Primary Care Guidance on Smoking and Mental Disorders

KEY LEARNING POINTS

- Smoking is the largest avoidable cause of premature death and health inequality in those with mental disorders who die 10-20 years earlier than the general population.
- Adults with mental disorders consume 42% of the tobacco in England and therefore disproportionately experience tobacco-related harm.
- With appropriate support, people with mental disorders are able to stop smoking.
- Smoking cessation improves mental and physical health even in the short term and reduces risk of premature death.
- Impact of smoking cessation on mood and anxiety disorders is at least as large as antidepressant treatment.
- Stopping smoking requires the immediate reduction of doses of some antidepressants, antipsychotics and benzodiazepines by up to 25% within the first week and up to 50% within 4 weeks.

Smoking: the biggest killer

Smoking is the largest cause of preventable death in England. In 2010/11 it was responsible for 79,100 deaths and 459,900 hospital admissions. Smokers die an average 10 years earlier than non-smokers. Smoking is also associated with an increased risk of several chronic diseases, including cardiovascular disease, peripheral arterial disease with associated 10-16 fold increased risk of amputation, chronic obstructive pulmonary disease and type 2 diabetes (60% increased risk) as well as cancer, blindness and dementia.

Smoking is therefore one of the most important modifiable risk factors for both premature mortality and chronic disease. This is even more important in people with mental disorder since smoking is the single largest contributor to their 10-20 year reduced life expectancy.

Higher rates of smoking in people with mental disorders

People with mental disorders experience disproportionate levels of smoking associated harm since they are both more likely to smoke and to smoke more heavily than the general population. In England, 42% of tobacco consumption is by those with mental disorders while 43% of smokers aged 11-16 have either conduct or emotional disorders.

Compared to smoking rates in the adult population, smoking rates are higher for people with different mental disorders:

- Common mental disorder: 32% (27% for those on antidepressants and 30% for those on anxiolytics)
- Psychosis: 40% (59% of people with a first episode of psychosis and 59% of those taking antipsychotics)
- Drug dependence: 69%
- Alcohol dependence: 46%
- Suicide attempt in past year: 57%
- Inpatients in mental health units: 70% (50% are heavy smokers)

Compared to smoking rates of 5% among 11-16 year olds in the general population, smoking rates are:

- 30% among the 6% of 11-16 year olds with conduct disorder
- 19% among the 4% of 11-16 year olds with emotional disorder

Smoking is the single largest cause of the 10-20 year lower life expectancy of people with mental disorders.
• 15% among the 3.5% of 11-16 year olds with attention deficit hyperactivity disorder

Smoking is also important to address in groups at higher risk of mental disorders such as those with learning disabilities, for whom respiratory disease is the leading cause of death 14.

**Impacts of smoking on mental disorders**

Smoking is associated with higher rates of mental disorders:

• Smoking during pregnancy is associated with two fold increased risk of conduct disorder in boys at age 15 and of antisocial behaviour and ADHD symptoms in older children 16.

• Smoking is associated with increased risk of depression17 and anxiety disorders18. The amount of tobacco smoked is associated with the number of depressive or anxiety symptoms, and after smoking cessation these symptoms reduce19,20.

• Smoking is associated with a 79% increased risk of Alzheimer’s disease and 78% increased risk of vascular dementia 21.

**Benefits of smoking cessation**

Given the 10-20 year lower life expectancy and higher rates of smoking in people with mental disorders, the following benefits of smoking cessation are even greater for this group although often underestimated:

• Physical benefits: Improved respiratory, vascular, reproductive, gastrointestinal and general health even within a few months of cessation 22.

• Mental benefits: Improved mental health and wellbeing, greater self-confidence, more social interaction, and reduced depressive and anxiety symptoms 17,22. The impact on mood and anxiety disorders is at least as large as antidepressant treatment 23.

• Pharmacotherapy can minimise withdrawal symptoms which are relatively short-lived.

