THE CURE PROJECT

CURING TOBACCO ADDICTION IN GREATER MANCHESTER

CURE Team

Specialists in Tobacco Addiction Treatment

Training Manual

The CURE Stands for:

C **Conversation**
The right conversation every time

U **Understand**
Understand the level of addicton

R **Replace**
Replace nicotine to prevent withdrawal

E **Experts and Evidence-base treatments**
Access to experts & the best evidenced based treatments

Chapters

Chapter 1: The scale of the tragedy

"Tobacco is the most effective agent of death ever developed and deployed on a worldwide scale"

American Cancer Society CEO

Global scale of the tragedy

- Smoking is the single greatest cause of preventable death, disability, ill-health and social inequality
- Tobacco will kill over 175 million people between now and the year 2030
- 600,000 non-smokers die each year from second hand smoke, 28% of which are children
- Half of all smokers will die prematurely & loose an average of 10 years of life
- After the age of 35 smokers loose a day of life for every 4 days of smoking
- Smoking causes 16 different forms of cancer and damages every organ in the body

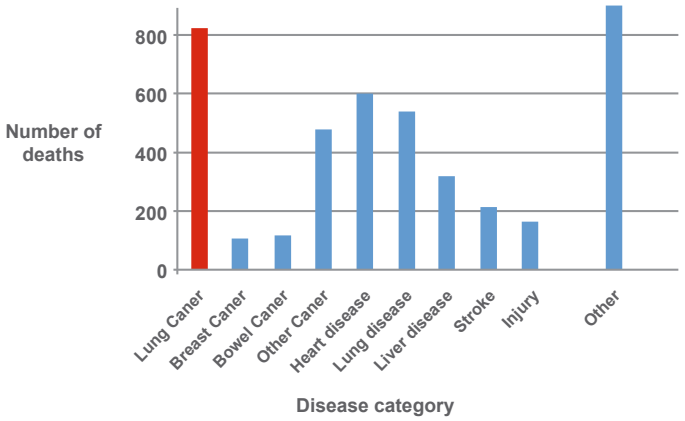
UK scale of the tragedy

- There are nearly 8 million smokers in the UK (5% currently access to stop smoking services)
- Recent decline in smoking prevalence in the general population is due to reduced uptake
- Most immediate tobacco control imperative is helping active smokers quit
- Smoking costs the NHS: £850 million per year inpatient costs, £1.1 billion per year in primary care costs and £696 million per year in OP secondary care services
- Treating tobacco addiction is the single most cost-effective life saving intervention provided by the NHS
- The cost per life year gained of treating tobacco addiction is 1/25th the cost of statin therapy in patients with coronary artery disease

Greater Manchester scale of the tragedy

- Smoking kills 13 people every day in Greater Manchester
- There are approximately 400,000 smokers in Greater Manchester
- Lung Cancer is the single biggest cause of premature death in Greater Manchester
- More than a third of hospital admissions across Greater Manchester are due to smoking
- There are 87,782 Greater Manchester smoker households that fall below the poverty line. If these smokers were helped to stop 34,131 households and 62,133 people could be lifted out of poverty

