<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tobacco Dependence Treatment Pathway</td>
<td>3</td>
</tr>
<tr>
<td>1.1 Introduction</td>
<td>3</td>
</tr>
<tr>
<td>1.2 Aims</td>
<td>3</td>
</tr>
<tr>
<td>1.3 E-cigarette use</td>
<td>4</td>
</tr>
<tr>
<td>2. Inpatient Pathway</td>
<td>4</td>
</tr>
<tr>
<td>2.1 Assessment</td>
<td>4</td>
</tr>
<tr>
<td>2.2 Identification of smokers</td>
<td>4</td>
</tr>
<tr>
<td>2.3 Advise and offer support</td>
<td>5</td>
</tr>
<tr>
<td>2.4 Act on smoker’s response</td>
<td>5</td>
</tr>
<tr>
<td>2.5 Nicotine replacement therapy product section</td>
<td>5</td>
</tr>
<tr>
<td>2.6 Pathway 1: Abstaining from smoking whilst in hospital buildings and grounds or making a sustained quit attempt from smoking with pharmacological and psychological support</td>
<td>6</td>
</tr>
<tr>
<td>2.7 Pathway 2: Abstaining from smoking whilst in hospital buildings and grounds without pharmacological and psychological support</td>
<td>7</td>
</tr>
<tr>
<td>2.8 Provide information</td>
<td>8</td>
</tr>
<tr>
<td>2.9 Assess</td>
<td>8</td>
</tr>
<tr>
<td>2.10 Discharge from inpatient care</td>
<td>8</td>
</tr>
<tr>
<td>3. Community Pathway</td>
<td>9</td>
</tr>
<tr>
<td>3.1 Assessment</td>
<td>9</td>
</tr>
<tr>
<td>3.2 Identification of smokers</td>
<td>9</td>
</tr>
<tr>
<td>3.3 Advise and offer support</td>
<td>9</td>
</tr>
<tr>
<td>3.4 Act on smoker’s response</td>
<td>9</td>
</tr>
<tr>
<td>4. Tobacco Dependence Treatment Pathway Inpatient Assessment Form</td>
<td>10</td>
</tr>
<tr>
<td>5. Tobacco Dependence Treatment Pathway Community Assessment Form</td>
<td>12</td>
</tr>
<tr>
<td>6. References</td>
<td>13</td>
</tr>
<tr>
<td>Appendix 1 Smoking Cessation – Effect on Psychotropic Medication including Clozapine</td>
<td>14</td>
</tr>
</tbody>
</table>
1. Tobacco Dependence Treatment Pathway

1.1 Introduction

Tobacco dependence is a treatable, chronic and relapsing condition\(^1\). The treatment needs of a smoker will differ according to their smoking history and behaviour, age, gender, socioeconomic status, mental health needs, use of other substances, if they are an inpatient or outpatient and their personal choice about receiving support\(^1\).

There are however, essential steps within the tobacco dependence treatment pathway that apply to all smokers.

1.2 Aims

The aim of the tobacco dependence treatment pathway is to:

1. Ensure we identify the smoking status of every current patient under the care of the Trust receiving inpatient or community care
2. Ensure early diagnosis of the severity of tobacco dependence
3. Offer every smoker nicotine replacement therapy (NRT) on arrival to an inpatient service following assessment of that person’s tobacco use and their preferences for treatment.
4. Offer evidence-based pharmacological, psychological and psycho-education treatment to smokers in receipt of inpatient and community care
5. Ensure smokers receive continuous, efficient care and treatment at transition points across the pathway\(^1\)
6. Ensure SPT meet the recommendations of the NICE guidelines for smoking cessation in secondary care\(^2\). The NICE guidelines describe support during an inpatient stay\(^2\).
1.3 E-cigarette use

E-cigarettes are battery powered devices that deliver nicotine via inhaled vapor\(^1\). E-cigarettes can be disposable, rechargeable devices with refillable tanks or rechargeable devices with replacement pre-filled cartridges. Nationally, e-cigarettes have rapidly become the most popular stop smoking aid with around 2.8m adults using e-cigarettes. Most of these vapers are smokers or ex-smokers\(^3,4\). While experimentation with e-cigarettes among young people has increased over recent years, long-term use is uncommon and almost entirely confined to current or ex-smokers\(^5\).

