service users include:

- strength of the physical addiction
- fear of withdrawal effects
- lack of awareness of health benefits of quitting
- perceived cost of NRT
- lack of knowledge or availability of cessation interventions
- difficulty in being around other smokers
- fear of isolation or exclusion when most other service users smoke
- co-occurring psychosocial disadvantages
- possible increase in substance misuse
- power of habit and routine
- fear of weight gain
- uncertainty of how cessation may affect medications or side effects of illness
- not being ready to quit

Challenges for staff include:

- fear of increased aggression or verbal abuse if cessation 'forced upon' service users
- high rates of smoking in mental health staff
- lack of support to implement smoke-free policy
- lack of information concerning details of legislation
- not enough time or training to offer alternative cessation methods to service users
- feeling "hypocritical" if insisting that service users cannot smoke if they themselves are smokers
- lack of joined-up working between inpatient, outpatient and smoking cessation services

A further challenge for both service users and staff is the likelihood that an enforced smoking ban will encourage people to go outside to smoke and therefore there may be an increase in the number of people either absconding or going absent without permission. As service users themselves report, going outside to smoke can be unpleasant in poor weather and intimidating for other people<sup>36</sup>. In addition, it imposes an increased burden on staff to do escorted leave duties to accompany smokers outside.

A number of papers have also summarised strategies that may be useful in helping services introduce adequate and relevant support for smokers wanting to stop smoking in light of the smoke-free policies. For example, a King's Fund survey interviewed five English mental health units that were already smoke-free to find out how they had introduced their no smoking policies<sup>13</sup>. The key elements of their strategies were:

- regular consultation with staff and service users to explain the reasons for smoke-free policy, and to allow staff and patients to register their fears and objections
- information for staff, service users and visitors about the smoke-free policy, on posters and banners and in information leaflets, and reminders about the ban in user group meetings
- training for staff in smoking cessation and nicotine replacement therapy, in distinguishing mental illness symptoms from nicotine withdrawal symptoms and in different ways of managing patients
- education for staff and patients about the health effects of smoking and its interaction with medication and psychiatric conditions
- co-ordination with existing smoking cessation services

## SMOKING BANS AND MENTAL HEALTH

- access to nicotine replacement therapy for staff and patients and access to advice and support for quitting
- planning the closure of the smoking room and its replacement with a safe, outdoor smoking area, and
- creation of alternative activities to interest patients.<sup>713</sup>

Some strategies were also identified in a recent event on smoking, mental health and well-being in Scotland<sup>162</sup>. After listening to a number of service users and health care workers talk about their experiences in stopping smoking or supporting those with mental health problems to stop smoking, a number of key learning points were distilled. These included:

- the need for understanding why people smoke, so that smoking cessation support services can be tailored to individual needs
- a recognition that typical approaches to smoking cessation do not work for everyone, particularly for people with mental health problems, and that support services need to be flexible in terms of group size, type of support offered and length of time for which support is offered
- the need for confidence-building and stress management techniques to be offered to those people wanting to stop smoking
- the need for smoking cessation practitioners to be able to direct people to other services that might help them (e.g. financial advisory services)
- the need for tobacco policies to allow sufficient time to involve all stakeholders to build support for and commitment to the policy, and
- the need for joint working, communication and information sharing to improve the effectiveness of policy implementation.

In addition to these strategies, ASH Scotland recommend that targeted health promotion campaigns and printed resources should be focused towards people with mental health problems and specifically address mental health service users' diagnoses, symptoms and treatments<sup>67</sup>.

As the largest employer in the UK<sup>154</sup>, the NHS is not unaware that mental health services will require support during the implementation phase of smoke-free policies and this raises a number of questions. For example, what resources will be made available to those in clinical practice who will have first-line responsibility for implementing the ban? What training needs to be made available to nurses and other mental health staff? What support will there be for mental health staff who are themselves smokers wishing to quit? Will mental health services be offered additional funding to provide treatments for those wishing to stop smoking?

In conjunction with the Tobacco Control Collaborating Centre, the NHS has produced a support pack for smoke free mental health services that attempts to answer some of the questions raised and which integrates some of the strategies outlined above<sup>155</sup>. How far these will go in helping services to implement a successful and helpful smoke-free environment – and the subsequent impact that has on smoking cessation and relapse rates – will no doubt be the focus of attention from many agencies over the coming year. In the meantime, it is not unreasonable to hope that smoke-free legislation may prove itself to be an opportunity to pursue a more integrated and holistic approach to mental health care.

## 5 CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

Most adults in the UK are aware of the physical health risks associated with cigarette smoking, but few recognise or acknowledge the links between smoking and mental health. Current estimates show that just over one quarter of the adult population (or 13 million people) smoke<sup>2</sup>. Studies of psychiatric patients in mental health units show that up to 70% smoke and around 50% are heavy smokers<sup>14-16</sup>. People with mental health problems living in the community smoke less, but still more than people in the general population, with up to 40% smoking and 30% smoking heavily<sup>17-20</sup>.

Although there are many factors that contribute to the association between smoking and mental health, some research has shown that smoking may be used as a kind of self-medication to counter stress and the effects of anxiety<sup>21,40</sup>. The self-medication hypothesis has also been explored in amongst people with more severe and enduring mental illnesses, like schizophrenia and Alzheimer's disease, and similarly found to be a consistent explanation for smoking behaviours.