Causes of premature death in Greater Manchester 2011 - 2013



Public Health England
http://healthierlives.phe.org.uk/topic/mortality

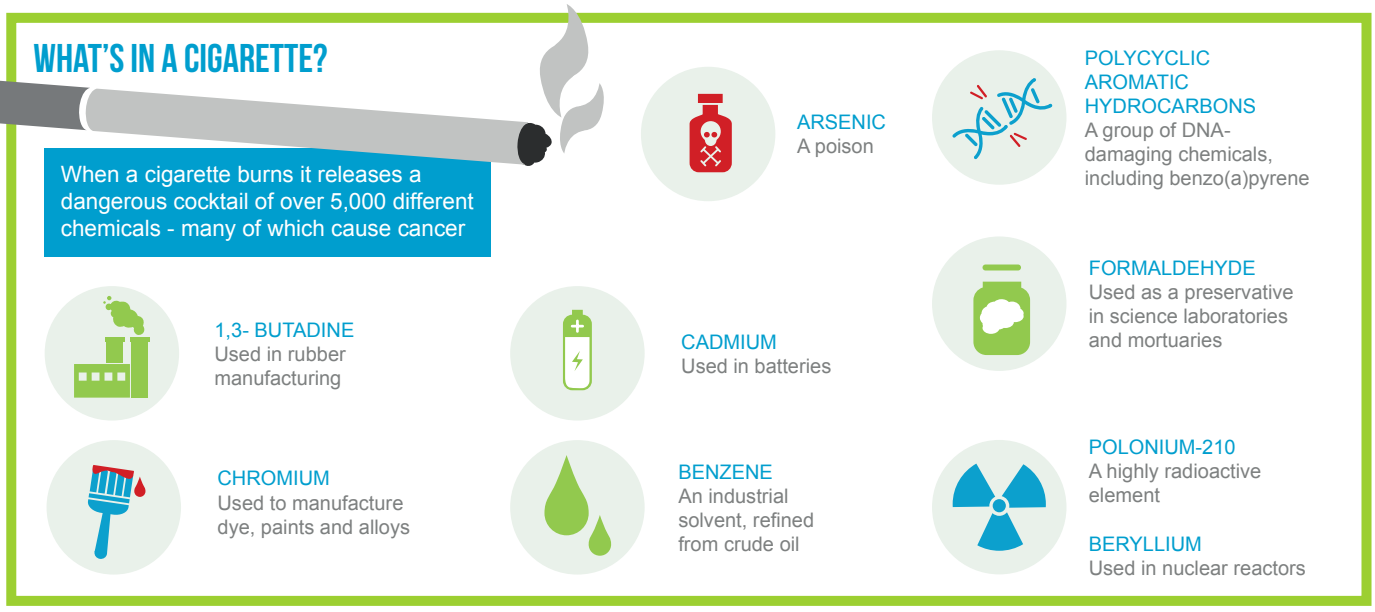
Chapter 2: Understanding Tobacco Addiction

Introdiction: What are smokers addicted to?

Smoking tobacco leads to a powerful addiction and craving for nicotine. This addiction develops in the brain. Outside of the brain, nicotine is a relatively harmless drug that is very similar to caffeine.

Unfortunately whilst it is the nicotine that smokers crave and desire it is not nicotine that causes smoking related diseases like cancer, heart attacks and strokes. It is the 5000 other chemicals in tobacco smoke that cause the horrific damage to every organ in the body.

When tobacco is burnt the smoke contains approximately 5000 chemicals that include carbon monoxide, tar, arsenic, formaldehyde, benzene and polonium.



www.cancerresearchuk.org

Why do smokers become addicted to nicotine?

When cigarette smoke is breathed into the lungs nicotine very quickly enters the bloodstream and travels very quickly into the brain. Nicotine causes the brain to produce feel-good and calming hormones that lead to a sense of relief, pleasure and calmness. As the nicotine disappears after the cigarette is finished the feel good hormones also disappear. This can cause negative feelings like anxiety, restlessness and agitation. The brain starts to crave more nicotine to alleviate these negative feelings. Over time the cravings intensify and the smoker struggles to cope without nicotine and continues to smoke.

Over many years of smoking the brain demands more and more nicotine to satisfy the cravings. Without nicotine the smoker suffers increasingly severe withdrawal symptoms such as: **Restlessness, agitation, sweating, nausea, headaches, insomnia, poor concentration, anxiety, anger, and irritability.** These symptoms drive smokers to reach for another cigarette and the cycle starts again.

Tobacco Addiction is a disease

What is the definition of a disease…..

'An *abnormal condition of a body part* resulting from various causes, such as infection, genetic defect, or environmental stress, and characterized by an *identifiable group of symptoms*.'

Now look at nicotine addiction again…..

Nicotine is an *environmental stress* that leads to an *abnormal condition of the brain* and causes an *identifiable group of symptoms* (*Restlessness, agitation, sweating, nausea, headaches, insomnia, poor concentration, anxiety, anger, irritability*)

Tobacco Addiction is, by definition, a disease

It is not a lifestyle choice. It is a chronic and relapsing disease that often begins in childhood.

Let's also remember the purpose of the NHS set out in the NHS Constitution:

'To provide equal & fair access to all patients to the most effective & evidence based treatments for their illness and disease, physical or mental'

Smokers have a disease – an addiction to nicotine in tobacco. We have very effective treatments to help cure their disease. The CURE specialists' primary role is to understand and empathise with a smokers' disease, how powerful the addiction to nicotine is and ensure smokers have fair and equal access to this help and treatment.