Only relatively small randomised control trials have been completed on the use of electronic cigarettes in supporting quit attempts. However, a 2014 Cochrane Review found that e-cigarettes were effective quitting aids and there is a developing body of evidence which shows that they can be effective in aiding smoking cessation\(^6,7\).

Since e-cigarettes do not contain tobacco and are not burnt, they do not result in the inhalation of cigarette smoke and are around 95% safer for users than smoking\(^5\). Additionally, there is no evidence of harm to bystanders from exposure to e-cigarette vapour and the risks to their health are likely to be extremely low\(^5\). While debate continues about the absolute level of safety of e-cigarettes, the consensus across England’s public health community is that they are significantly safer for users than tobacco\(^8\).

E-cigarette use, known as vaping, is not covered by Smokefree legislation\(^8\). E-cigarettes therefore may support compliance with the Trust smoke free policy and help smokers manage their nicotine dependence. **The Trust currently supports the use of disposable e-cigarettes**\(^9\). **Rechargeable e-cigarettes with refillable tanks and rechargeable e-cigarettes with replacement pre-filled cartridges are currently not permitted under any circumstances.** E-cigarette use is not recommended for young people. The sale of e-cigarettes to under-18s and purchase of e-cigarettes on behalf of under-18s is prohibited in the UK\(^8\).

Currently, the government is in the process of reviewing all e-cigarettes through the MHRA licensing process\(^10,11\). As new evidence of safety and efficacy emerges, as well as further information around the licensing of e-cigarettes, the Trust will review its position on the use of these products.

Protocols have been developed in each locality of the Trust which describe the way patients are able to obtain e-cigarettes for use on inpatient units in that locality.

2. Inpatient pathway

2.1 Assessment

- All patients admitted to inpatient units should have a Tobacco Dependence Treatment Pathway Inpatient Assessment Form (see page 10) completed.
- The completed form should be uploaded as an attachment on to the ‘Assessment’ section of the patient’s Carenotes record. This should be saved under the title ‘Tobacco Dependence Inpatient Assessment Form – *insert date*’.

2.2 Identification of smokers

- The first step in treating tobacco dependence is to identify current tobacco users.
- On the inpatient assessment form complete Section 1 ‘Identification of Smokers’
- The identification and recording of each patient’s smoking status needs to be completed regularly, i.e. on admission and discharge from hospital.
2.3 Advise and offer support

- To comply with the Trust’s Smoke free Policy and the NICE guidelines for smoking cessation in secondary care, smokers will need to abstain from smoking whilst in Trust buildings and grounds during an inpatient admission\(^2,9\).
- Making an attempt to permanently stop smoking is an opportunity not an obligation.

During an inpatient admission a smoker has three options:

**OPTION 1:** to temporarily abstain from smoking whilst in buildings and in the grounds, with pharmacological and/or psychological support

**OPTION 2:** to temporarily abstain from smoking whilst in buildings and in the grounds, without pharmacological and/or psychological support

**OPTION 3:** to use the opportunity to make a sustained quit attempt, with pharmacological and/or psychological support. This should be followed up by the offer of tobacco dependence treatment support from a ward tobacco dependence treatment advisor.

- Offering support to quit or manage tobacco withdrawal symptoms during a period of temporary abstinence, rather than asking a smoker how interested are they in stopping or telling a person they should stop, leads to more people making a quit attempt\(^{12}\). The most effective method of quitting or managing tobacco withdrawal symptoms during a period of temporary abstinence, is with intensive behavioural support and combination NRT (i.e. a patch and oral product) or varenicline or buproprion (as sole therapies)\(^{2,12}\). Varenicline and buproprion should be used with caution in patients who have mental health problems\(^2\).
- Advising the smoker that stopping smoking is one of the best things they can do for their health and wellbeing\(^{13}\).
- Complete Section 2 ‘Advise and offer support’ on the inpatient assessment form

2.4 Act on smoker’s response

- Based on the smoker’s response, choose one of the two pathways as detailed below.
- If the patient has chosen Option 1 or 3 (see above), complete section 3 ‘Act on the smoker’s response’ on the inpatient assessment form.