• Financial benefits24: Smoking cessation can lead to financial gains and a 25% reduction in financial stress 24. This is even more important for people with mental disorders who spend proportionately more of their income on tobacco. One study highlighted that people with schizophrenia spent a third of their benefits on tobacco 25.

• Reduced doses of some medications by up to 25% in the first week after smoking cessation, and up to 50% four weeks after cessation 26.

**Effective smoking cessation and reduction interventions**

• Smokers with mental disorders are as motivated to stop as smokers without 27.

• Different types of support increase the rates of successful smoking cessation attempts in people with mental disorder 28.

• People who want to stop smoking should be offered a combination of pharmacotherapy and non-pharmacological approaches 28.

• Higher cessation rates occur when smoking cessation interventions are provided more intensively and in combination as they are for smokers within the general population 29.

• Evidence based smoking cessation interventions can be just as effective for people with mental disorder 28,29,30,31,32 but may require additional monitoring for medication dose adjustment and potential deterioration in mental health 28,29,33.

• Evidence based interventions which support reduction of tobacco use while people continue to smoke are also effective and double cessation rates 34.

• Support should be offered at every opportunity – ‘making every contact count’.

**Pharmacological interventions**

Different pharmacotherapies are effective for smoking cessation in the general population. Such interventions are also effective in people with mental disorders. As for other groups with higher levels of nicotine dependence, greater levels of cessation and reduction occur when behavioural support is accompanied by combined pharmacological interventions at higher doses:

• Nicotine Replacement Therapy (NRT) is effective (OR 1.84, 1.71-1.99) 35 although different products vary in effectiveness. Nasal spray is the most effective followed by tablets/lozenges, inhalers and patches with gum the least effective 36. However, NRT is more effective in combination with a patch and faster acting form such as gum, inhalator and spray 35,36. As for other more dependent smokers, combination NRT for people with mental disorder is likely to be more effective and required for longer than the recommended 8-12 weeks 17,29.

• Unlicensed products containing nicotine such as electronic cigarettes are likely to be less harmful than tobacco, although people using them should be encouraged to switch to a licensed product 29.

• Bupropion is effective (OR 1.82, 1.60-2.06)35 and almost triples cessation rates at six months for those with schizophrenia with no reported serious adverse events 32.

• Nortriptyline is effective (OR 2.03, 1.48-2.78)35.

• Cytisine is effective (OR 3.98, 2.01-7.87)35.

• Varenicline is effective (OR 2.88, 2.40-3.47) 39 with some evidence supporting the use of varenicline in people with depression 39 although a NICE review did not support use in people with schizophrenia 29.

• Comparing different pharmacological interventions 39:
  - NRT and bupropion are equally effective.
  - Varenicline is more effective than bupropion or single forms of NRT.
  - Varenicline is equally as effective as combination NRT
  - Addition of bupropion or nortriptyline does not increase effectiveness of NRT
  - Combination of different forms of NRT and NRT/bupropion reduces smoking consumption in people with mental disorder 17,29.

**Non-pharmacological interventions**

The following interventions are likely to be effective for people with mental disorders:

• Simple advice from doctors 18.

• Smoking cessation advice given by nurses 29.

• Multi-sessional intensive behavioural support is more effective in groups than individual and more effective than self-help or other less intensive interventions 20.

• Telephone support 39 and multiple call-back counselling improves cessation rates 39.

• Some internet based interventions 39.

For smokers with mental disorders 29.

• Motivational interviewing increases referrals for smoking cessation.

• Contingency payments with or without NRT/bupropion can reduce consumption in those with schizophrenia.

**Combined pharmacological and other interventions**

• Mood management strategies in combination with pharmacotherapy support cessation in people with depression 40.

• In people with schizophrenia, weak evidence for increased rates of cessation and reduction using combination high intensity behavioural therapy with NRT 29.

Therefore, combination NRT should be offered to all smokers with mental disorders with the options of further interventions as required.