For too long smokers have suffered the stigma that smoking is a lifestyle choice and have not received the help and treatment they need for their addiction. Busting the myth that nicotine is the dangerous drug in tobacco helps a smoker understand they crave a harmless substance that can be delivered in a different and safer way without exposing themselves to the disease causing toxic chemicals. This in itself can be a powerful revelation for a smoker.

Chapter 3: Introduction to pharmacotherapy for tobacco addiction – The EAGLES study

There are very effective treatments for tobacco addiction. The CURE project aims to ensure all smokers admitted to hospital have access to these treatments and are well informed about how best to use them.

There are three main treatments for tobacco addiction

- **Nicotine replacement therapy**
- **Varenicline (Champix)**
- **Bupropion (Zyban)**

The EAGLES Study – The Lancet 2016

The EAGLES study is a critical piece of evidence that informs how we best treat and help patients with an addiction to tobacco. It is a randomised controlled trial to evaluate the effectiveness of the three main pharmacotherapy strategies (nicotine replacement therapy, varenicline and bupropion) for treating tobacco addiction head to head and versus placebo. It is the only trial that has directly compared the different treatment strategies. It also answered the questions over neuropsychiatric adverse events using these treatments.

Over 8000 patients were randomised in the trial. These patients were split into those that had a history of mental health disease and those that did not. Each patient was randomly allocated to either placebo (no treatment), nicotine replacement therapy, varenicline or bupropion.

The main outcomes of the trial were to see which treatment was most effective at helping smokers to quit and how often moderate to severe mental health problems happened as the patients were undergoing treatment.

Results

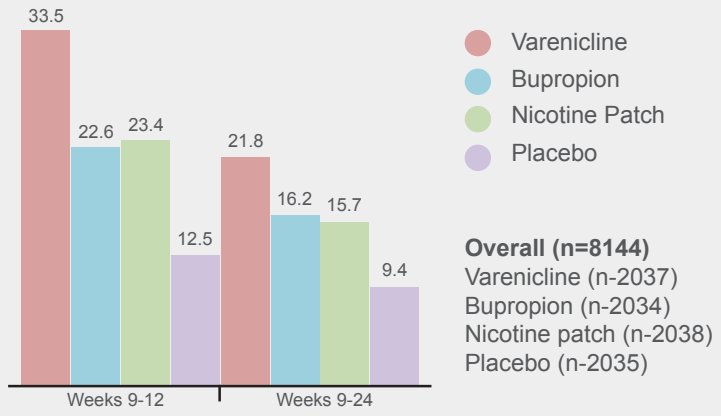


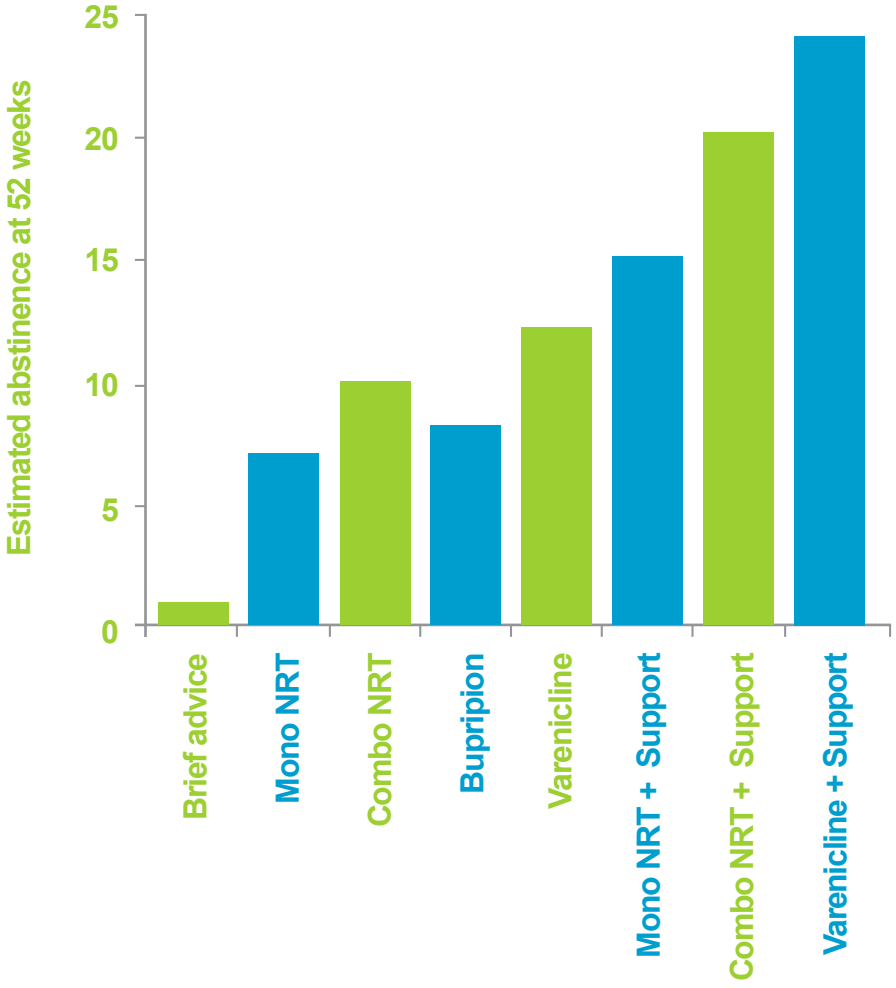
Figure 1: *Abstinence rates in the EAGLES study*