2.5 Nicotine replacement therapy product section

- If the smoker has chosen Option 1 or 3 (see above), complete section 4 ‘Nicotine replacement therapy product section’ on the inpatient assessment form.
- Following selection of NRT products, there are two ways to supply NRT to the patient:
  - Prescription by a medical or non-medical prescriber
  - Medicines Administered under Protocol (see Group Protocols on Pharmacy section of SUSI). This is available for lozenges and patches only.
2.6 For smokers choosing OPTION 1 or OPTION 3: Abstaining from smoking whilst in hospital buildings and grounds or making a sustained quit attempt from smoking with pharmacological and psychological support

### PATHWAY 1: Abstaining from smoking whilst in hospital buildings and grounds or making a sustained quit attempt from smoking with pharmacological and psychological support

<table>
<thead>
<tr>
<th>Does patient want NRT support for temporary abstinence?</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow PATHWAY 2.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assessment**
- How many cigarettes a day do you smoke?
- How soon after you wake up do you have your first cigarette?
- Past use of NRT products
- Patient choice of NRT products
- Known allergies to NRT products
- Will smoking cessation impact on their current medication regime (see document ‘Smoking Cessation – Effect on Psychotropic Medication’)

Choose one of the following immediate acting products for any patient wanting NRT support

- **Nicorette® 15mg Inhalator** 15mg/cartridge. Maximum 6 cartridges/day.
- **Nicorette® 1mg Oral spray** 1-2 sprays every 30 minutes to 1 hour. Maximum 64 sprays/day
- **NiQuitin® Minis 1.5mg & 4mg lozenges** 1-2 lozenges every hour. Maximum 15 lozenges/day

Choose one of the following transdermal patch regimens in addition to the immediate acting product based on the number of cigarettes the patient smokes a day. It is the patient’s choice whether they have a 16 hour or a 24 hour patch. 24 hour patches left on overnight may cause sleep disturbances.

**Less than 10 cigarettes a day**

Consider if the patient’s cravings may be controlled with an immediate acting product alone

- **Nicorette® Invisi 16 hour patch**
  - 15mg for 8 weeks then
  - 10mg for final 4 weeks
  - OR
- **NiQuitin CQ® Clear 24 hour patch**
  - 14mg for 6 weeks then
  - 7mg for final 2 weeks

**More than 10 cigarettes a day**

- **Nicorette® Invisi 16 hour patch**
  - 25mg for 8 weeks then
  - 15mg for 2 weeks then
  - 10mg for final 2 weeks
  - OR
- **NiQuitin CQ® Clear 24 hour patch**
  - 21mg for 6 weeks then
  - 14mg for 2 weeks then
  - 7mg for final 2 weeks

Complete section 4 ‘Nicotine replacement therapy product selection’ on inpatient assessment form

For patients who have chosen to make a sustained quit attempt only (Option 3)

On discharge ensure a referral is made to the patient’s primary care stop smoking service to enable them to access pharmacological and psychological support once they are in the community. See 2.10 for further information.
2.7 For smokers who choose OPTION 2; to temporarily abstain from smoking whilst in buildings and in the grounds, without pharmacological and/or psychological support, follow treatment pathway 2 below:

**PATHWAY 2: Abstaining from smoking whilst in hospital buildings and grounds without pharmacological and psychological support**

- **Provide education and raise awareness of tobacco dependence and treatment**
  - Inform smokers that all Trust buildings and grounds are Smokefree

- **Daily assessment of nicotine withdrawal symptoms and the impact these may have on mental health symptoms and wellbeing**
  - Daily assessment of any cigarette use. Consider may this may impact on therapeutic care - see 'Smoking Cessation – Effect on Psychotropic Medication including Clozapine'[^14]
  - Manage any occurrence of smoking in buildings and grounds according to therapeutic management of smoking incidents

