Clinical Guidelines and Procedures
Management of Nicotine Dependence

Purpose

The purpose of this document is to provide staff within the Division of Mental Health Justice Health Alcohol and Drug Services procedures for working with consumers with nicotine dependence. The Practice Guidelines is divided into 3 sections:
A. Assessment
B. Effective psychological and behavioural interventions
C. Pharmacotherapy in the treatment of nicotine dependence
D. Roles of Clinical Staff

Scope

This guideline is for all staff within the Division of Mental Health, Justice Health and Alcohol & Drug Services.

Guiding principles

The ACT Health Directorate Smoke Free Policy aims to minimise exposure to Environmental Tobacco Smoke (ETS) for visitors, consumers, staff, contractor and volunteers across all ACT Health Directorate premises. It also provides guidance on how to provide advice and support to consumers who would like to make a quit attempt which extends beyond their stay in hospital.

Pharmacological treatment of nicotine dependence potentially improves patient comfort, increases compliance with hospital smoke free policies and promotes smoking cessation after discharge. All clinical staff have shared responsibility for supporting consumers in complying with the ACT Health Directorate Smoke Free Policy and the Mental Health Justice Health Alcohol and Drug Services Smoke Free Environment Standard Operating Procedure.

These guidelines have a strong alignment to the clinical guidelines developed and tested in other jurisdictions, and unless stated otherwise have been derived from the Western Australian Department of the Health Clinical Guidelines and Procedures for the Management of Nicotine Dependant Inpatients.

Evidence based research indicates that a number of guiding principles are necessary to ensure a smoke free environment including:

- The availability and use of Nicotine Replacement Therapy (NRT)
- Provision of alternative activities, dietary changes, clear protocols and family support for the smoke free environment
• Greater support for and education of direct-care staff on distinguishing mental illness symptoms from nicotine withdrawal symptoms
• Development of alternative supports to assist staff to manage their own nicotine withdrawal and associated stress levels
• Development of clear policies with regard to smoking and occupational health and safety concerns for staff and consumers as part of the process of introducing the policy.

Staff will need to manage nicotine dependence in consumers in a sensitive manner and recognise that withdrawal from nicotine can cause distress.

### Procedure

#### A. Assessment

1. **Assessment of Nicotine Dependence on referral to MHJHADS and on admission to an inpatient unit**

All consumers referred to any of the Division's program areas including inpatient units will be asked about their tobacco smoking status via the Smoking Screening and Brief Intervention Form (Appendix 1). The smoking status of all consumers should be recorded in the consumer records including discharge summaries and referral forms by noting the relevant Diagnostic Statistical Manual (DSM-IV) code for tobacco use (Appendix 2).

<table>
<thead>
<tr>
<th>DSM-IV codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>305.1</td>
<td>Nicotine Dependence</td>
</tr>
<tr>
<td>292</td>
<td>Nicotine Withdrawal</td>
</tr>
<tr>
<td>292.9</td>
<td>Nicotine-Related Disorder NOS</td>
</tr>
</tbody>
</table>

Following the identification of consumers that smoke, the health professional will provide brief interventions or identify other appropriate treatments which are evidence based including psychological, behavioural and pharmacotherapy interventions. Following completing the screening tool, further assessment can be completed by using the Fagerstrom to assess for nicotine dependence (Appendix 3).

**Nicotine withdrawal**

The symptoms of nicotine withdrawal include 1 or more of the following within 24 hours of cessation or reduction in nicotine intake.

- Anxiety
- Irritability or restlessness
- Reduced concentration
- Craving for tobacco (or other nicotine containing products)
- Malaise or weakness
- Increased cough
- Dysphoric mood
- Mouth ulceration
- Increased appetite
- Insomnia

(Note: In the assessment by the clinician, these symptoms of tobacco withdrawal may cause clinically significant distress and may not be due to a general medical condition and not accounted for by another mental disorder.)

B. Effective Psychological and Behavioural Interventions

- Upon screening of the consumer’s smoking status, assess consumers’ readiness to quit and level of nicotine dependence through administering a Fagerstrom Test of Nicotine Dependence.
- Assist the consumer by offering support to quit - via psychological and/or behavioural interventions and/or pharmacotherapy options.
- Discuss with consumers on quit programs available within the community. If in the inpatient unit, discuss with consumers on the supports they will receive within the unit (follow pharmacotherapy guidelines in section C as an adjunct).
- Effective psychological and behavioural interventions include:
  - ✓ Motivational Interviewing through assessing the readiness to change
  - ✓ Brief interventions based on the 5A’s

(Motivational interviewing and brief interventions for supporting consumers who smoke are provided to all staff within MHJHADS)

C. Pharmacotherapies for consumers with nicotine dependence

1. Appropriate treatment for people with nicotine dependence

Please read in conjunction with the Flowchart-Mangement of Nicotine Dependant Inpatients (Appendix 4):

Effective management of nicotine dependence consumers will depend to a large extent on the timeliness of management of withdrawal symptoms with NRT. The elimination half-life of nicotine is <two hrs, which means that many patients will seek to smoke unless withdrawal symptoms can be prevented via timely and regular provision of NRT. NRT aims to replace some of the nicotine obtained from tobacco, thus reducing withdrawal symptoms when stopping smoking.