**Population approaches**

• Smoke-free policies and campaigns targeting people with mental disorder.

• Assessing compliance with tobacco legislation.

• Addressing illicit tobacco.

**Prescribing considerations**

Stopping smoking is an opportunity to reduce doses of some antipsychotics, antidepressants and benzodiazepines within days of cessation (as reduced metabolism decreases dose requirements).

**Preventing medication toxicity following cessation**

Stopping smoking is an opportunity to reduce doses of some antipsychotics, antidepressants and benzodiazepines within days of cessation (as reduced metabolism decreases dose requirements).

• Clozapine and olanzapine: 25% dose reduction during first week of cessation and then further blood levels taken on a weekly basis until levels have stabilised.

• Fluphenazine and some benzodiazepines: 25% dose reduction in first week.

• Tricyclic antidepressants: 10-25% dose reduction in first week.

Further dose reductions may be required with continued cessation although original doses need to be reinstated if smoking is resumed 26.

**Contraindications**

Bupropion is contraindicated in bipolar affective disorder and epilepsy due to risk of seizure 26. It should not be prescribed with drugs which increase risk of seizures such as tricyclic antidepressants, MAOIs and some anti-psychotics including clozapine.

**Addiction**

Chlorpromazine and depot injection 26.
Monitoring of mental state during cessation
Depressive symptoms may worsen in a minority of people following cessation despite symptoms of schizophrenia not appear to worsen (but see next paragraph).

Potential side effects of bupropion and varenicline
Bupropion and varenicline are effective and tolerated: a Cochrane review found no excess neuropsychiatric or cardiac side effects and a large prospective cohort study found no increased risk of treated depression or suicidal behaviour. However, there have been reports of neuropsychiatric side effects for both bupropion and varenicline, even in people without pre-existing mental disorders. Therefore, the MHRA and BNF advise care be taken when prescribing these medications for people with a history of psychiatric illness as there is a relative lack of research for use within this group.

Because of this, use of bupropion and varenicline should always be accompanied by appropriate monitoring:

- Warn people taking bupropion or varenicline of the potential increased risk of adverse neuropsychiatric symptoms and monitor them regularly, particularly in the first 2-3 weeks.
- Emergence of neuropsychiatric symptoms should prompt immediate stopping of bupropion and varenicline and continued monitoring until symptoms resolve.

Minimising weight gain
Average weight increases by 4.7kg one year following smoking cessation although a Cochrane review highlighted that this can be reduced through setting a target for weight gain and controlling calorie intake, taking regular exercise and increasing physical activity at home.

Key role of primary care
Most mental disorders and associated physical health issues are managed within primary care. Primary care therefore plays a key role in communicating how smoking cessation and reduction can improve physical and mental health in both the short and long term. GPs should aim to:

- Offer combined Nicotine Replacement Therapy (NRT) to all, including those who continue to smoke, to support smoking reduction if not abrupt cessation.
- Encourage engagement in group or individual smoking cessation counselling.
- Advise that secondary mental health settings are smoke-free and that interventions are in place to support temporary abstinence and reduced smoking if the person is unwilling to stop smoking.
- Reduce doses of relevant drugs upon smoking cessation. This requires clear communication and co-ordination between smoking cessation services and prescribers in primary and secondary care.
- Monitor the mental state of patients following cessation. For those taking bupropion and varenicline, there should be a clearly negotiated plan of support that outlines actions to be taken in the event of change in psychiatric symptoms, especially in the first 2-3 weeks.
- Monitor for smoking resumption since this is common and requires prompt dose increases of some medications.
- ‘Making every contact count’

Information about size of local smoking cessation gap
Despite smoking being the largest single cause of premature death in people with mental disorder and the impact of cessation on mood and anxiety disorders being at least as large as antidepressant treatment, only a minority of smokers with mental disorder receive smoking cessation intervention:

- Only one in ten smokers with mental disorders receive cessation medication in primary care. Furthermore, interventions are lower per consultation for smokers with mental disorders compared with smokers without.
- Although 82% of smokers in primary care in 2012-13 had a record of an offer of support and treatment within the preceding 27 months, no information is routinely collected about rates of intervention and outcomes for people with different mental disorder.
- 9% of adult smokers set a quit date through NHS Stop Smoking Services in 2012-13 which is 11% lower than in 2011-12. There is no data on this for people with mental disorders.