- **Repeat education and the offer of support regularly. Switch to pathway 1 if patient agrees to support**
  - If the patient has tried NRT and has used it correctly (at the correct dose for the correct length of time), unsuccessfully for temporary abstinence previously, **consider the use of electronic cigarettes** (see 1.3).
2.8 Provide information

- Staff can refer to the ‘Nicotine replacement therapy guideline and product formulary’ for information on any of the following:
  - How to use the NRT product correctly
  - What side effects to expect and how to manage them
  - What withdrawal symptoms to expect and how to manage them
  - Maximum dose to use of each NRT product
  - Importance of adherence

2.9 Assess

- Severity and frequency of withdrawal symptoms
- Response to treatment
- Plasma level of clozapine and other medication (see Appendix 1 ‘Smoking Cessation – Effect on Psychotropic Medication including Clozapine’)
- Ensure technique for using the NRT product is correct
- Adherence with NRT

2.10 Discharge from inpatient care

- Ensure that the patient’s current smoking status is documented on Carenotes under ‘Notes’.
- When people are discharged from hospital ensure they have sufficient NRT to last at least 1 week or until their next contact with a stop smoking service
- Alert the patient’s community consultant and GP to that person’s changes in smoking behaviour.
- If the patient wants to continue to receive support to stop smoking in the community, refer to the local NHS Stop Smoking Service:
  
  i. Discharge from West Sussex: Refer to Smokefree West Sussex using the referral form or telephone number on the website https://www.smokefreewestsussex.co.uk/
  
  ii. Discharge from Brighton and Hove: Refer to healthtrainers@brighton-hove.gcsx.gov.uk
  
  iii. Discharge from East Sussex: Refer to Quit 51 using the referral form or telephone number on the website http://www.quit51.co.uk
3. Community Pathway

Staff working in the community have an important role to play in the management of tobacco dependence before and after a smoker is admitted to hospital and during their care within community services.

3.1 Assessment

- The identification and recording of each patient’s smoking status needs to be completed regularly, i.e. on first contact, prior to admission or after discharge from hospital and at each Care Programme Approach (CPA) review. This should be completed on a Tobacco Dependence Treatment Pathway Community Assessment Form (see page 12).
- The completed form should be uploaded as an attachment on to the ‘Assessment’ section of the patient’s Carenotes record. This should be saved under the title ‘Tobacco Dependence Community Assessment Form – *insert date*’

3.2 Identification of smokers

- The first step in treating tobacco dependence is to identify current tobacco users.
- On the community assessment form complete Section 1 ‘Identification of Smokers’

3.3 Advise and offer support

- Confirming if someone is a smoker, should be followed up with advice on the most effective way of quitting
- Inform smokers that all Trust buildings and grounds are Smokefree
- Offering support to quit rather than asking a smoker how interested are they in stopping or telling a person they should stop, leads to more people making a quit attempt\textsuperscript{12}. The most effective method of quitting, is with intensive behavioural support and combination NRT (i.e. a patch and oral product) or varenicline or bupropion (as sole therapies)\textsuperscript{2,12}. Varenicline and bupropion should be used with caution in patients who have mental health problems\textsuperscript{2}.
- Advising the smoker that stopping smoking is one of the best things they can do for their health and wellbeing\textsuperscript{13}.
- Complete Section 2 ‘Advise and offer support’ on the inpatient assessment form

3.4 Act on smoker’s response

- If the patient would like specialist support to stop smoking, refer them to their local smoking cessation service:
  i. Patients living in West Sussex: Refer to Smokefree West Sussex using the referral form or telephone number on the website [https://www.smokefreewestsussex.co.uk/](https://www.smokefreewestsussex.co.uk/)
  ii. Patients living in the Brighton and Hove: Refer to [healthtrainers@brighton-hove.gcsx.gov.uk](mailto:healthtrainers@brighton-hove.gcsx.gov.uk)
  iii. Patients living in East Sussex: Refer to Quit 51 using the referral form or telephone number on the website [http://www.quit51.co.uk](http://www.quit51.co.uk)
- Check whether smoking cessation will impact on the patient’s current medication regime (see document ‘Smoking Cessation – Effect on Psychotropic Medication including Clozapine’\textsuperscript{14})
- Alert the patient’s community consultant and GP to that person’s changes in smoking behaviour. Although smoking cessation can require changes to be made to a patient’s medication regime, this should not impact on their referral to smoking cessation services and they should continue to be encouraged to quit smoking if they wish to.
4. Tobacco Dependence Treatment Pathway