Nursing staff may initiate NRT via Nurse Initiated Medication protocol for consumers, subject to medical review within 24 hours. However, in most instances especially with respect to admissions to acute inpatient units, the initial prescribing for nicotine replacement is expected to be made by a medical officer. Medical officers and nurses share responsibility to review the consumers for ongoing withdrawal symptoms and response to NRT. Clinical staff shall advise consumers of the correct ways to use NRT (refer to Appendix 5 Nicotine Replacement Therapy Fact Sheet).
Clinical staff should consider combination pharmacotherapy for all consumers. Combination pharmacotherapy is the provision of fast acting products (such as gum, lozenge or inhaler) with a patch. It can enhance levels of comfort if the patient continues to experience withdrawal symptoms or has difficulty abstaining from smoking while on a nicotine patch.

For consumers do not wish to quit smoking efforts can still be made to offer brief interventions or NRT.

Smokers who are ready to cease smoking can access up to 12 weeks of subsidised nicotine replacement therapy per year through the PBS. This includes 14mg and 21mg patches. All consumers who have been provided with NRT in inpatient units will be provided with 7 days of NRT upon discharge and followed up by the relevant community team/GP within 7 days. Continued support should be offered to consumers in the community following discharge from hospital which includes access to NRT, psychological and/or behavioural interventions.

Other pharmacotherapies

Pharmacotherapies for smoking cessation that are not NRT may only be prescribed to consumers by a medical officer. The two most effective forms of non-nicotine pharmacotherapies, Bupropion and Varenicline are summarized below. In most cases these medications will be initiated by the patient’s General Practitioner but they may be considered as treatments for consumers in hospital if nicotine therapy has failed or the consumer has benefited from these options in the past.

Bupropion

Bupropion (Zyban) is an oral non-nicotine therapy which affects neuronal re-uptake of noradrenalin and dopamine. The active ingredient in this medication is also present in certain anti-depressant medications. Bupropion reduces withdrawal symptoms and has found to be of similar efficacy to NRT 9. In the community, Bupropion is available as a Pharmaceutical Benefits Scheme (PBS) Authority item for the treatment of nicotine dependence in those who are committed to quitting smoking, when used in conjunction with counselling for smoking cessation/abstinence. The use of varenicline in the inpatient setting may be considered in consumers who have reported benefit with use and should be done in consultation with the treating psychiatrist, pharmacist and GP and if required consultation with the Alcohol and Drug Consultation-Liaison Service.

Varenicline

Varenicline (Champix) was developed specifically to help people stop smoking. Varenicline works by binding to nicotine receptors in the reward centres in the brain. In doing so, it reduces the severity of tobacco withdrawal symptoms while simultaneously reducing the rewarding effects of nicotine. Varenicline is on the PBS as an authority item for people in a comprehensive support and counselling program for smoking cessation. Varenicline at standard dose increased the chances of successful long-term smoking cessation between two- and threefold compared with pharmacologically unassisted quit
attempts. There are reports of psychiatric adverse events with the use of Varenicline. The use of varicenicline in an inpatient setting may be considered in consumers who have reported benefit with prior use and should be done in consultation with the treating psychiatrist, pharmacist and GP and if required consultation with the Alcohol & Drug Consultation-Liaison Service.

Nicotine replacement therapy in specified populations

As a rule, getting nicotine from NRT is much safer than from cigarettes. (NRT does not contain the harmful chemicals that cigarettes have.) But the following points may be relevant to some people.

- **Pregnancy**- NRT is likely to be safer than continued smoking and so its use can be justified in pregnant women who are finding it difficult to stop smoking. NRT products that are taken intermittently (such as gum, lozenge, inhaler) are preferred to patches. This is to minimise the exposure of nicotine to the unborn baby. Avoid liquorice-flavoured NRT products.
- **Breast-feeding**- The amount of nicotine that gets into breast milk is probably similar whether the mother smokes or uses NRT. Breast-feeding within one hour of smoking or taking an NRT product can significantly increase the levels of nicotine in breast milk. Therefore, NRT products that are taken intermittently are probably best if NRT is used during breast-feeding. Avoid using the NRT for at least one hour before breast-feeding.
- **Children and adolescents and NRT** - The levels of nicotine in NRT are not suitable for children under 12. Children are likely to be affected by nicotine and it could cause severe toxicity, which can be fatal. **Contraindication**: NRT should not be used for consumers under 12 years of age. Data is limited in relation to the value of NRT use in young people (over 12 years and under 18 years) where the demand for cessation products and the motivation to quit is low. **Precaution**: Patients less than 18 years of age are excluded from nurse initiated NRT and should be referred to a medical officer.

*(See Appendix 9 for further information on NRT and other populations)*

Drug interactions with smoking cessation

When patients stop smoking (with or without NRT), clinical staff shall carefully review prescribed medication and adjust or monitor drugs whose metabolism is affected by smoking cessation.

*Drug information sources contain varying reports of the effect of smoking. The table in Appendix 6 provides a list of common medications which may need a reduction upon smoking cessation. Many drug interactions have been identified with tobacco smoke. In most cases it is the tobacco smoke, not the nicotine, which causes the drug interactions. Products in tobacco smoke induce the hepatic cytochrome P450 enzymes and increase drug clearance in smokers. NRT does not contribute to the drug interactions through this affect. However, nicotine can counter the pharmacologic actions of certain drugs, because it activates the sympathetic nervous system.

*(See Appendix 6 for Smoking and Drug Interactions)*

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<th>Page</th>
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<tr>
<td>E.g. DGD11-001</td>
<td>E.g. Dec 2011</td>
<td>E.g. Dec 2014</td>
<td>Bed Based Services</td>
<td>5 of 22</td>
</tr>
</tbody>
</table>
D. Roles of clinical staff

All clinical staff is expected to undertake QUIT Skills Training and Clinical Practice Guidelines for the Management of Nicotine Dependence through Organisation Development Unit. Clinical staff should be familiar with the actions outlined for managing specific consumer groups or settings.