In order to try and reduce the risks of smoking and the associated health implications of breathing second-hand smoke ('passive smoking'), many countries have introduced nation-wide smoking bans that prohibit smoking in workplaces and enclosed public places. England is the last country in the United Kingdom to implement a full smoking ban in workplaces and enclosed public spaces, which comes into effect on the 1st July 2007. As with other countries, the new legislation has provoked much discussion, not least concerning which places justify an exemption from the ban. In some countries, residential mental health units are exempt. English legislation, however, will offer only a limited exemption to the smoking ban in residential mental health units, allowing smoking in bedrooms or rooms used only for smoking until the 1st July 2008, after which date all enclosed parts of the unit will be required to comply with the ban<sup>12</sup>.

This decision has divided opinion amongst mental health service users, staff, policy makers and practitioners<sup>13</sup>, although research from other countries draws the conclusion that implementation of smoke-free policies in residential mental health units has not resulted in the negative outcomes anticipated. However, it has also highlighted the often inadequate availability or suitability of smoking cessation strategies and support in mental health units. This points to the need for services to develop useful and effective cessation strategies, which should include a combination of pharmacological and psychosocial interventions.

The research outlined in this report emphasises the need to understand the inter-related factors that are involved in mental health, wellbeing and illness. It is likely that smoking interacts with these factors in a variety of ways, and this needs to be reflected in the strategies available to support people wanting to stop smoking.

## 5.2 Recommendations

In light of the evidence summarised in the report, the following recommendations are made:

1. Primary Care staff should be made aware of higher smoking rates and more reported difficulties in quitting among people with mental health problems and of any specialist help available, so they can refer effectively  
ACTION: Department of Health, Primary Care Trusts (PCTs)
2. People providing information on smoking cessation including helplines should be made aware of the needs of people with mental health problems, and should be able to signpost them to other help and support  
ACTION: Department of Health, PCTs
3. Commissioners need to ensure that smoking cessation services including group therapies are tailored to meet the needs of vulnerable groups including mental health service users  
ACTION: PCTs
4. Staff in mental health services must offer nicotine replacement therapy and other smoking cessation support  
ACTION: Mental Health Trusts (MHTs)
5. Mental health services need to commission specialist help with smoking cessation such as CBT  
ACTION: MHTs, PCTs
6. Patients in both in-patient and community services must be offered help with smoking cessation as part of their care package  
ACTION: MHTs
7. Staff in mental health services should understand nicotine withdrawal symptoms and how they can exacerbate mental distress, so that they can respond effectively  
ACTION: MHTs, education providers
8. Information should be made widely available to staff, service-users and visitors to mental health services about how their environment will change as a result of the smoking ban, and of any help that is available with smoking cessation  
ACTION: MHTs
9. In-patient units need to ensure that there is a sheltered outdoor space that smokers can access, and where necessary, regular escorted visits to these spaces should be offered as a priority  
ACTION: MHTs
10. Any aggression or violence toward patients and staff in in-patient settings that are believed to be linked to the smoking ban should be monitored and reported to senior managers in MHTs  
ACTION: MHTs

## 6 FURTHER INFORMATION AND RESOURCES

### 6.1 Information about mental health problems

#### **Mental Health Foundation**

Founded in 1949, the Mental Health Foundation is a leading UK charity that provides information, carries out research, campaigns and works to improve services for anyone affected by mental health problems, whatever their age and wherever they live.

London Office  
9th Floor Sea Containers House  
20 Upper Ground  
London  
SE1 9QB  
0207 803 1100  
[www.mentalhealth.org.uk](http://www.mentalhealth.org.uk)

Scotland Office  
Merchants House  
30 George Square  
Glasgow  
G2 1EG  
0141 572 0125

#### **Coping with stress and anxiety**

Self-help guides from Newcastle and Newcastle, North Tyneside and Northumberland Mental Health NHS Trust:

Stress	<a href="http://www.nnt.nhs.uk/mh/leaflets/stress%20A5.pdf">www.nnt.nhs.uk/mh/leaflets/stress%20A5.pdf</a>
Stress and Anxiety	<a href="http://www.ntw.nhs.uk/pic/docs/selfhelp/Stress%20and%20Anxiety.pdf">www.ntw.nhs.uk/pic/docs/selfhelp/Stress%20and%20Anxiety.pdf</a>

Factsheet for young people experiencing stress from the Royal College of Psychiatrists:

[www.rcpsych.ac.uk/mentalhealthinformation/mentalhealthandgrowingup/32copingwithstress.aspx](http://www.rcpsych.ac.uk/mentalhealthinformation/mentalhealthandgrowingup/32copingwithstress.aspx)

#### **Depression Alliance**

Depression Alliance is the leading UK charity for people affected by depression.

212 Spitfire Studios  
63-71 Collier Street  
London  
N1 9BE  
0845 123 2320  
[www.depressionalliance.org](http://www.depressionalliance.org)

#### **Rethink**

Working together to help everyone affected by severe mental illness recover a better quality of life.

5th Floor, Royal London House  
22-25 Finsbury Square  
London  
EC2A 1DX  
0845 456 0455  
[www.rethink.org](http://www.rethink.org)

## FURTHER INFORMATION AND RESOURCES

### **The Alzheimer's Society**

The UK's leading care and research charity for people with dementia, their families and carers.

Gordon House  
10 Greencoat Place  
London  
SW1P 1PH  
020 7306 0606  
[www.alzheimers.org.uk](http://www.alzheimers.org.uk)

## **6.2 Information about smoking cessation**

### **Giving Up Smoking**

A UK-wide NHS website for helping smokers to give up smoking.

[www.givingupsmoking.co.uk](http://www.givingupsmoking.co.uk)

### **NHS Smoking Helplines**

England and Wales:	0800 169 0 169
Northern Ireland:	0800 85 85 85
Scotland:	0800 84 84 84

### **ASH**

ASH is a campaigning public health charity working towards achieving a sharp reduction and eventual elimination of the health problems caused by tobacco.