Inpatient Assessment Form

<table>
<thead>
<tr>
<th>Patient Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surname</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>First name</td>
</tr>
<tr>
<td>CIS No:</td>
</tr>
<tr>
<td>Date of birth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Name</td>
</tr>
<tr>
<td>Job Title</td>
</tr>
<tr>
<td>Ward</td>
</tr>
<tr>
<td>Hospital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of assessment</th>
</tr>
</thead>
</table>

1. Identification of Smokers

The patient has been asked if they smoke

- [ ] Yes
- [ ] No

Patient’s current smoking status

- [ ] Smoker
- [ ] Non-smoker

If the patient is a smoker continue to section 2
If the patient is a non-smoker or an ex-smoker advise that support and advice is available on the ward if they wish to access it.

This is the end of the assessment for non-smokers or ex-smokers

Staff signature

2. Advise and offer support

Which option to abstain from smoking during their inpatient admission has the patient chosen?

- [ ] OPTION 1: to temporarily abstain from smoking whilst in buildings and in the grounds, with pharmacological and/or psychological support
- [ ] OPTION 2: to temporarily abstain from smoking whilst in buildings and in the grounds, without pharmacological and/or psychological support
- [ ] OPTION 3: to use the opportunity to make a sustained quit attempt, with pharmacological and/or psychological support.

Have the benefits of smoking cessation been discussed with the patient?

- [ ] Yes
- [ ] No

Does the patient want to see a smoking cessation advisor during their admission?

- [ ] Yes
- [ ] No

If the patient has chosen option 1 or option 3 continue to section 3.
If the patient has chosen option 2 continue to section 6.
### 3. Act on the smoker’s response

<table>
<thead>
<tr>
<th>Does the patient want NRT support for temporary abstinence?</th>
<th>Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the patient has said ‘Yes’ continue to the next question</td>
<td>If the patient has said ‘No’ continue to section 6.</td>
</tr>
</tbody>
</table>

#### How many cigarettes per day (cpd) does the patient smoke?
- Less than 10 ☐
- 10-20 ☐
- More than 20 ☐

#### How soon after waking up does the patient have their first cigarette?
- Less than 30 minutes ☐
- More than 30 minutes ☐

<table>
<thead>
<tr>
<th>Has the patient used NRT successfully in the past?</th>
<th>Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which NRT products has the patient used in the past?</td>
<td>Lozenges ☐ Gum ☐ Oral Spray ☐ Inhalator ☐ Patches ☐ Microtabs ☐ Nasal Spray ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does the patient have any known allergies to NRT products?</th>
<th>Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>If ‘Yes’ please state the nature of the allergy:</td>
<td></td>
</tr>
</tbody>
</table>
| Will smoking cessation impact on their current medication regime (see document ‘Smoking Cessation – Effect on Psychotropic Medication including clozapine’

#### 4. Nicotine replacement therapy product section

<table>
<thead>
<tr>
<th>Would the patient like to use an immediate acting NRT product?</th>
<th>Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which immediate acting product has the patient chosen?</td>
<td>Lozenges ☐ Inhalator ☐ Oral Spray ☐</td>
</tr>
</tbody>
</table>

*If the patient has smokes less than 30 minutes after waking advise that they use an immediate acting nicotine preparation as soon as they wake up.*

<table>
<thead>
<tr>
<th>In addition to the immediate acting NRT product, would the patient like to use a nicotine patch?</th>
<th>Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the patient smokes less than 10 cigarettes per day, Consider if the patient’s cravings may be controlled with an immediate acting product alone</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which nicotine patch has the patient chosen?</th>
<th>Patients who smoke less than 10 cpd:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicorette® Invisi 15mg 16 hour patch ☐</td>
<td>NiQuitin CQ® Clear 14mg 24 hour patch ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients who smoke more than 10 cpd:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicorette® Invisi 25mg 16 hour patch ☐</td>
</tr>
</tbody>
</table>

| How did the patient access NRT following this assessment? | Medicine administered under protocol (MAUP) ☐ Prescription ☐ |