**Clinical Staff roles:**
- Complete Smoking Screening and Intervention Form (Appendix 1)
- Follow the Flow Chart – Management of Nicotine Dependent Consumers (nurse initiated) (Appendix 4).

**Medical Officer Roles:**
- Understand the role of nurses in the management of nicotine dependent inpatients and recognise the points of care requiring intervention by a medical officer (as outlined in the Flow Chart in Appendix 4).
- Review all consumers at the point of admission to inpatient units and prescribe nicotine replacement according to guidelines.
- Review and prescribe appropriate NRT within 24 hours of nurse initiated NRT.
- Assess all consumers with contraindications to nurse initiated NRT and prescribe appropriate NRT.
- Monitor patient withdrawal and adjust medication accordingly.
- Ensure smoking status is recorded on consumer records, discharge summaries and referral forms by noting the relevant Diagnostic and Statistical Manual (DSM-IV) code for tobacco use.
- Include reference to NRT administered as part of the consumer discharge plan and provide a minimum of 7 days NRT upon discharge.

**Pharmacist roles:**
- Provide the ward with appropriate smoking cessation pharmacotherapies.
- Be involved with consumer medication reconciliation.
- Provide advice to other clinical staff regarding nicotine withdrawal and smoking cessation pharmacotherapies.
- Arrange discharge advice for consumers regarding ongoing smoking cessation pharmacotherapy options.

**Compliance**

Supportive and compassionate strategies and approaches will be used in managing adherence to the policy.

All clinical staff have a responsibility to ensure consumers who are referred to any of the Division’s Programs areas are asked about their smoking status and appropriately supported.
Evaluation

Monitoring and evaluation is an important component of the ACT Health Directorate Smoke Free Policy. Snapshot ward audits and consumer surveys will provide monitoring of management of nicotine dependent consumers.

Outcome Measures
- Smoking assessment completed and documented in all consumer files with the relevant treatment options provided

Method
- File audits
- Consumer feedback

Related Legislation, Policies and Standards

Legislation
- Work Health and Safety Act (2011)

Policies
- ACT Health Directorate Smoke Free Workplace Policy
- Violence and Aggression by Patients, Consumers or Visitors Prevention and Management Policy and SOPs
- Smoke Free Environment Standard Operating Procedure (Draft)

References


Attachments

Appendices attached
Appendix I

Smoking Screening and Brief Intervention Form

Date: _______________________________

Do you identify as
( ) Aboriginal
( ) Torres Strait Islander
( ) Aboriginal and Torres Strait Islander
( ) Neither Aboriginal or Torres Strait Islander
( ) CALD Ethnicity ________________________________

ASK the 5As at the initial assessment:

Do you currently smoke? No / Yes

If you are currently smoking, what is the number of cigarettes per day: ______

ADVISE: benefits of quitting:
For Self for Family
( ) Give out quit booklet
( ) Increase in Self esteem
( ) Risks of passive smoking decreased
( ) Breathe better, more energy
( ) Create healthier environment
( ) Save money
( ) Children less likely to be smokers
( ) Less risk of Cancer
( ) Less risk of lung damage
( ) Less risk of Cardiac/respiratory diseases

ASSESS to quit or reduce smoking:
( ) Not interested
( ) Thinking about it
( ) Preparing to quit
( ) Recently quit (reinforce)
( ) Relapse/slip up

ASSIST/ARRANGE: Education/Quit plan
( ) Congratulate- if non smoker or have quit successfully
( ) Encouragement given
( ) Explain ACT Health smoke-free policy
( ) NRT (conduct Fagerstrom test for nicotine dependence level)
( ) Explain how NRT works (see Appendix 4)
( ) Explained options for NRT (Appendix 3)

Adapted from DHF Smoke-Free Family assessment and intervention Community Health Screening
Appendix 2

DSM-IV criteria for nicotine dependence  
DSM-IV Code 305.1  
Must demonstrate at least three of the following criteria occurring at the same time during a 12-month period:
1. Tolerance—Signs of tolerance are a need for a markedly increased amount of nicotine to produce the desired effect or a diminished effect with continued use of the same amount of nicotine.
2. Withdrawal, as manifested by either the characteristic nicotine withdrawal syndrome, or nicotine (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.
3. Nicotine is used in larger amounts or over a longer period than intended.
4. The user has a persistent desire or makes unsuccessful attempts to cut down on tobacco.
5. A great deal of time is spent in obtaining or using the substance (e.g., chain smoking).
6. Important social, occupational, or recreational activities are reduced because of tobacco use.
7. Use of the substance continues despite recurrent physical or psychological problems caused or exacerbated by tobacco—for example, continuing to smoke despite diagnoses such as hypertension, heart disease, cancer, bronchitis, and chronic obstructive lung disease.

DSM –IV criteria for nicotine withdrawal  
DSM code 292.0  
A. Daily use of nicotine for at least several weeks.  
B. Abrupt cessation of nicotine use, or deduction in the amount of nicotine used, followed within 24 hours by four (or more) of the following signs:  
(1) dysphoric or depressed mood  
(2) insomnia  
(3) irritability, frustration, or anger  
(4) anxiety  
(5) difficulty concentrating  
(6) restlessness  
(7) decreased heart rate  
(8) increased appetite or weight gain  
C. The symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.  
D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Nicotine-Related Disorder Not Otherwise Specified  
DSM-IV code 292.9  
The Nicotine-Related Disorder Not Otherwise Specified category is for disorders associated with the use of nicotine that are not classifiable as Nicotine Dependence or Nicotine Withdrawal.
Appendix 3

Fagerstrom Test for Nicotine Dependence

Use the following test to score a consumer's level of nicotine dependence once they have been identified as a current or recent smoker.