[www.ash.org.uk](http://www.ash.org.uk)

### **GASP Online**

The GASP online catalogue contains over 400 stop smoking and tobacco control resources including leaflets, books, activity packs, training materials, displays, posters, models, carbon monoxide monitors and promotional items.

[www.gasp.org.uk](http://www.gasp.org.uk)

### **Cancer Research UK**

P.O. Box 123  
Lincoln's Inn Fields  
London WC2A 3PX  
020 7242 0200  
<http://info.cancerresearchuk.org/healthyliving/smokingandtobacco/givingup/>

## **Quit**

Quit is an independent charity to help smokers stop.

211 Old Street  
London EC1V 9NR  
020 7251 1551  
0800 00 22 00  
[www.quit.org.uk](http://www.quit.org.uk)

## **SMOKEFREE**

NHS website offering advice and resources to stop smoking:

[www.gosmokefree.co.uk](http://www.gosmokefree.co.uk)

## **NICE reviews on smoking cessation**

Brief interventions and referral for smoking cessation in primary care and other settings:

[www.nice.org.uk/guidance/PH11](http://www.nice.org.uk/guidance/PH11)

Guidance on the optimal provision of smoking cessation services with particular reference to manual groups, pregnant smokers and hard to reach communities. Guidance due November 2007:

[www.nice.org.uk/page.aspx?o=SmokingCessationPGMain](http://www.nice.org.uk/page.aspx?o=SmokingCessationPGMain)

## **6.3 Information about smoke-free legislation**

### **Smoke Free England**

Information about the smoking ban in England

[www.smokefreeengland.co.uk](http://www.smokefreeengland.co.uk)

### **Clearing The Air Scotland**

Information about the smoking ban in Scotland

[www.clearingtheairscotland.com](http://www.clearingtheairscotland.com)

### **Smoking Ban Wales**

Information about the smoking ban in Wales

[www.smokingbanwales.co.uk](http://www.smokingbanwales.co.uk)

## 7 REFERENCES

1. Raw M, McNeill A, West R. Smoking cessation guidelines for health professionals. A guide to effective smoking cessation interventions for the health care system. *Thorax* 1998; 53 Suppl 5 Pt 1:S1-19.
2. Davy M. Time and generational trends in smoking among men and women in Great Britain, 1972–2004/05. [www.statistics.gov.uk](http://www.statistics.gov.uk), 2006. Accessed 30th March 2007
3. ASH. Smoking statistics: Illness and death. Available from: <http://www.ash.org.uk/html/factsheets/html/fact02.html>, 2007. Accessed 30th March 2007
4. Patkar AA, Vergare MJ, Batra V, Weinstein SP, Leone FT. Tobacco smoking: current concepts in etiology and treatment. *Psychiatry* 2003; 66(3):183-199.
5. Ludbrook A, Cohen D, Teijlingen EV. International review of the health and economic impact of the regulation of smoking in public places. [www.smokingbanwales.co.uk](http://www.smokingbanwales.co.uk), 2005. Accessed 30th March 2007
6. ASH. International trends towards smoke free provision (Updated January 2007). Available from: [www.ash.org.uk/html/publicplaces/html/intlaw.html](http://www.ash.org.uk/html/publicplaces/html/intlaw.html), 2007. Accessed 30th March 2007
7. O'Mahony E, Rahmani F. Staff attitudes to smoking in an Irish mental health service. *Psychiatric Bulletin* 2004; 28(11):425.
8. Clearing the Air Scotland. Smoke-free legislation: National compliance data. <http://www.clearingtheairscotland.com/latest/index.html>, 2007. Accessed 30th March 2007
9. [www.bbc.co.uk](http://www.bbc.co.uk). Smoking ban debate in Scotland. <http://news.bbc.co.uk/1/hi/scotland/6480843.stm>, 2007. Accessed 30th March 2007
10. Action Network. Smoking bans: An action network briefing. <http://www.bbc.co.uk/dna/actionnetwork/A2702143>, 2006. Accessed 30th March 2007
11. [www.bbc.co.uk](http://www.bbc.co.uk). Smoking ban in all pubs and clubs. [http://news.bbc.co.uk/1/hi/uk\\_politics/4709258.stm](http://news.bbc.co.uk/1/hi/uk_politics/4709258.stm), 2007. Accessed 30th March 2007
12. HMSO. Draft Smoke-Free (Exemptions and Vehicles) Regulations 2007. <http://www.parliament.the-stationery-office.co.uk/pa/cm/cmtoday/cmstand/output/deleg/dg02070226-01.htm>, 2007. Accessed 30th March 2007
13. Jochelson KMB. Clearing the air: debating smoke-free policies in psychiatric units. 2006. London, King's Fund.
14. Coulthard M, Farrell M, Singleton N, Meltzer H. Tobacco, alcohol and drug use and mental health. 2002. HMSO, Norwich.
15. Foster K, Meltzer H, Gill B, Hinds K. The circumstances of adults with a psychotic disorder. *Int Rev Psychiatry* 2003; 15(1-2):84-90.
16. Meltzer H, Gill B, Hinds K, Petticrew M. The prevalence of psychiatric morbidity among adults living in institutions. *Int Rev Psychiatry* 2003; 15(1-2):129-133.
17. Farrell M, Howes S, Bebbington P, Brugha T, Jenkins R, Lewis G et al. Nicotine, alcohol and drug dependence, and psychiatric comorbidity--results of a national household survey. *Int Rev Psychiatry* 2003; 15(1-2):50-56.
18. Farrell M, Howes S, Taylor C, Lewis G, Jenkins R, Bebbington P et al. Substance misuse and psychiatric comorbidity: an overview of the OPCS National Psychiatric Morbidity Survey. *Int Rev Psychiatry* 2003; 15(1-2):43-49.
19. Farrell M, Howes S, Bebbington P, Brugha T, Jenkins R, Lewis G et al. Nicotine, alcohol and drug dependence and psychiatric comorbidity. Results of a national household survey. *Br J Psychiatry* 2001; 179:432-437.
20. Farrell M, Howes S, Taylor C, Lewis G, Jenkins R, Bebbington P et al. Substance misuse and psychiatric comorbidity: an overview of the OPCS National Psychiatric Morbidity Survey. *Addict Behav* 1998; 23(6):909-918.
21. Brown C. Tobacco and mental health: A literature review. [www.ashscotland.org.uk](http://www.ashscotland.org.uk), 2004. Accessed 30th March 2007
22. Mentality and NIMHE. Healthy body and mind: Promoting healthy living for people who experience mental distress. A guide for people working in primary health care teams supporting people with severe and enduring mental illness. 2004. London, National Institute for Mental Health in England (now part of CSIP).
23. Reichler H, Baker A, Lewin T, Carr V. Smoking among in-patients with drug-related problems in an Australian psychiatric hospital. *Drug & Alcohol Review* 2001; 20(2):231-237.
24. Wadsworth EJK, Moss SC, Simpson SA, Smith AP. Factors associated with recreational drug use. *Journal Of Psychopharmacology (Oxford, England)* 2004; 18(2):238-248.