<table>
<thead>
<tr>
<th>5. Provide information</th>
</tr>
</thead>
</table>
| Refer to the ‘Nicotine replacement therapy guideline and product formulary’ for further information about the NRT products

<table>
<thead>
<tr>
<th>6. Patients who have chosen Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow Pathway 2 in SPT Tobacco Dependence Treatment Pathway</td>
</tr>
</tbody>
</table>

| Staff signature |
## 5. Tobacco Dependence Treatment Pathway

### Community Assessment Form

<table>
<thead>
<tr>
<th>Patient Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surname</td>
</tr>
<tr>
<td>First name</td>
</tr>
<tr>
<td>CIS No:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Name</td>
</tr>
<tr>
<td>Job Title</td>
</tr>
<tr>
<td>Community base</td>
</tr>
</tbody>
</table>

### Date of assessment

1. **Identification of Smokers**
   - The patient has been asked if they smoke: Yes [ ], No [ ]
   - Patient’s current smoking status: Smoker [ ], Non-smoker [ ]
   - If the patient is a smoker continue to section 2
   - If the patient is a non-smoker or an ex-smoker advise that support and advice is available on the ward if they wish to access it.
   - This is the end of the assessment for non-smokers or ex-smokers

### 2. Advise and offer support

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes [ ]</th>
<th>No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the patient been informed that all Trust buildings and grounds are Smokefree?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have the benefits of smoking cessation been discussed with the patient?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the patient want to be referred to the smoking cessation service in their local area?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the patient been referred to the smoking cessation service in their local area?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Staff signature
6. References

3. Use of electronic cigarettes (vapourisers) among adults in Great Britain, ASH, May 2016
7. McRobbie H et al. Can electronic cigarettes help people stop smoking or reduce the amount they smoke, and are they safe to use for this purpose? Cochrane Database of Systematic Reviews, 2014
Smoking Cessation – Effect on Psychotropic Medication including Clozapine

**Summary.**
A guide to the adjustment of dose in patients who stop smoking – e.g. on admission to an inpatient unit.

**Background.**
The hydrocarbons in tobacco smoke induce the production or activity of various liver enzymes, in particular cytochrome CYP1A2, an enzyme associated with the metabolism of several psychotropic drugs including clozapine. Therefore, in response to smoking cessation it is possible that the metabolism of these drugs will decrease and plasma levels will rise. This is particularly the case for clozapine where it is possible that plasma levels may be elevated to toxicity.

Note – CYP1A2 activity is affected by hydrocarbons and not by nicotine. Therefore nicotine replacement therapy (NRT) will not affect drug metabolism and there are no known interactions between NRT and drug therapy.

**Drugs Most Affected.**

<table>
<thead>
<tr>
<th>Plasma level of these drugs:—</th>
<th>Psychotropic drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is likely to rise, therefore…</strong></td>
<td></td>
</tr>
<tr>
<td>a dose reduction may be required. The patient must be monitored for adverse effects and plasma drug levels should be monitored if appropriate</td>
<td>chlorpromazine, fluphenazine, haloperidol, <strong>olanzapine, duloxetine, fluvoxamine, clozapine</strong> – see overleaf.</td>
</tr>
<tr>
<td><strong>May possibly rise, but…</strong></td>
<td></td>
</tr>
<tr>
<td>this is not generally found to be clinically significant. If adverse effects occur, consider decreasing dose.</td>
<td>flupentixol, zuclopenthixol, trifluoperazine, mirtazapine, tricyclic antidepressants, lamotrigine, valproate, most benzodiazepines, zolpidem, propranolol</td>
</tr>
<tr>
<td><strong>Is unlikely to rise, therefore…</strong></td>
<td></td>
</tr>
<tr>
<td>no interaction is expected. However, data are often limited so patients should be monitored for adverse effects.</td>
<td>amisulpride, aripiprazole, quetiapine, risperidone, citalopram, escitalopram, fluoxetine, paroxetine, sertraline, moclobemide, reboxetine, venlafaxine, carbamazepine, chloridiazepoxide. (Note – lithium levels may reduce).</td>
</tr>
</tbody>
</table>