<table>
<thead>
<tr>
<th>Please tick one box for each question</th>
</tr>
</thead>
<tbody>
<tr>
<td>How soon after waking do you smoke your first cigarette?</td>
</tr>
<tr>
<td>Within 5 minutes 3</td>
</tr>
<tr>
<td>5-30 minutes 2</td>
</tr>
<tr>
<td>31-60 minutes 1</td>
</tr>
<tr>
<td>60+ minutes 0</td>
</tr>
<tr>
<td>How many cigarettes a day do you smoke?</td>
</tr>
<tr>
<td>10 or less 0</td>
</tr>
<tr>
<td>11-20 1</td>
</tr>
<tr>
<td>21-30 2</td>
</tr>
<tr>
<td>31 or more 3</td>
</tr>
<tr>
<td>Total Score</td>
</tr>
<tr>
<td>SCORE</td>
</tr>
<tr>
<td>1-2 = very low dependence</td>
</tr>
<tr>
<td>3 = low to mod dependence</td>
</tr>
<tr>
<td>4 = moderate dependence</td>
</tr>
<tr>
<td>5+ = high dependence</td>
</tr>
</tbody>
</table>

Offer appropriate level of NRT according to their level of dependence

- Remember to consider contraindications and precautions – refer to medical officer if appropriate
- Consumers previous quit attempts may also provide assistance in which products may be suitable

<table>
<thead>
<tr>
<th>Dependence level</th>
<th>Combination therapy</th>
<th>NRT dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Patches: 21mg/24 hour AND Lozenge or Gum: 2mg or inhaler</td>
<td>Patches: 21mg/24 hr Inhaler: 6-12 cartridges per day Lozenge: 4mg Gum: 4mg</td>
</tr>
<tr>
<td>Moderate</td>
<td>Patches: 21mg/24 hr AND Lozenge or Gum: 2mg or inhaler</td>
<td>Patches: 21mg/24 hr or 14mg/24 hr Inhaler: 6-12 cartridges per day Lozenge: 4mg Gum: 4mg</td>
</tr>
<tr>
<td>Low to moderate</td>
<td>Patches: 14mg/24 hr AND Lozenge or gum: 2mg or inhaler</td>
<td>Patches: 14mg/24 hr Inhaler: 6-12 cartridges per day Lozenge: 2mg Gum: 2mg</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>May not need NRT Monitor for withdrawal symptoms Patches: 7mg/24 hr Lozenges: 2mg Gum: 2mg</td>
</tr>
</tbody>
</table>

*Maximum of 12 lozenges per 24 hours, when combined with patch. Minimum recommended is 4 per 24 hours if experiencing breakthrough cravings.
Appendix 4

Flow Chart – Management of Nicotine Dependent consumers (nurse initiated)

1. Assess smoking status via admission assessment tool and record smoking status using relevant DSM-IV code for tobacco use
   - Never smoked or ex-smoker (> 6 months since last cigarette) – Encourage continued abstinence
   - Current smoker or recently quit – Follow steps 2–7

2. Inform consumer of the ACT Health Smoke-Free Policy and provide them with a Smoke Free Advice for Consumers Brochure

3. Complete Fagerstrom Test for current and recent smokers.

4. Offer eligible consumers NRT according to their level of dependence. Discuss previous quit attempts with consumers – this may assist in determining appropriate NRT. Offer Nicotine Replacement Therapy Fact Sheet.

Excluded patients from nurse-initiated NRT

<table>
<thead>
<tr>
<th>Contraindicated (NRT should not be prescribed)</th>
<th>Precaution (Medical Officer Consultation required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Smokers Under 18 years</td>
<td>Gastrointestinal disease</td>
</tr>
<tr>
<td>Children under 12 years</td>
<td>Acute myocardial infarction, unstable or worsening angina, severe cardiac arrhythmias</td>
</tr>
<tr>
<td>Those with hypersensitivity to nicotine</td>
<td>Recent* or planned coronary angioplasty, bypass graft or stenting</td>
</tr>
<tr>
<td>Phenylketonurics (should not use lozenge)</td>
<td>Peripheral vascular disease</td>
</tr>
<tr>
<td>Menthol hypersensitivity (should not use inhaler)</td>
<td>Renal and hepatic impairment</td>
</tr>
<tr>
<td></td>
<td>Recent cerebrovascular accident</td>
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<tr>
<td></td>
<td>Lactating mothers or mothers of preterm infants</td>
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</tbody>
</table>

NRT dosing for eligible consumers

<table>
<thead>
<tr>
<th>Dependence level</th>
<th>Nicotine replacement therapy: Combination therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Fagerstrom score =5+</td>
<td>Patch: 21mg/24 hour AND Lozenge 2mg or INHALER</td>
</tr>
<tr>
<td>Moderate Fagerstrom score = 4</td>
<td>Patch 21mg/24 hr AND Lozenge 2mg or inhaler</td>
</tr>
<tr>
<td>Low to moderate Fagerstrom score = 3</td>
<td>Patch: 14mg/24 hour AND Lozenge 2mg or INHALER</td>
</tr>
<tr>
<td>Low Fagerstrom score =1-2</td>
<td>May not need NRT Monitor for withdrawal symptoms Patch 7mg/24 hr OR Lozenge 2mg</td>
</tr>
</tbody>
</table>

Maximum of 12 lozenges over 24 hours when combined with patch Minimum of 4 lozenges recommended 24 hours if experiencing breakthrough cravings

5. Monitor signs and symptoms of withdrawal and review dosing if symptoms persist. The Nicotine Withdrawal Management Plan can be used for monitoring. For consumers with a Fagerstrom Test score of 5+ and patients experiencing breakthrough cravings with combination NRT, consider the use of 2nd patch and continue supplementary NRT.