25. Cancer Research UK. Lung cancer and smoking statistics. <http://info.cancerresearchuk.org/cancerstats/types/lung/smoking/>, 2004. Accessed 30th March 2007
26. Chassin L, Presson CC, Rose J, Sherman SJ, Davis MJ, Gonzalez JL. Parenting style and smoking-specific parenting practices as predictors of adolescent smoking onset. *J Pediatr Psychol* 2005; 30(4):333-344.
27. Chassin L, Presson CC, Sherman SJ. Adolescent cigarette smoking: a commentary and issues for pediatric psychology. *J Pediatr Psychol* 2005; 30(4):299-303.
28. Pierce JP, Gilpin EA, Choi WS. Sharing the blame: smoking experimentation and future smoking-attributable mortality due to Joe Camel and Marlboro advertising and promotions. *Tob Control* 1999; 8(1):37-44.
29. Farkas AJ, Distefan JM, Choi WS, Gilpin EA, Pierce JP. Does parental smoking cessation discourage adolescent smoking? *Prev Med* 1999; 28(3):213-218.
30. Distefan JM, Gilpin EA, Choi WS, Pierce JP. Parental influences predict adolescent smoking in the United States, 1989-1993. *J Adolesc Health* 1998; 22(6):466-474.
31. Lovato C, Linn G, Stead LF, Best A. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *Cochrane Database of Systematic Reviews: Reviews 2003 Issue 3* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD0 2003.
32. MMWR. Smoking-attributable mortality and years of potential life lost - United States 1984. *Morbidity and Mortality Weekly Report* 1997; 46:444-451.
33. Hastings G, MacFayden L. Keep Smiling, no-one's going to die: an analysis of internal documents from the tobacco industry's main UK advertising agencies. <http://www.tobaccopapers.com/keepsmiling/KeepSmilingReport.pdf>, 2000. Accessed 30th March 2007
34. The Highland Users Group. *The Smoking Ban (and how we have been affected by it)*. 2007. Scotland, The Highland Users Group.
35. Haarasilta LM, Marttunen MJ, Kaprio JA, Aro HM. Correlates of depression in a representative nationwide sample of adolescents (15-19 years) and young adults (20-24 years). *European Journal of Public Health* 2004; 14(3):280-285.
36. Newcastle NTaNMHNT. *Stress: A self-help guide*. <http://www.nnt.nhs.uk/mh/leaflets/stress%20A5.pdf>, 2001. Accessed 30th March 2007
37. Health and Safety Executive. *Stress-related and psychological disorders*. <http://www.hse.gov.uk/statistics/causdis/stress.htm>, 2007. Accessed 30th March 2007
38. Donz J, Ruffieux C, Cornuz J. Determinants of smoking and cessation in older women. *Age And Ageing* 2007; 36(1):53-57.
39. George A, Waller G. Motivators for smoking in women with eating disorders. *European Eating Disorders Review* 2005; 13(6):417-423.
40. Degenhardt L, Hall W. The relationship between tobacco use, substance-use disorders and mental health: results from the National Survey of Mental Health and Well-being. *Nicotine Tob Res* 2001; 3(3):225-234.
41. Lauder W, Mummery K, Jones M, Caperchione C. A comparison of health behaviours in lonely and non-lonely populations. *Psychology, Health & Medicine* 2006; 11(2):233-245.
42. Parrott AC. Cigarette-derived nicotine is not a medicine. *World J Biol Psychiatry* 2003; 4(2):49-55.
43. Parrott AC. Cigarette smoking does cause stress. *Am Psychol* 2000; 55(10):1159-1160.
44. Parrott AC, Kaye FJ. Daily uplifts, hassles, stresses and cognitive failures: in cigarette smokers, abstaining smokers, and non-smokers. *Behav Pharmacol* 1999; 10(6-7):639-646.
45. Parrott AC. Does cigarette smoking cause stress?. *Am Psychol* 1999; 54(10):817-820.
46. Niaura R, Shadel WG, Britt DM, Abrams DB. Response to social stress, urge to smoke, and smoking cessation. *Addict Behav* 2002; 27(2):241-250.
47. Mental Health Foundation. *Up and Running? Exercise therapy and the treatment of mild or moderate depression in primary care*. 2005. London: MHF.
48. Cornah D. *Cheers? Understanding the relationship between alcohol and mental health*. 2006. London: MHF.
49. Cornah D. *The impact of spirituality on mental health: A review of the literature*. 2006. London: MHF.
50. Newcastle NTaNMHNT. *Stress and Anxiety: A self-help guide*. <http://www.nnt.nhs.uk/mh/leaflets/stress&anx5.pdf>, 2007. Accessed 30th March 2007