Varenicline was the most effective treatment (33.5% quit rate at 9-12 weeks):

There was no increased risk of moderate to severe neuropsychiatric adverse events with any of the treatments; NRT, varenicline or bupropion. The act of stopping smoking carries a small risk of moderate to severe neuropsychiatric events and this is regardless of the treatment used. The risk is higher in those with a history of psychiatric illness (5%) versus those without (2%). **Varenicline** is safe to use in patients with stable mental health disease (ie who have had no change of dose or new medication added in the last 3 months). Advise patients to seek help in the event of a neuropsychiatric event. In the long term, stopping smoking can improve mental health disease such as anxiety and depression.

This is especially important as the smoking prevalence in patients with mental health illness is very high (40%) and has not reduced in the last 20 years. These are the most vulnerable members of our society and smoking cessation is the most powerful and beneficial intervention we can offer. The CURE project must focus on overcoming the barriers to delivering effective treatment for tobacco addiction in smokers with mental health disease

The graph below shows the estimated 52 week quit rates from all the different pharmacotherapy strategies. It confirms that varenicline and behavioural support is the most effective treatment, closely followed by NRT and behavioural support. It also confirms that these medications are effective without behavioural support and therefore **if such support is refused or is not available, this should not preclude treatment with evidence base medications for tobacco addiction.**



In the CURE project smokers admitted to hospital will be offered NRT, varenicline and specialist support; harnessing our most powerful and effective treatments in a multi-faceted approach to curing this disease.

Chapter 4: Pharmacotherapy for tobacco addiction: nicotine replacement therapy

Mode of Action

Nicotine replacement therapy (NRT) delivers nicotine into the bloodstream without the toxic components of cigarette smoke. NRT alleviates cravings for tobacco and is an effective and safe smoking cessation tool. Nicotine is a relatively harmless substance with similar effects to caffeine. It is safe in long term use with no increase in mortality, serious adverse events, cardiovascular disease or cancer.

Nicotine replacement therapy is the most effective medication for the immediate relief and prevention of cravings when stopping smoking. This is why nicotine replacement therapy is the first line treatment for smokers admitted to hospital and should be started as soon as possible after being admitted.

Evidence Base:

Nicotine replacement therapy increases the chance of abstinence by approximately 60% compared to placebo. In the EAGLES study NRT was more effective than placebo in smoking cessation (23.4% quit rate at 9-12 weeks versus 12.5%).

Side effects:

Warn about sleep disturbance. Nicotine patches can cause mild skin irritation. Short acting nicotine can cause dyspepsia, nausea or hiccups if nicotine is swallowed rather than absorbed at the gums.

Contraindications

NRT can be used in all smokers admitted to hospital and in acute illnesses including pneumonia, heart attack and stroke.
24 hour nicotine patches are not advised for use in pregnancy as it is best to give baby a rest overnight.
Liquorice gum is also not advised for use in pregnancy and lactation due to the presence of glycyrrhizin.