6. Review by Medical Officer (within 24 hours) & ongoing management of nicotine dependence.

7. On discharge, assess patient’s intention to remain abstinent after leaving hospital.
   - Supply a minimum of 7 days of NRT for those who choose to remain abstinent.
   - Record smoking status (using DSM-IV code) and nicotine dependence management during hospitalisation on discharge summary.
   - Advise patients interested in non-nicotine pharmacotherapies to discuss with their GP.
   - Provide information or referrals to community based smoking cessation services for ongoing support eg. Quitline 13QUIT, quitnow.info.au, GP, pharmacist, Cancer Council ACT.
Appendix 5: Nicotine Replacement Therapy Fact Sheet

What is nicotine addiction?

Nicotine is a drug that is inhaled from the tobacco in cigarettes. It gets into the bloodstream and stimulates the brain. Most regular smokers are addicted to nicotine.

If you are a regular smoker, when the blood level of nicotine falls, you usually develop withdrawal symptoms such as restlessness, increased appetite, inability to concentrate, irritability, dizziness, constipation, nicotine craving, or just feeling awful. These symptoms begin within a few hours after having the last cigarette. If they are not relieved by the next cigarette, withdrawal symptoms get worse. If you do not smoke any more, the withdrawal symptoms peak after about 24 hours, and then gradually ease over about 2-4 weeks. So, most smokers smoke regularly to feel 'normal', and to prevent withdrawal symptoms. About 2 in 3 smokers want to stop smoking but, without help, many fail to succeed. The main reason why so few smokers succeed, even though they want to stop smoking, is because nicotine addiction is strong and difficult to break. This is where nicotine replacement therapy (NRT) can help.

What is nicotine replacement therapy?

NRT is a way of getting nicotine into the bloodstream without smoking. There are nicotine gums, patches, inhalers, tablets and lozenges. You will be offered a combination of any one of these during your stay in hospital. On discharge, you can buy most of these from pharmacies and other retail outlets. They are also available on prescription.

How does nicotine replacement therapy work?

NRT stops, or reduces, the symptoms of nicotine withdrawal. This helps you to stop smoking, but without having unpleasant withdrawal symptoms. NRT does not 'make' you stop smoking. You still need determination to succeed in breaking the smoking habit.

How effective is nicotine replacement therapy?

NRT does increase the chance of quitting smoking. Various studies have looked at this issue. The studies compared NRT to a similar dummy (placebo) product in people who were keen to stop smoking. The results from the studies showed that, on average, about 17 in 100 people who took NRT stopped smoking successfully. This compared with about 10 in 100 who took the dummy (placebo) product rather than NRT. In other words, it increased the rate of success by about 70%. A combination of NRT with support or counseling may give the best chance of success.

Which form of nicotine replacement therapy is best?

There is not much difference in how well the different types of NRT work. Personal preference usually determines which one to use. Below are listed some points about each form of NRT. Please note, this is just a brief overview. Read the manufacturer's instructions on the packet for detailed advice on each type of NRT, or seek advice from a pharmacist, doctor or nurse.

Nicotine gum

Two strengths are available - 2 mg and 4 mg. You should use the 4 mg strength if you smoke 18 or more cigarettes a day. You can chew up to 15 pieces a day to start with. To release the nicotine, chew the gum slowly until the taste is strong. Then rest it between the cheek and the gum to allow absorption of nicotine into the bloodstream. Chew the gum again when the taste fades, and rest it again when the taste is strong, etc. Use a fresh piece of gum after about an hour.

After 2-3 months you should use the gum less and less. For example, reduce the chewing time, cut

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the gum into smaller pieces, or alternate the nicotine gum with sugar-free gum. Gradually stop the gum completely.

The disadvantage of gum is that some people do not like the taste, or always having something in their mouth. Gum is not suitable if you wear dentures.

**Nicotine patches**

A patch that is stuck on to the skin releases nicotine into the bloodstream. Some patches, which you wear only when you are awake, last 16 hours. Other types last 24 hours, and you wear these the whole time. The 24-hour patch may disturb sleep, but is thought to help with early morning craving for nicotine. Patches are discreet, and easy to apply.

The patches come in different strengths. The manufacturers normally recommend that you gradually reduce the strength of the patch over time before stopping completely. However, some research studies suggest that stopping abruptly is probably just as good without the need to gradually reduce the dose.

The disadvantage of patches is that a steady amount of nicotine is delivered. This does not mimic the alternate high and low levels of nicotine when you smoke, or with chewing nicotine gum. Skin irritation beneath the patch occurs in some users.

**Nicotine inhaler**

This resembles a cigarette. Nicotine cartridges are inserted into it, and inhaled in an action similar to smoking. You should use about 6-12 cartridges a day for eight weeks, and then gradually reduce over four further weeks. It is particularly suitable if you miss the hand-to-mouth movements of smoking.

**Nicotine lozenges**

You dissolve these under the tongue (they are not swallowed). Nicotine is absorbed through the mouth into the bloodstream. They are easy to use.