## REFERENCES

51. McNeill A. Smoking and mental health - a review of the literature. [http://www.scan.uk.net/docstore/smoking\\_and\\_mental\\_health\\_lit\\_review.pdf](http://www.scan.uk.net/docstore/smoking_and_mental_health_lit_review.pdf), 2001. Accessed 30th March 2007
52. Anda RF, Williamson DF, Escobedo LG, Mast EE, Giovino GA, Remington PL. Depression and the dynamics of smoking. A national perspective. *JAMA* 1990; 264(12):1541-1545.
53. Edwards R, McElduff P, Harrison RA, Watson K, Butler G, Elton P. Pleasure or pain? A profile of smokers in Northern England. *Public Health* 2006; 120(8):760-768.
54. Office for National Statistics. The health of children and young people. <http://www.statistics.gov.uk/ccinugget.asp?id=853>, 2004. Accessed 30th March 2007
55. Niaura R, Britt DM, Shadel WG, Goldstein M, Abrams D, Brown R. Symptoms of depression and survival experience among three samples of smokers trying to quit. *Psychol Addict Behav* 2001; 15(1):13-17.
56. Breslau N, Kilbey MM, Andreski P. Vulnerability to psychopathology in nicotine-dependent smokers: an epidemiologic study of young adults. *The American Journal Of Psychiatry* 1993; 150(6):941-946.
57. Breslau N, Kilbey MM, Andreski P. Nicotine dependence and major depression. New evidence from a prospective investigation. *Arch Gen Psychiatry* 1993; 50(1):31-35.
58. Breslau N, Kilbey MM, Andreski P. Nicotine withdrawal symptoms and psychiatric disorders: findings from an epidemiologic study of young adults. *The American Journal Of Psychiatry* 1992; 149(4):464-469.
59. Lawn SJ, Pols RG, Barber JG. Smoking and quitting: a qualitative study with community-living psychiatric clients. *Soc Sci Med* 2002; 54(1):93-104.
60. Cornah D. Feeding Minds: The impact of food on mental health. 2006. London: MHF.
61. Corvin A, O'Mahony E, O'Regan M, Comerford C, O'Connell R, Craddock N et al. Cigarette smoking and psychotic symptoms in bipolar affective disorder. *Br J Psychiatry* 2001; 179:35-38.
62. Aguilar MC, Gurpegui M, Diaz FJ, de LJ. Nicotine dependence and symptoms in schizophrenia: naturalistic study of complex interactions. *Br J Psychiatry* 2005; 186:215-221.
63. Brown S, Inskip H, Barraclough B. Causes of the excess mortality of schizophrenia. *The British Journal Of Psychiatry: The Journal Of Mental Science* 2000; 177:212-217.
64. de Leon J, Diaz FJ, Rogers T, Browne D, Dinsmore L. Initiation of daily smoking and nicotine dependence in schizophrenia and mood disorders. *Schizophrenia Research* 2002; 56(1/2):47-54.
65. ASH Scotland. Tobacco and mental health. [http://www.ashscotland.org.uk/ash/ash\\_display/jsp?pContentID=3921&p\\_applic=CCC&p\\_service=Content show&](http://www.ashscotland.org.uk/ash/ash_display/jsp?pContentID=3921&p_applic=CCC&p_service=Content show&), 2007, Accessed 30th March 2007
66. McCreadie RG. Diet, smoking and cardiovascular risk in people with schizophrenia: descriptive study. *The British Journal Of Psychiatry: The Journal Of Mental Science* 2003; 183:534-539.
67. Leon J. Smoking and vulnerability for schizophrenia. *Schizophrenia Bulletin* 1996; 22(3):405-409.
68. McCreadie RG, Kelly C. Patients with schizophrenia who smoke. Private disaster, public resource. *Br J Psychiatry* 2000; 176:109.
69. Health Development Agency. Where do we go from here? Tobacco control policies in psychiatric and long-stay settings. 2001. London: HDA.
70. de Leon J, Diaz FJ, Aguilar MC, Jurado D, Gurpegui M. Does smoking reduce akathisia? Testing a narrow version of the self-medication hypothesis. *Schizophr Res* 2006; 86(1-3):256-268.
71. Kumari V, Postma P. Nicotine use in schizophrenia: the self medication hypotheses. *Neurosci Biobehav Rev* 2005; 29(6):1021-1034.
72. Fraser M. Smoking and mental health services -- MIND briefing. 2007.
73. Forchuk C, Norman R, Malla A, Martin ML, McLean T, Cheng S et al. Schizophrenia and the motivation for smoking. *Perspectives In Psychiatric Care* 2002; 38(2):41-49.
74. George TP, Ziedonis DM, Feingold A, Pepper WT, Satterburg CA, Winkel J et al. Nicotine transdermal patch and atypical antipsychotic medications for smoking cessation in schizophrenia. *The American Journal Of Psychiatry* 2000; 157(11):1835-1842.
75. Van Dongen CJ. Smoking and persistent mental illness: an exploratory study 4. *J Psychosoc Nurs Ment Health Serv* 1999; 37(11):26-34.
76. Gurpegui M, Martinez-Ortega JM, Jurado D, Aguilar MC, Diaz FJ, de LJ. Subjective effects and the main reason for smoking in outpatients with schizophrenia: a case-control study. *Compr Psychiatry* 2007; 48(2):186-191.

