The clinical case for providing stop smoking support to hospitalised patients

The importance of addressing smoking among hospitalised patients

Smoking is the leading preventable cause of death and disability in the UK and there is a **direct association to hospital outcomes.**[1] Moreover tobacco use is responsible for a large proportion of healthcare spending.

Addressing tobacco use among patients who smoke is one of the most important interventions we can provide to improve both short and long-term health and healthcare outcomes.

Admission to hospital is an important opportunity to intervene with smokers by providing both brief advice on smoking and support to stop smoking, including making a referral on to specialised stop smoking support at the hospital or the local stop smoking service. **The NHS Long Term Plan has committed that all people admitted to hospital who smoke will be offered NHS-funded tobacco treatment services by 2023/24.**[2]

Why intervene in secondary care?

1. A large proportion of patients admitted to hospitals are smokers and there is a direct relationship between their continued smoking and their treatment and recovery.
2. Quitting smoking can lead to significant health benefits, and reduce length of stay, complications, and readmissions to hospital as well as improve the patient long-term risk of smoking-related illness and health spending.
3. Hospital patients are more receptive to 'Very Brief Advice' (VBA) and an offer of support to stop smoking, as they are often experiencing a period of heightened motivation to quit smoking as a result of their hospitalisation and/or medical condition.
4. Many patients who are regular smokers will need support with managing tobacco withdrawal while in hospital, supporting patients with managing acute withdrawal symptoms will encourage compliance to the smokefree hospital policy, improve their clinical care, and can lead to long-term quitting.

Effects of smoking on hospital and health outcomes

Patients who smoke will have a greater length of stay, increased complications and adverse events, reduced treatment effectiveness, increased risk of readmission, and poorer survival.

Continued smoking increases risks for:

- suppressed immune response[3]
- infection[3]
- reduced wound healing[4,5]
- connective tissue graft failure, fracture union failures[6,7]
- cardiovascular events and death for those with cardiovascular disease[8–10]
- decreased effectiveness of pulmonary, cardiovascular and cancer treatments[11]
- reduced survival time for cardiovascular, stroke, pulmonary and cancer patients[12]
- as well as many other risks[4,5]

The effect of hospitalisation on stopping smoking

- The experience of hospitalisation itself can serve to motivate quit attempts among hospitalised patients and can even lead to patients stopping smoking long-term.[6,8,13–15]
- The smokefree hospital environment, and in many cases the patients ill health, may require smokers to abstain from smoking and can provide the ideal opportunity to initiate treatment.
- Many patients stop smoking during hospital admissions and those who do not stop completely tend to decrease their use of tobacco.[9,13,15]

What are the health benefits of stopping smoking for hospitalised patients?

Stopping smoking will not only benefit a patient's long-term health by reducing the risk of developing smoking related disease,[10] but smoking abstinence may also help a patient to recover quicker by eliminating the acute effects of smoking on the body. There is an evidenced benefit of stopping smoking in terms of hospitalisation outcomes and general outcomes (see below).

Hospital outcomes

Inpatient smoking cessation programs have been shown to be highly cost-effective interventions and can result in significant cost-savings to the NHS.[15–17]

- Reduction in length of stay, complications and 30-day readmissions, and death[1,16–18]
- Stopping smoking decreases the risk of postoperative complications and reduces wound healing complications by 20 – 40%.[7,19]

General health benefits of stopping smoking[20]

- Within 20 minutes heart rate and blood pressure drops.
- Within 12 hours carbon monoxide levels in the blood return to normal.
- Within 24 hours the chance of a heart attack decreases.
- Within 2 weeks to 3 months circulation improves and lung function increases.
- Within 1 to 9 months lungs regain normal ciliary function, reducing infection risk.
- Within 1 year risk of heart attack is reduced by half.
- Within 5 to 15 years risk of stroke is reduced to that of a non-smoker.
- By 10 years the risk of lung cancer is approximately half that of a smoker. The risk of cancers of the mouth, throat, bladder, kidney and pancreas also decrease.
- By 15 years risk of heart attack is that of a non-smoker.

Stop smoking support is effective

Providing a stop smoking intervention to a hospital patient is proven to be effective regardless of the reason for admission.[13]

There is strong evidence that smoking cessation interventions that begin in hospital and include quit smoking medications, bedside counselling and behavioural support, and post-discharge support for ≥ 1 month, increase the likelihood of smoking abstinence.[13] Providing support post-discharge is important for patients to remain quit long-term, in particular when they return to their regular routines. This includes behavioural support to replace unhealthy routines with healthy ones and the use of stop smoking medications.

Evidence indicates that stop smoking medications including nicotine replacement therapy (NRT), bupropion (Zyban) and varenicline (Champix) are all effective treatments for stopping smoking that significantly increase the patient's chances of stopping smoking in the short and long-term.[21]

Best practices for managing tobacco withdrawal in the inpatient setting

Most regular smokers will experience tobacco withdrawal symptoms within hours of being in a smoke-free environment. These symptoms can range from mild to severe and include aggression and hostility and can affect the care of the patient. **Recognising and managing tobacco withdrawal among hospitalised patients who smoke should be a priority.**

Providing NRT to a patient during a period of forced abstinence will ease withdrawal symptoms and can also support long-term quitting. A combination of the patch (NRT patch can take 20 – 40 minutes to reach therapeutic dose) with a short-acting oral NRT product (e.g. gum, inhaler, spray) is a recommended evidence-based practice.[22,23] NRT is generally used in the inpatient setting as it works quickly, however pill-based medications (i.e. varenicline and bupropion), which are titrated to therapeutic doses over a 1-week period, can be helpful to initiate for longer-term treatment of smoking.

Tobacco withdrawal symptoms include:
Urges to smoke or cravings
Restlessness or difficulty concentrating
Irritability, aggression, anxiety, crying, sadness or depression
Difficulty sleeping or sleeping disturbances
Increased appetite and weight gain
Coughing
Mouth ulcers
Constipation
Light headedness

Providing 'Very Brief Advice' to hospital patients

Offering VBA is a clinically proven preventative action that every healthcare professional can take[17] and it is important to keep giving advice at every opportunity, as smokers may take several attempts to stop smoking successfully.[24–26] In addition, by referring a patient to specialist stop smoking support at the hospital or via the local stop smoking service, they are three times more likely to stop smoking.[27]

Research shows that 95% of patients expect to be asked about smoking and a short intervention can make all the difference.[24,25,28] The 3As 30 second approach to giving 'very brief advice' areas follows:

ASK and record smoking status

ADVISE the patient:

- the best way of quitting is with a combination of support and stop smoking medication
- support with stopping smoking and/or managing any tobacco withdrawal symptoms (temporary abstinence) is available
- of the personal health benefits of stopping smoking

ACT on the patient's response:

- prescribe NRT for patients in withdrawal
- monitor withdrawal and adjust pharmacotherapy accordingly
- refer to specialised stop smoking support (hospital-based, local stop smoking service)

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