**Can different methods of nicotine replacement therapy be combined?**

This is an option, especially if you have particularly bad withdrawal symptoms. The common combination is to use an NRT patch (which gives a regular background level of nicotine) with gum (taken now and then to top up the level of nicotine to ease sudden cravings). Evidence from research studies suggests that this kind of combination provides a small but significant increase in success rates compared with a single product. It is also thought that it is safe to combine NRT in this way.

**Nicotine replacement therapy and other diseases and situations**

As a rule, getting nicotine from NRT is much safer than from cigarettes. (NRT does not contain the harmful chemicals that cigarettes have.) But the following points may be relevant to some people.

- **Pregnancy.** NRT is likely to be safer than continued smoking and so its use can be justified in pregnant women who are finding it difficult to stop smoking. NRT products that are taken
intermittently (such as gum, lozenge, inhaler) are preferred to patches. This is to minimise the exposure of nicotine to the unborn baby. Avoid liquorice-flavoured NRT products.

- **Breast-feeding.** The amount of nicotine that gets into breast milk is probably similar whether the mother smokes or uses NRT. Breast-feeding within one hour of smoking or taking an NRT product can significantly increase the levels of nicotine in breast milk. Therefore, NRT products that are taken intermittently are probably best if NRT is used during breast-feeding. Avoid using the NRT for at least one hour before breast-feeding.

- **If you are taking a theophylline medicine** (used for some lung conditions) and stop smoking, the blood level of theophylline will increase. (The chemicals in cigarette smoke interfere with this medicine.) It is likely that the dose you need to take will need to be reduced, typically by about a third.

- **If you are taking clozapine** – and stop smoking, the blood levels of clozapine may increase. (The chemicals in cigarette smoke interfere with this medicine). The dose you take may need to be reduced, however signs of clozapine toxicity and blood levels of clozapine will be monitored during your hospital stay.

**Some other points about nicotine replacement therapy**

- Apart from causing addiction, nicotine is not thought to cause disease when taken for a few months. The health problems from cigarettes, such as lung and heart diseases, are due to the tar and other chemicals in cigarettes. So, taking NRT instead of smoking is one step towards a healthier life.

- The dose of nicotine in NRT is not as high as in cigarettes. Also, the nicotine from smoking is absorbed quickly, and has a quicker effect than NRT. So, NRT is not a perfect replacement. Withdrawal symptoms are reduced with NRT, but may not go completely.

- Always read the product label before starting NRT for full instructions and cautions.

- Cost - a week's supply of NRT can vary, depending on the one you choose. NRT is also available on prescription. However, your doctor will follow guidelines when prescribing NRT. For example, a first prescription should only be issued if you are committed to giving up smoking, and further prescriptions should only be issued if you have stayed off cigarettes.

- The risk of becoming addicted (dependent) on NRT is small. About 1 in 20 people who stop smoking with the help of NRT continue to use NRT in the longer term. The safety of NRT when used for a very long time is not yet known and the risks and benefits of doing this should be discussed with your doctor.

*Adapted from Nicotine Replacement Therapy information from www.patient.co.uk website*
# Appendix 6: Smoking and Drug Interactions

Common drugs used in psychiatric settings are highlighted. Smoking cessation may result in increased levels of:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mechanism and effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular drugs</strong></td>
<td></td>
</tr>
<tr>
<td>Propranolol</td>
<td>Smoking increases clearance. Closely monitor for adverse events</td>
</tr>
<tr>
<td>Verapamil</td>
<td>Smoking increases clearance. Closely monitor dose.</td>
</tr>
<tr>
<td>Warfarin</td>
<td>Dose reduction of 14-23% needed. Closely monitor INR</td>
</tr>
<tr>
<td>Mexiletine, Flecaïnide, Lignocaine</td>
<td>Dosage may need to be decreased</td>
</tr>
<tr>
<td><strong>Benzodiazepines</strong></td>
<td></td>
</tr>
<tr>
<td>Diazepam</td>
<td>Smoking increases clearance. Monitor for increased sedation post cessation of smoking</td>
</tr>
<tr>
<td>Other benzodiazepines</td>
<td>Smoking may increase clearance. Monitor for increased sedation</td>
</tr>
<tr>
<td><strong>Antipsychotics</strong></td>
<td></td>
</tr>
<tr>
<td>Clozapine</td>
<td>Smoking increases clearance. Dose reduction may be needed to avoid toxicity.</td>
</tr>
<tr>
<td>Olanzapine</td>
<td></td>
</tr>
<tr>
<td>Haloperidol</td>
<td>Smoking increases clearance. Monitor.</td>
</tr>
<tr>
<td><strong>Antidepressants</strong></td>
<td></td>
</tr>
<tr>
<td>Fluvoxamine</td>
<td>Smoking increases clearance. Monitor for adverse events post smoking cessation</td>
</tr>
<tr>
<td>Tricyclic antidepressants</td>
<td>Smoking may increase clearance. Monitor.</td>
</tr>
<tr>
<td><strong>Alzheimers</strong></td>
<td></td>
</tr>
<tr>
<td>Rivastigmine</td>
<td>Smoking increases clearance. Decreased dose may be needed.</td>
</tr>
<tr>
<td>Tacrine</td>
<td>Smoking increases clearance. Decreased dose may be needed.</td>
</tr>
<tr>
<td><strong>Antidiabetic</strong></td>
<td></td>
</tr>
<tr>
<td>Insulin</td>
<td>Smoking may reduce subcutaneous insulin absorption. Post smoking cessation monitor BSLs. May need dose reduction</td>
</tr>
<tr>
<td>Oral hypoglycaemics</td>
<td>Nicotine may increase plasma glucose. Monitor BSLs. May need dose reduction.</td>
</tr>
<tr>
<td><strong>Respiratory</strong></td>
<td></td>
</tr>
<tr>
<td>Theophylline</td>
<td>Decrease in clearance after smoking cessation. Closely monitor levels and adjust dose accordingly.</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Caffeine</td>
<td>Increased caffeine levels post smoking cessation. Recommend reduced caffeine intake post smoking cessation.</td>
</tr>
</tbody>
</table>
Appendix 7

Nicotine Withdrawal Management Plan

This plan is to be used by Nurses and Medical Officer following initial NRT assessment to dispense ongoing Nicotine Replacement Therapy.