77. Lucksted A, Dixon LB, Sembly JB. A focus group pilot study of tobacco smoking among psychosocial rehabilitation clients. *Psychiatric Services (Washington, D C )* 2000; 51(12):1544-1548.
78. Punnoose S, Belgamwar MR. Nicotine for schizophrenia. *Cochrane Database of Systematic Reviews: Reviews 2006 Issue 1* John Wiley & Sons , Ltd Chichester, UK DOI : 10 1002 /14651858 CD004838 pub2 2006.
79. Salib E. Risk factors in clinically diagnosed Alzheimer's disease: a retrospective hospital-based case control study in Warrington. *Aging & Mental Health* 2000; 4(3):259-267.
80. Alzheimer's Society. What is Alzheimer's Disease? Factsheet. 2003.
81. Brenner DE, Kukull WA, van BG, Bowen JD, McCormick WC, Teri L et al. Relationship between cigarette smoking and Alzheimer's disease in a population-based case-control study. *Neurology* 1993; 43(2):293-300.
82. Shalat SL, Seltzer B, Pidcock C, Baker EL, Jr. Risk factors for Alzheimer's disease: a case-control study. *Neurology* 1987; 37(10):1630-1633.
83. Van Duijn CM, Clayton DG, Chandra V, Fratiglioni L, Graves AB, Heyman A et al. Interaction between genetic and environmental risk factors for Alzheimer's disease: a reanalysis of case-control studies. EURODEM Risk Factors Research Group. *Genet Epidemiol* 1994; 11(6):539-551.
84. Van Duijn CM, Clayton D, Chandra V, Fratiglioni L, Graves AB, Heyman A et al. Familial aggregation of Alzheimer's disease and related disorders: a collaborative re-analysis of case-control studies. EURODEM Risk Factors Research Group. *Int J Epidemiol* 1991; 20 Suppl 2:S13-S20.
85. Van Duijn CM, Hofman A. Relation between nicotine intake and Alzheimer's disease. *BMJ* 1991; 302(6791):1491-1494.
86. Nordberg A. Neuroprotection in Alzheimer's disease - new strategies for treatment. *Neurotox Res* 2000; 2(2-3):157-165.
87. López-Arrieta JLA, Sanz FJ. Nicotine for Alzheimer's disease. *Cochrane Database of Systematic Reviews: Reviews 2001 Issue 2* John Wiley & Sons , Ltd Chichester, UK DOI : 10 1002 /14651858 CD001749 2001.
88. Kadir A, rreh-Shori T, Almkvist O, Wall A, Langstrom B, Nordberg A. Changes in brain (11)C-nicotine binding sites in patients with mild Alzheimer's disease following rivastigmine treatment as assessed by PET. *Psychopharmacology (Berl)* 2007; 191(4):1005-1014.
89. Liu Q, Zhang J, Zhu H, Qin C, Chen Q, Zhao B. Dissecting the signaling pathway of nicotine-mediated neuroprotection in a mouse Alzheimer disease model 8. *FASEB J* 2007; 21(1):61-73.
90. Papke RL, Dwoskin LP, Crooks PA. The pharmacological activity of nicotine and nornicotine on nAChRs subtypes: relevance to nicotine dependence and drug discovery. *J Neurochem* 2007.
91. www.bbc.co.uk. Quit smoking drug available in UK. <http://news.bbc.co.uk/1/hi/health/6207176.stm>, 2006. Accessed 30th March 2007
92. NICE. Smoking cessation synopsis introduction. <http://www.nice.org.uk/page.aspx?o=404403>, 2007. Accessed 30th March 2007
93. Public Health Interventions Advisory Committee. Brief interventions and referral for smoking cessation in primary care and other settings. <http://www.nice.org.uk/page.aspx?o=SmokingCessationMain>, 2006. Accessed 30th March 2007
94. Millward L, Wohlgemuth C, Taske N, McLean C, Naidoo B, Taylor L et al. Smoking and public health: a compendium of smoking behaviour initiatives that addresses socially disadvantaged populations. <http://www.nice.org.uk/page.aspx?o=400636>, 2007. Accessed 30th March 2007
95. National Institute for Health and Clinical Excellence. NICE appraisal on varenicline (Champix) for smoking cessation - Press Release, 30th May 2007. <http://www.nice.org.uk/page.aspx?o=433526> , 2007. Accessed 4th June 2007
96. Cahill K, Stead LF, Lancaster T. Nicotine receptor partial agonists for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2007 Issue 1* John Wiley & Sons , Ltd Chichester, UK DOI : 10 1002 /14651858 CD006103 pub2 2007.
97. Hughes JR, Stead LF, Lancaster T. Antidepressants for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2007 Issue 1* John Wiley & Sons , Ltd Chichester, UK DOI : 10 1002 /14651858 CD000031 pub3 2007.

