MIL

Oxford University Hospitals NHS
NHS Foundation Trust

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This Medicines Information Leaflet is produced locally to optimise the use of medicines by encouraging prescribing that is safe, clinically appropriate and cost-effective to the NHS.

Nicotine Replacement Therapy (NRT) for Smoking Cessation

The Trust is committed to providing a smoke-free environment within its hospitals and grounds to reduce exposure to second-hand smoke. This is governed by the OUH Smoke Free Policy[1], The Smoke Free (Premises and Enforcement) Regulations 2006[2], and the government White Papers 'Choosing Health' (2004)[3] and 'Tobacco Control Plan for England' (2017).[4] NICE and Public Health England offer evidence-based guidance, which forms the basis for the recommendations herein.[5-10]

'Make Every Contact Count'

Every patient should be asked if they smoke or have recently stopped smoking which should be recorded on EPR. This forms part of the Trust's activity to comply with a 'Risky Behaviours' CQUIN which launched in 2018/19. Those who are unable to, or do not wish to, discuss smoking should have this recorded in their records. Their smoking status should be discussed at the first available opportunity.[1]

Patients must abstain from smoking whilst on hospital grounds and therefore this guidance can be applied to those who need to temporarily abstain and those who wish to make a quit attempt.[1]

Quitting, cutting down & temporary abstinence

Everyone who smokes should be encouraged to stop smoking completely. The 'not-a-puff' rule is associated with better outcomes and is more cost-effective than the 'cut down to quit' approach.[11] Smokers are requested to stop smoking abruptly on an agreed quit date, rather than gradual cessation. 'Cut down to quit' may be more appropriate for those unable or unwilling to stop abruptly.[12]

'Not-a-puff' quitters should have regular and PRN NRT prescribed as this is associated with better quit rates.[13]

'Cut down to quit' smokers may only need 1 form of NRT prescribed (regular or PRN depending on level of smoking dependence).

Supply on discharge

A 14 day supply should be made on discharge and a referral to Stop for Life Oxon via EPR or by emailing referrals.stopforlife@nhs.net for those making a quit attempt. 'Cut down to quit' smokers' requirements should be reassessed on discharge. Patients should be encouraged to use a licensed NRT product to help them abstain as this is associated with greater success rates than stopping abruptly.[5]

Nicotine replacement therapy

Licensed NRT and pharmacotherapies will help people stop smoking by reducing cravings. There are multiple options of NRT which include: patches, gum, lozenges, a mouthspray, inhalators, nasal spray, and microtabs. The Trust formulary includes the most popular and cost-effective options; **patches** (for regular use) and a choice of the **inhalator** or **lozenges** (for PRN use).

Other pharmacotherapies

Bupropion (Zyban®) (Non-formulary) and **varenicline (Champix®)** (NICE TA) are tablets which are a licensed alternative to NRT. However, they are not suitable for pregnant and breast-feeding women or those under 18 years.

Monitoring is required therefore within the Trust these options are **restricted formulary for continuation only** and it is recommended that these are **initiated in primary care**. This is because patients should start bupropion/varenicline 1-2 weeks before their quit date, i.e. whilst they are still smoking. This is therefore not possible to do in hospital as smoking is not permitted.

Electronic cigarettes (e-cigarettes)

Public Health England recommend that stop smoking services should offer support to people who are already using e-cigarettes in a quit attempt as there is growing evidence that these can help people stop smoking.[16] Their long-term side-effects are unknown. They are not classified as medicines and therefore are not assessed for safety, quality, and efficacy. As there is no combustion, e-cigarettes are predicted to be 95% less harmful than tobacco cigarettes and therefore contribute to harm reduction.[14] However, licensed pharmacotherapy remain the first-line choice. E-cigarettes cannot be used in hospital due to fire risks.

Contraindications/ Cautions with NRT

There are no circumstances in which it is safer to smoke than to use NRT.[15] However there are some patients which require special consideration:

- Those on nicotine dependence medications: bupropion (Zyban®), or varenicline (Champix®).
- Previous severe reactions to NRT.
- **Pregnancy/breastfeeding:** nicotine metabolism is accelerated therefore offer NRT if needed. Remove 24 hour patch at night. Avoid liquorice flavour.
- **Skin diseases:** patches should be used with caution.
- **Co-morbidities**: medical supervision required in diabetes, cardiovascular, or thyroid disease.
- **Diabetes:** monitor blood sugar more closely during NRT initiation.
- **Moderate to severe hepatic or severe renal impairment:** monitor for side effects due to reduced clearance and metabolism.
- **Age:** NRT is not licensed in the under 12s.