PLACE CONSUMER LABEL HERE

Fagerstrom Test Score: __________________________________________

NRT History:

_________________________________________________________________

_________________________________________________________________

Medical Assessment for NRT:

_________________________________________________________________

_________________________________________________________________

Nicotine withdrawal management plan

<table>
<thead>
<tr>
<th>Date</th>
<th>NRT type</th>
<th>Review (eg good, medium, no effect)</th>
<th>Comments</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix 8  Prescription for NRT as written on medication chart

Regular nicotine replacement
# PRN nicotine replacement

## AS REQUIRED

**"PRN" MEDICATIONS**

Attach ADR Sticker
See front page for details

<table>
<thead>
<tr>
<th>Date</th>
<th>Medication (Print Generic Name)</th>
<th>Route</th>
<th>Dose &amp; Frequency</th>
<th>Max dose/day (mg)</th>
<th>Time</th>
<th>Doctor</th>
<th>Printed Name</th>
<th>Contact</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/11</td>
<td>Nicotine lozenge</td>
<td>p.o.</td>
<td>2mg 1-2 hourly</td>
<td>PRN</td>
<td>24mg</td>
<td></td>
<td>DOCTOR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indication:** Nicotine cravings

<table>
<thead>
<tr>
<th>Date</th>
<th>Medication (Print Generic Name)</th>
<th>Route</th>
<th>Dose &amp; Frequency</th>
<th>Max dose/24 hrs (mg)</th>
<th>Time</th>
<th>Doctor</th>
<th>Printed Name</th>
<th>Contact</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/11</td>
<td>Nicotine inhaler</td>
<td></td>
<td>1-2 hourly</td>
<td>PRN</td>
<td>12</td>
<td></td>
<td>DOCTOR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indication:** Nicotine cravings

<table>
<thead>
<tr>
<th>Date</th>
<th>Medication (Print Generic Name)</th>
<th>Route</th>
<th>Dose &amp; Frequency</th>
<th>Max dose/24 hrs (mg)</th>
<th>Time</th>
<th>Doctor</th>
<th>Printed Name</th>
<th>Contact</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/11</td>
<td>Nicotine gum</td>
<td>p.o.</td>
<td>2mg 1-2 hourly</td>
<td>PRN</td>
<td>2.9mg</td>
<td></td>
<td>DOCTOR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indication:** Nicotine cravings

Check if patient has another Medication Chart
Appendix 9

Specific patient groups or settings and NRT

Pregnant women and NRT

Ideally, smoking cessation during pregnancy shall be achieved without NRT. However for women unable to quit on their own, NRT shall be offered as the risk to the foetus is lower than tobacco smoking. Intermittent dosing products (i.e. lozenges, gum and inhalers) are preferable as these deliver nicotine only as required and avoid the constant nicotine release from patches.

In those circumstances where the woman is unable to quit using intermittent dosing products, a medical officer can assess for the safe use of patches.

Nicotine can have an adverse effect on labour and foetal heart rate. Therefore, women presenting in labour shall be assessed for nicotine dependence and offered NRT as required during the labour and reviewed for ongoing therapy post partum.

Smoking during pregnancy is associated with risks such as unhealthy birth weight premature birth or stillbirth. The antenatal phase provides opportunities for the early identification and assessment of smokers and smoking cessation advice and support. The earlier abstinence is achieved during pregnancy the better.

Breastfeeding and NRT

Intermittent dosing products (i.e. lozenge, gum and inhalers) shall be used while breastfeeding. The delivery of nicotine to infants via breast milk is unpredictable and depends upon the serum concentration of nicotine in the mother and rate of milk production. Although nicotine is concentrated in breast milk, oral as opposed to inhaled nicotine is substantially metabolised by the liver before entering the blood of the infant. Staff shall be aware of the potential side effects of nicotine on infants and review the mother’s NRT treatment if symptoms attributable to NRT occur. Symptoms of mild nicotine toxicity in children include nausea, vomiting, diarrhoea, increased salivation, pallor (from peripheral vasoconstriction), excessive sweating, weakness, and dizziness. Possible strategies to minimise the amount of nicotine in breast milk may be to prolong the duration between NRT administration and breastfeeding (ideally 2-3 hours).

Nicotine from both smoking and NRT is found in breast milk. However, the small amount of nicotine the infant receives from NRT is relatively lower and less hazardous than that from smoking.

Children and adolescents and NRT

The levels of nicotine in NRT are not suitable for children under 12. Children are likely to be affected by nicotine and it could cause severe toxicity, which can be fatal.

Contraindication: NRT should not be used for consumers under 12 years of age.

Data is limited in relation to the value of NRT use in young people (over 12 years and under 18 years) where the demand for cessation products and the motivation to quit is low 20. Nevertheless NRT is safe in this group.