Co-ordination with public health
- Local public health teams are responsible for the Joint Strategic Needs Assessment (JSNA) which outlines the local level of unmet need.
- Local level of unmet smoking cessation need for people with mental disorders should be included in JSNAs by estimating the numbers of smokers with mental disorders and the proportion that are receiving smoking cessation from primary care, secondary care, NHS Stop Smoking Services, pharmacies and other providers.
- Such assessments can inform service planning and support CCGs to commission services which are compliant with the 2013 NICE guidance regarding smoke-free environments. In turn, this can challenge the notion of mental health services being complicit with smoking and smoking initiation.

Useful Resources
http://www.rcplondon.ac.uk/publications/smoking-and-mental-health


NICE (2013) Tobacco harm reduction
http://www.nice.org.uk/ph45

http://www.hscic.gov.uk/catalogue/PUB12228

DH (2012) Local Stop Smoking Services. Key updates to the 2011/12 services delivery and monitoring guidance for 2012/13

DH (2011) NHS Stop Smoking Services: service and monitoring guidance 2011/12. This document provides best practice guidance relevant to the provision of all NHS stop smoking interventions including for those with mental illness. It sets out fundamental quality principles for the delivery of services and stop smoking support

Local tobacco control profiles for England Indicator dataset 2011.
http://www.tobaccoprofiles.info/


Rethink physical health check tool (and other resources)
http://www.rethink.org/about-us/health-professionals/physical-health-resources

This factsheet is one of a series of practitioner resources originally developed by the Primary Care Mental Health Forum (Royal College of General Practitioners & Royal College of Psychiatrists) which have been updated with the support of NHS England and Public Health England.
Authors

Dr Jonathan Campon previously worked as a GP and is now a Consultant Psychiatrist and Director of Public Mental Health at South London & Maudsley NHS Foundation Trust, Director of Population Mental Health at UCLPartners and Visiting Professor of Population Mental Health at UCL.

Dr David Shiers is a retired GP from North Staffordshire and a Clinical Advisor to the National Audit of Smoking.

Professor John Britton is the Director at the UK Centre for Tobacco and Alcohol Studies, University of Nottingham and chairs the RCP Tobacco Advisory Group.

Simon Gilbody is Professor of Psychological Medicine and Health Services Research, and Director of the Mental Health and Addictions Research Group at the University of York.

We are grateful for the comments of Dr Roger Banks (Consultant in the Psychiatry of Intellectual Disability and Honorary Senior Lecturer at Bangor University), Dr Peter Elton (Clinical Director Greater Manchester, Lancashire, South Cumbria Strategic Clinical Network) and Professor Ann McNeill (Professor of Tobacco Addiction, UK Centre for Tobacco and Alcohol Studies, National Addiction Centre, Institute of Psychiatry, King’s College London).

Endorsements

Royal College of General Practitioners (RCGP)
Royal College of Psychiatrists (RCPsych)
Royal College of Physicians (RCP)
Royal College of Surgeons (RC Surgeons)
Rethink Mental Illness
UCLPartners – Academic Health Science Partnership
UK Faculty of Public Health (FPH)
National Collaborating Centre for Mental Health (NCCMH)
Royal Society for Public Health

References

27. NICE Tobacco harm reduction http://www.nice.org.uk/CG145
37. van der Meer RM, Willemsen MC, Smit F, Cuijpers P. Cigarette smoking intervention actions for smokers with past or present depression. Cochrane Database Syst Rev 2013; 8: CD006102