Drug interactions

Cigarette smoking can interact with some medicines by stimulating cytochrome P450 enzymes, particularly CYP1A2. Medicines metabolised by these enzymes may be affected when a patient stops or starts smoking**.**

Most interactions have little clinical significance, however, some medicines may require dosage modification or monitoring when smoking is stopped. Any effect usually happens within 1-4 weeks, therefore noting the stop date is important. *Table 1* lists strong (red), moderate (amber) and weak (green) interactions. Please note this list is not exhaustive.

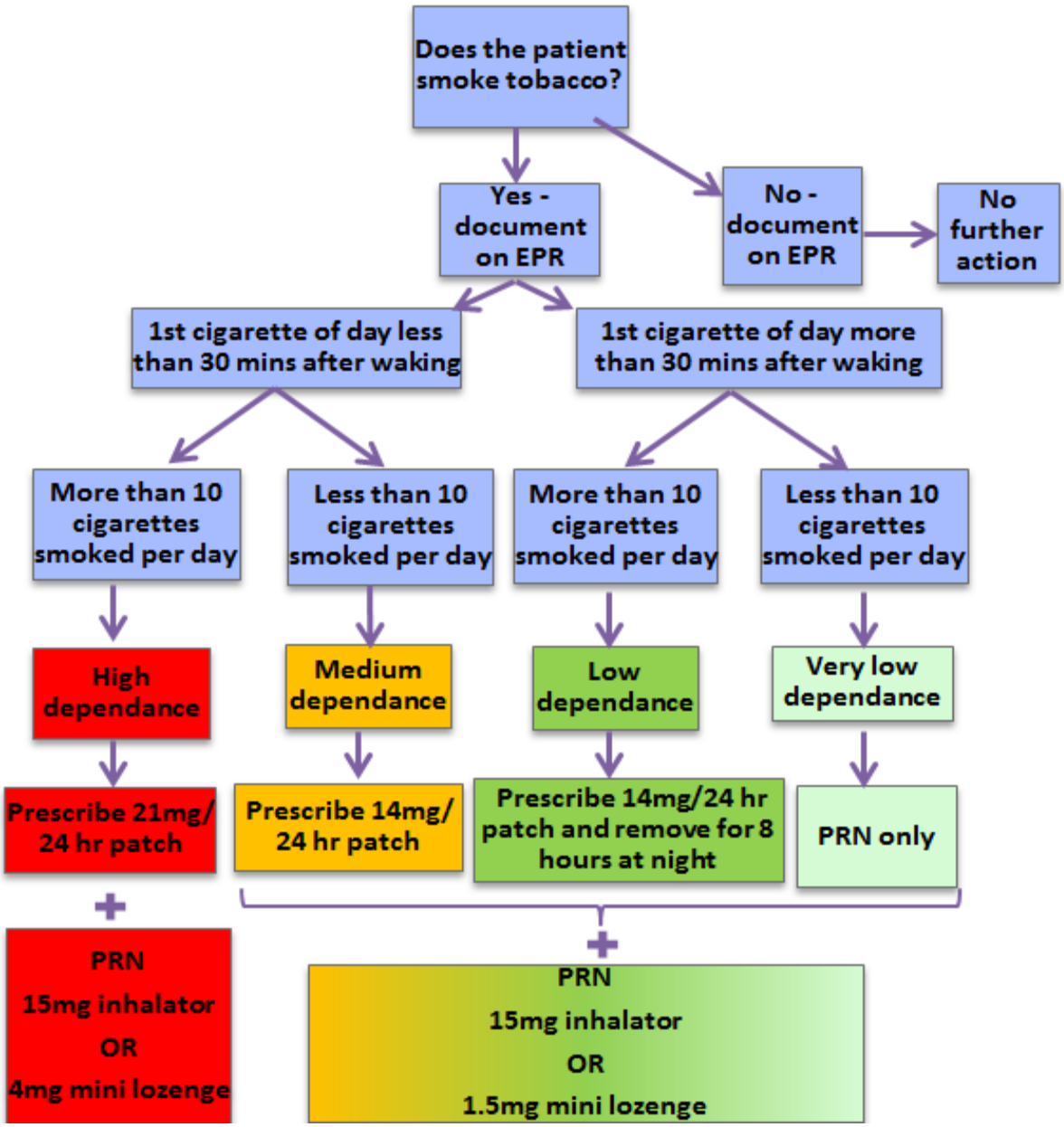
Table 1: Common interactions

Drug	Interaction	Action
Clozapine	Smoking reduces clozapine concentrations by up to 50%.	Monitor level before and 1-2 weeks after stopping smoking. Monitor for adverse effects. Adjust dose accordingly.
Theophylline	Tobacco increases theophylline clearance. Levels can increase on stopping smoking.	Reduce dose by 25-33% a week after stopping smoking. Monitor level weekly. Adjust dose accordingly until effects normalise (may take several weeks).
Adenosine	Smoking/NRT may enhance effect.	Monitor heart rate (HR) & blood pressure (BP).
Benzo-diazepines	Stopping smoking may enhance effect of drug.	Monitor sedation. Possible dose reduction required if stop smoking.
Beta-blockers	Nicotine increases HR & BP.	Monitor HR & BP, titrate dose to effect.
Cinacalcet	Smokers have lower levels as tobacco increases clearance of cinacalcet.	Inform nephrologists to monitor parathyroid concentrations if stop smoking. Adjust dose as required.
Chlorpro-mazine	Smokers may have lower plasma concentration (increased clearance).	Reduce dose as necessary on smoking cessation. Monitor for adverse effects.
Erlotinib		
Flecainide		
Fluvoxamine		
Haloperidol		
Mexiletine		
Olanzapine		
Insulin	Smoking tobacco, and to a lesser extent NRT can increase insulin resistance.	Insulin dose may need to be reduced when stopping smoking/starting NRT.
Opioids	Smoking possibly increased metabolism of opiates and reduces their effectiveness.	Stop smoking prior to surgery may need increased requirements after surgery.
Quinine	Smoking possibly increases clearance.	No action.
Warfarin	INR may increase if stop smoking.	Monitor INR and adjust dose.

Brief interventions

All patients should be asked if they smoke, what they smoke, their willingness to stop, and preference of available treatments. *Figure 1* should be used as a guide to assist in this process.

Figure 1: Prescribing advice for NRT



Prescribing advice

- Check there are no contraindications and the prescribing advice does not contradict any cautions.