<table>
<thead>
<tr>
<th>Doc Number</th>
<th>Issued</th>
<th>Review Date</th>
<th>Area Responsible</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.g. DGD11-001</td>
<td>E.g. Dec 2011</td>
<td>E.g. Dec 2014</td>
<td>E.g. QSU</td>
<td>19 of 22</td>
</tr>
</tbody>
</table>
Precaution: Patients less than 18 years of age are excluded from nurse initiated NRT and should be referred to a medical officer.

Cardiovascular disease and NRT
NRT typically produces much lower peak arterial concentrations than smoking and so has less intense cardiovascular effects. Clinical trials of NRT in patients with underlying stable cardiovascular disease suggest that nicotine does not increase cardiovascular risk and can be used safely by smokers with less severe cardiovascular disease.

Precaution: Those with severe arrhythmias, refractory angina or recent (within 4 weeks) myocardial infarction or unstable angina are excluded from nurse initiated NRT and should be referred to a medical officer.

Diabetics and NRT
Consumers with diabetes mellitus will require at a minimum four times a day blood glucose levels (BGL) when NRT is initiated as catecholamines released by nicotine can affect carbohydrate metabolism and vasoconstriction may delay/reduce insulin absorption. Depending on the BGL’s and clinical status of the consumer, a consult with Endocrinology should be considered.

Psychiatric medication
Smoking interacts with some medications by increasing metabolic rate, making medications pass through the system more quickly (see Appendix 3: Common medication interactions with smoking cessation). Health professionals shall carefully monitor and adjust prescribed medications during smoking cessation. Combination therapy for NRT should be offered. Cessation of smoking can increase the active metabolite of clozapine, norclozapine and may give rise to toxicity. Consumers on clozapine who are initiated on NRT should be carefully monitored for signs of clozapine toxicity and a clozapine level should be considered. Dose reduction may need to be considered to avoid clozapine toxicity.

Consumers with a Fagerstrom Test score 5+
It is recommended that moderate to heavily nicotine dependent patients (i.e. those who score 5+ on the Fagerstrom Test – Appendix 3) be screened and/or monitored for depression. These consumers may require combination therapy of two forms of NRT in order to prevent symptoms of nicotine withdrawal. A consultation with Alcohol & Drug Consultation-Liaison Service should be considered.

Indigenous consumers
Indigenous people have a complex series of underlying historical and social issues to take into consideration when considering present day smoking. Indigenous consumers shall be informed of the Smoke Free ACT Health Policy in a culturally sensitive manner with emphasis on why the hospital is smoke free. Additional time and resources may be required to ensure indigenous consumers are informed of the policy and consent to NRT if required. English may not be the first language of many indigenous consumers who shall require access to interpreters where appropriate. Aboriginal Health Workers and/or Aboriginal Liaison Officers based at the hospitals shall be accessed to assist in communicating the Smoke Free Policy. It may be culturally appropriate to involve the family in the process.
Culturally and Linguistically Diverse (CALD) patients

A CALD consumer’s social, mental, physical and spiritual well-being factors need to be taken into account when addressing health related issues. CALD consumers shall be informed of the Smoke-free ACT Health Policy in a culturally secure manner. Culturally appropriate visual imagery, DVD’S, information leaflets, pictures and symbol forms should be utilised to communicate the Smoke Free Policy to CALD patients. Interpreters must be used at all times when communicating with CALD consumers who are not able to understand adequately in English the reasoning behind and consequences of the ACT Smoke Free Policy on their inpatient stay. Interpreters may be accessed via telephone or on site in some hospitals. A whole of family approach may be necessary to empower and engage the client and maximise conformity to the Smoke Fee Policy. Clinical staff shall have clear knowledge of the Hospital Policy for communication with CALD consumers.

Parents or guardians of child and adolescent consumers

Parents or guardians of child and adolescent mental health consumers shall be informed of the Smoke-free ACT Health Policy. Those who smoke shall be provided with advice on how to manage their nicotine withdrawal or cravings whilst on ACT Health grounds. Further information on where to access smoking cessation support in the community shall be provided. This includes information on accessing NRT on the PBS.
Appendix 10

Community supports

Quitline is a confidential telephone service dedicated to helping people quit smoking. The service is available 24 hours a day, seven days a week for the cost of a local call (except mobiles). The Quitline in the ACT is staffed 7am to 10.30pm Monday to Friday and 9am to 5pm Saturday and Sunday. Calls outside these hours are directed to a call centre to arrange a call within those hours or to be sent a Quit Pack with written information or both. Trained counsellors provide support, encouragement and resources to help during the process of quitting. Callers to the Quitline have access to Quitkits, translation services and quitting resources in several languages. Tailored information and assistance is also available for young people, pregnant women, and people with a mental illness.

Local pharmacy

Pharmacies are well resourced to provide counselling, support and advice to consumers on NRT products and strategies for quitting smoking. Pharmacists are able to screen for nicotine dependence and deliver effective brief advice and support with quitting.

General Practitioner (GP)

The GP’s role begins with early detection, patient education and advice to quit and prompt appropriate referral. GPs can provide support and counselling to smokers, as well as access to prescription only medication for smoking cessation.

Group quitting courses

Consumers should be referred to local community based support and quitting courses such as the Cancer Council ACT ‘Fresh Start’ course. Contact the Cancer Helpline on (02) 62579999, email tobaccocontrol@actcancer.org or through the website www.actcancer.org www.icanquit.com.au

This website is aimed directly at smokers, both young people and adults and provides information and resources on successfully quitting.