## REFERENCES

98. David S, Lancaster T, Stead LF, Evins AE. Opioid antagonists for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2006 Issue 4* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD003086 pub2 2006.
99. Fry-Smith A, Hyde C, Moore D, Roberts J, Sandercock J. Clinical and cost-effectiveness of nicotine replacement therapy for new licensed indications and combination therapy: A summary of best evidence. <http://www.nice.org.uk/page.aspx?o=404383>, 2007. Accessed 30th March 2007
100. Stead LF, Perera R, Lancaster T. Telephone counselling for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2006 Issue 3* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD002850 pub2 2006.
101. White AR, Rampes H, Campbell JL. Acupuncture and related interventions for smoking cessation. *Cochrane Database of Systematic Reviews : Reviews 2006 Issue 1* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD000009 pub2 2006.
102. Hey K, Perera R. Competitions and incentives for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD004307 pub2 2005.
103. Hey K, Perera R. Quit and Win contests for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD004986 pub2 2005.
104. Kaper J, Wagena EJ, Severens JL, Van-Schayck CP. Healthcare financing systems for increasing the use of tobacco dependence treatment. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 1* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651 2005.
105. Lancaster T, Stead LF. Individual behavioural counselling for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD001292 pub2 2005.
106. Lancaster T, Stead LF. Self-help interventions for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 3* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD001118 pub2 2005.
107. Ussher M. Exercise interventions for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 1* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD002295 pub2 2005.
108. Hughes JR, Frances RJ. How to help psychiatric patients stop smoking 2. *Psychiatr Serv* 1995; 46(5):435-436.
109. Abbot NC, Stead LF, White AR, Barnes J. Hypnotherapy for smoking cessation 32. *Cochrane Database of Systematic Reviews: Reviews 1998 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD001008 1998.
110. Stead LF, Lancaster T. Group behaviour therapy programmes for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2005 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD001007 pub2 2005.
111. Haas AL, Munoz RF, Humfleet GL, Reus VI, Hall SM. Influences of mood, depression history, and treatment modality on outcomes in smoking cessation. *J Consult Clin Psychol* 2004; 72(4):563-570.
112. Brown RA, Kahler CW, Niaura R, Abrams DB, Sales SD, Ramsey SE et al. Cognitive-behavioral treatment for depression in smoking cessation. *J Consult Clin Psychol* 2001; 69(3):471-480.
113. Kahler CW, Brown RA, Strong DR, Lloyd-Richardson EE, Niaura R. History of major depressive disorder among smokers in cessation treatment: associations with dysfunctional attitudes and coping. *Addict Behav* 2003; 28(6):1033-1047.
114. Kahler CW, Brown RA, Ramsey SE, Niaura R, Abrams DB, Goldstein MG et al. Negative mood, depressive symptoms, and major depression after smoking cessation treatment in smokers with a history of major depressive disorder 15. *J Abnorm Psychol* 2002; 111(4):670-675.
115. Evins AE, Mays VK, Rigotti NA, Tisdale T, Cather C, Goff DC. A pilot trial of bupropion added to cognitive behavioral therapy for smoking cessation in schizophrenia. *Nicotine Tob Res* 2001; 3(4):397-403.
116. Baker A, Richmond R, Haile M, Lewin TJ, Carr VJ, Taylor RL et al. A randomized controlled trial of a smoking cessation intervention among people with a psychotic disorder. *The American Journal Of Psychiatry* 2006; 163(11):1934-1942.

117. El-Guebaly N, Cathcart J, Currie S, Brown D, Gloster S. Smoking cessation approaches for persons with mental illness or addictive disorders. *Psychiatr Serv* 2002; 53(9):1166-1170.
118. Wang D, Connock M, Barton P, Fry-Smith A, Aveyard P, Moore D. Cut down to quit with nicotine replacement therapies (NRT) in smoking cessation: Systematic review of effectiveness and economic analysis. <http://www.nice.org.uk/page.aspx?o=404622>, 2006. Accessed 30th March 2007
119. Gourlay SG, Stead LF, Benowitz NL. Clonidine for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews 2004 Issue 3* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD000058 pub2 2004.
120. Rosen-Chase C, Dyson V. Treatment of nicotine dependence in the chronic mentally ill. *J Subst Abuse Treat* 1999; 16(4):315-320.
121. Covey LS. Tobacco cessation among patients with depression. *Prim Care* 1999; 26(3):691-706.
122. Covey LS, Glassman AH, Stetner F. Major depression following smoking cessation. *The American Journal Of Psychiatry* 1997; 154(2):263-265.
123. Stage KB, Glassman AH, Covey LS. Depression after smoking cessation: case reports. *J Clin Psychiatry* 1996; 57(10):467-469.
124. Hitsman B, Pingitore R, Spring B, Mahableshwarkar A, Mizes JS, Seigraves KA et al. Antidepressant pharmacotherapy helps some cigarette smokers more than others. *J Consult Clin Psychol* 1999; 67(4):547-554.
125. Saules KK, Schuh LM, Arfken CL, Reed K, Kilbey MM, Schuster CR. Double-blind placebo-controlled trial of fluoxetine in smoking cessation treatment including nicotine patch and cognitive-behavioral group therapy. *The American Journal On Addictions / American Academy Of Psychiatrists In Alcoholism And Addictions* 2004; 13(5):438-446.
126. Kumar MT, Joseph J, Crome I. Interventions for smoking cessation in people with schizophrenic and other psychotic disorders. *Cochrane Database of Systematic Reviews: Protocols 2006 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD 2006.
127. Etter M, Etter JF. Acceptability and impact of a partial smoking ban in a psychiatric hospital. *Prev Med* 2007; 44(1):64-69.
128. Callinan JE, Clarke A, Doherty K, Kelleher C. Smoking bans for reducing smoking prevalence and tobacco consumption. *Cochrane Database of Systematic Reviews: Protocols 2006 Issue 2* John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD005992 2006.
129. Gurpegui M, Martinez-Ortega JM, Aguilar MC, Diaz FJ, Quintana HM, de LJ. Smoking initiation and schizophrenia: a replication study in a Spanish sample. *Schizophr Res* 2005; 76(1):113-118.
130. Lawn S, Pols R. Smoking bans in psychiatric inpatient settings? A review of the research. *Aust N Z J Psychiatry* 2005; 39(10):866-885.
131. Matthews LS, Diaz B, Bird P, Cook A, Stephenson AE, Kraus JE et al. Implementing a smoking ban in an acute psychiatric admissions unit. *J Psychosoc Nurs Ment Health Serv* 2005; 43(11):33-36.
132. Willemsen MC, Gorts CA, Van SP, Jonkers R, Hilberink SR. Exposure to environmental tobacco smoke (ETS) and determinants of support for complete smoking bans in psychiatric settings. *Tob Control* 2004; 13(2):180-185.
133. The Stationary Office. Smoking Kills: A White Paper on Tobacco. <http://www.archive.official-documents.co.uk/document/cm41/4177/4177.htm>, 1998. Accessed 30th March 2007
134. Department of Health. Choosing Health: Making healthier choices easier. [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4094550](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094550), 2004. Accessed 30th March 2007
135. Department of Health. Tobacco. <http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Tobacco/index.htm>, 2007. Accessed 30th March 2007
136. Upadhyaya HP, Brady KT, Wharton M, Liao J. Psychiatric disorders and cigarette smoking among child and adolescent psychiatry inpatients. *The American Journal On Addictions / American Academy Of Psychiatrists In Alcoholism And Addictions* 2003; 12(2):144-152.
137. Dickens G, Stubbs J, Popham R, Haw C. Smoking in a forensic psychiatric service: a survey of inpatients' views. *J Psychiatr Ment Health Nurs* 2005; 12(6):672.