- **Inhalator cartridges** can be used for approximately 8 sessions with each lasting approximately 40 minutes. Maximum 6 cartridges daily. Take shallow breaths rather than deep breaths with the inhalator.
- **Lozenges** should be moved from one side of the mouth to the other until they dissolve (approx. 10 mins). Use every 1–2 hours as needed. Maximum 15 lozenges daily. Do not chew or swallow whole.
- **Patches** should be applied on waking, to a different, dry, non-hairy skin site each day. Remove after 16 hours if patient does not smoke within 30 mins of waking (low dependence) or after 24 hours if smokes within 30 mins of waking (medium or high dependence).
- **Stepdown** to a lower dosage of NRT should be considered if a patient has been on the same dose for 6 weeks. This should be in consultation with a smoking cessation advisor or the pharmacy medicines information team.

Side effects of NRT

The adverse effects of using NRT are usually short term, and may in fact occur as a result of stopping smoking. These could include: nausea, dizziness, headaches, cold/flu-like symptoms, palpitation, dyspepsia, gastro-intestinal disturbances, hiccups, insomnia, vivid dreams, myalgia, chest pain, blood pressure changes, anxiety, irritability, impaired concentration, & dysmenorrhoea.

Referral support

Within hospital

- **Brief interventions –** as above, completed for all patients by a healthcare professional (HCP).
- **Individual behavioural support –** self or HCP referral to a smoking cessation advisor:
  - **Here for Health** drop-in centre (Blue Outpatients, JR, Monday-Friday 09:30-17:00) 01865 221429
  - Refer to be seen by a **Here for Health** smoking cessation advisor via email or EPR
- **Pharmacotherapies –** NRT patches, inhalators, lozenges available via pharmacy. A 14 day supply will be made available on discharge.
- **Self-help materials –** leaflets and information available from smoking cessation advisors and in **Here for Health** drop in centre.

On discharge

- **Individual behavioural support –** Refer to Stop for Life Oxon via online referral form, or automatically on EPR by selecting "Refer to smoking cessation service?" in the KIPI or iview assessment
- **Self-help materials –** an online app 'Best You' is available on the Stop for Life Oxon website.
- **Telephone counselling and quit lines –**
  - **Stop for Life Oxon**: 0800 122 3790
  - NHS Smoke Free Helpline: 0300 123 1014 (7am-11pm)
- **Pharmacotherapies and support –** full range of NRT, from community service or pharmacies. Talk to your GP or Stop for Life Oxon about how to access Bupropion (Zyban®), or varenicline (Champix®) as eligibility and availability continues to change for these.

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