The most significant effects on plasma levels are seen with clozapine and olanzapine where increases of up to 70% and 20% respectively have been reported. For olanzapine patients, a reduction in dose of 2.5 – 5mg may be indicated. **For clozapine patients far more drastic dose reductions may be necessary, as described overleaf.**

**Action recommended on admission / assessment.**
- Ascertain pre-admission smoking status and recent medication compliance
- Determine effect of smoking cessation from the table above
- Consider adjustment of dose, based also on age, hepatic function, and the time delay for drug plasma level changes to occur – usually not within the first 7 days. Continue to monitor for emergence of adverse effects
- Ascertain and monitor smoking status on leave / discharge. Readjust dose if indicated

If you require this document in an alternative format, i.e. easy read, large text, audio or Braille please contact the pharmacy team on 01243 623349.
For clozapine:

1. **Review** latest (outpatient) serum clozapine levels (if available) and order a new baseline serum clozapine level as soon as practicable. **(Note – no ‘call-out’ is required, as dose reduction need not be immediate. Arrange bloods in normal ‘office hours’).**

2. **Review** side-effects history and, if possible, check against the serum clozapine levels at which they occurred.

3. **Assess** the risk of toxicity (i.e. if level exceeds 1000ng/ml) by estimating the non-smoking serum clozapine level using the formula below:

   
   
   \[
   \text{Serum clozapine}^{(\text{Non-smoker})} = [1.5 \times \text{Serum clozapine}^{(\text{Smoker})}] + 50
   \]

   
   
   
   **e.g. smoking level of 500ng/ml gives a non-smoking level of 800ng/ml**

   **Note** The formula is considered to give a suitably accurate result in approximately 80% of cases. However, in patients with higher smoking clozapine levels or doses, (e.g. above 700ng/ml or above 700mg daily), the CYP1A2 enzyme may have been saturated resulting in much higher rates of metabolism. Greatly increased levels may then occur in these patients when they stop smoking and the formula may be wildly inaccurate.

4. **Set a target** (non-smoking) serum clozapine level, taking into consideration the patient’s current condition and clinical response to current dose / level. If indicated, adjust the clozapine dose accordingly. **(Note – if compliance has been poor prior to admission, the baseline level may be artificially low. This should be taken into consideration).**

   For example

   
   
   Smoker admitted on clozapine 600mg daily and serum level found to be 480ng/ml. Compliant with medication but clinically unwell on this dose and considered to need a higher level. Estimated serum level on cessation of smoking is \((1.5 \times 480) + 50 = 770\text{ng/ml}\). If clinician considers that a target serum level of 770ng/ml is appropriate then no adjustment of dose may be necessary. However, if it is felt that the target level should be in the region of 600ng/ml, then the patient’s dose may need reducing to 450mg or 475mg daily. For levels above 500ng/mL consider seizure prophylaxis.

5. Necessary reductions in daily dose should normally be made at a rate of approximately 10% per day.

6. If possible, **monitor** serum clozapine level at day 3 and then weekly (until stabilised to target level). Also, pre-discharge level (unless done in previous 48 hours).

7. **Monitor** for adverse effects – bearing in mind that some may take as long as 2 to 3 weeks after adjustment of dose to become apparent.

8. **On discharge or leave,** reassess patient’s likelihood to recommence smoking and the potential reduction in serum clozapine level in response. If this occurs it is likely that the clozapine dose will have to be increased.

9. **Post-discharge,** where possible, monitor serum clozapine level once each week, (or fortnightly if total dose change was less than 20%), until stable.

**References:**


Psychotropic Drug Directory 2014 – S.Bazire

Original version: April 2007 Reviewed: January 2011 and July 15 Next review: July 2018