## REFERENCES

138. Campion J, McNeill A, Checinski K. Exempting mental health units from smoke free laws. *British Medical Journal* 2006; 333:407-408.
  139. Rice VH, Stead LF. Nursing interventions for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews* 2004 Issue 1 John Wiley & Sons, Ltd Chichester, UK DOI : 10 1002 /14651858 CD001188 pub2 2004.
  140. Lancaster T, Stead LF. Physician advice for smoking cessation. *Cochrane Database of Systematic Reviews: Reviews* 2004 Issue 4 John Wiley & Sons , Ltd Chichester, UK DOI : 10 1002 /14651858 CD000165 pub2 2004.
  141. McNally L, Oyefeso A, Annan J, Perryman K, Bloor R, Freeman S et al. A survey of staff attitudes to smoking-related policy and intervention in psychiatric and general health care settings. *Journal Of Public Health (Oxford, England)* 2006; 28(3):192-196.
  142. Dickens GL, Stubbs JH, Haw CM. Smoking and mental health nurses: A survey of clinical staff in a psychiatric hospital. *J Psychiatr Ment Health Nurs* 2004; 11(4):445-451.
  143. Lawn S, Condon J. Psychiatric nurses ethical stance on cigarette smoking by patients: Determinants and dilemmas in their role in supporting cessation. *International Journal of Mental Health Nursing* 2006; 15(2):111-118.
  144. Bloor RN, Meeson L, Crome IB. The effects of a non-smoking policy on nursing staff smoking behaviour and attitudes in a psychiatric hospital. *J Psychiatr Ment Health Nurs* 2006; 13(2):188-196.
  145. Meikeljohn C, Sanders K, Butler S. Physical health care in medium-secure units. *Nursing Standard*, 8-14th January 2003.
  146. Prochaska JJ, Gill P, Hall SM. Treatment of tobacco use in an inpatient psychiatric setting. *Psychiatr Serv* 2004; 55(11):1265-1270.
  147. House of Commons Health Committee. *Smoking in Public Places: First report of session 2005-06, vol 1, HC 485-1*. London: The Stationary Office; 2005.
  148. El-Guebaly N, Cathcart J, Currie S, Brown D, Gloster S. Public health and therapeutic aspects of smoking bans in mental health and addiction settings. *Psychiatr Serv* 2002; 53(12):1617-1622.
  149. Jochelson K. Smoke-free legislation and mental health units: the challenges ahead. *British Journal of Psychiatry* 2006; 189(yes):479-480.
  150. Smith CM, Pristach CA, Cartagena M. Obligatory cessation of smoking by psychiatric inpatients. *Psychiatric Services* 1999; 50(1):91-94.
  151. CHEX, Lardner C. *Smoking, Mental Health and Well-being: 'Be happy, don't worry and stop smoking'*, paper ed. Glasgow and Edinburgh, Scotland: CHEX, Scottish Tobacco Control Alliance and UKPHA Scotland; 2007.
  152. NHS Employers. *Equality and Diversity*. <http://www.nhsemployers.org/excellence/equality-diversity.cfm>, 2007. Accessed 30th March 2007
  153. *Support pack for smoke free mental health services*. Warwick: TCCC; 2006.
-

# Mental Health Foundation

## About the Mental Health Foundation

Founded in 1949, the Mental Health Foundation is the leading UK charity working in mental health and learning disabilities.

We are unique in the way we work. We bring together teams that undertake research, develop services, design training, influence policy and raise public awareness within one organisation. We are keen to tackle difficult issues and try different approaches, many of them led by service users themselves. We use our findings to promote survival, recovery and prevention. We do this by working with statutory and voluntary organisations, from GP practices to primary schools. We enable them to provide better help for people with mental health problems or learning disabilities, and promote mental well-being.

We also work to influence policy, including Government at the highest levels. We use our knowledge to raise awareness and to help tackle stigma attached to mental illness and learning disabilities. We reach millions of people every year through our media work, information booklets and online services.

If you would like to find out more about our work, please contact us.

### **The Mental Health Foundation**

Sea Containers House  
20 Upper Ground  
London, SE1 9QB  
020 7803 1100

### **Scotland Office**

Merchants House  
30 George Square  
Glasgow, G2 1EG  
0141 572 0125

**[www.mentalhealth.org.uk](http://www.mentalhealth.org.uk)**

Registered charity number 801130