Prescribing notes:
- NRT should be prescribed for a minimum of 8-12 weeks.
- Ongoing prescription may be required to facilitate ongoing abstinence.
- Encourage patients to use the short acting nicotine regularly e.g. Little and often, up to on the hour every hour if needed

Cravings for nicotine are extremely powerful and NRT is weaker than cigarettes. Patients cannot overdose on nicotine except for causing mild symptoms such as light-headiness or nausea. However, under-dosing will affect how well NRT can alleviate cravings!

There is no increased risk of moderate to severe neuropsychiatric adverse events with NRT. The act of stopping smoking carries a small risk of moderate to severe neuropsychiatric events and this is regardless of the treatment used. The risk is higher in those with a history of psychiatric illness (5%) versus those without (2%). **Advise patients to seek help in the event of a neuropsychiatric event**. In the long term, stopping smoking can improve mental health disease,

Prescribing Nicotine Replacement Therapy

Nicotine replacement therapy comes in two forms: short acting and long acting. Think of NRT as a trying to put out a fire (cravings). Long acting nicotine is like a sprinkler system – providing a constant flow of water to control the fire. Short acting nicotine is like a fire extinguisher – a rapid burst of water to put the fire out there and then.

Some patients only need one type of NRT whereas many with require combination NRT. Always discuss NRT treatment options with patients and help and advise them which mono or combination therapy suits them best. Treatments may need to be adjusted or totally changed as the person progresses through the quit attempt. It is important to discuss the dose and correct use of each medication the patient choses to ensure they get the best from it, do not underuse it and give them the best chance to avoid relapse

NRT is not as powerful as smoking at delivering nicotine and it is important to explain this to smokers and encourage them to use the NRT, particularly the short acting nicotine, frequently – little and often, up to on the hour every hour especially when first starting the treatment when nicotine cravings are at their worst.

Short acting nicotine

Short acting nicotine comes in many forms, each as effective as each other. Each short acting nicotine has its own technique and top tips for ensuring smokers get the best relief of their cravings.

• Nicotine inhalator

The inhalator is not a very accurate name for this device because the user does not inhale the nicotine. The user puffs on the device so the medication enters the mouth and is absorbed through the gums. It is not breathed into the lungs. Patients often like this device because it mimics the hand to mouth action of smoking. It is not as powerful as a cigarette and you should ***advise your patients to use the inhalator for 20 minutes at a time to have an effect similar to a cigarette.***

Nicotine dose - **10 puffs from a nicotine inhalator = 1 puff on a cigarette**

• Nicotine chewing gum

Nicotine chewing gum is not to be chewed like normal chewing gum. ***Advise your patients to chew the gum until they notice a hot fiery taste, then park the gum between their lip and gum to let the nicotine be absorbed through the gum.*** If they chew it like normal gum they are likely to swallow the nicotine which cause heartburn, nausea and hiccups.

• Nicotine lozenges

Nicotine lozenges are sucked like a sweet to release the nicotine. The nicotine is then absorbed through the gums. However, if there are any symptoms of the nicotine being swallowed (heartburn, nausea, hiccups) then ***advise your patients to park the lozenge between the lip and gum to allow the nicotine to be absorbed through the gum.***

Short acting nicotine

• Nicotine microtabs

These are very small tablets that are placed under tongue. They are not chewed, sucked or swallowed. The nicotine is absorbed through the gums.

• Nicotine nasal spray

Nicotine is sprayed into the nostrils and absorbed into bloodstream through the lining of the nose. Give the following advice to your patients:

Tip your head back slightly and insert the spray tip into one of your nostrils. Press nozzle firmly and quickly. Spray into your other nostril. If you experience sneezing, a runny nose, or watery eyes, these effects should decrease after the first few days.

• Nicotine mouthspray

Nicotine mouthspray is sprayed into the inside of the cheek and is absorbed into the bloodstream through the linings of the mouth. ***Not to be swallowed.***.

• Nicotine mini lozenges

Nicotine lozenges are sucked initially like a sweet to release the nicotine. The nicotine is then absorbed through the gums. However, if there are any symptoms of the nicotine being swallowed (heartburn, nausea, hiccups) then ***advise your patients to park the lozenge between the lip and gum to allow the nicotine to be absorbed through the gum.***

• Nicotine oral strips

These are a film strip containing nicotine. Place one strip onto the tongue and press it gently onto the roof of the mouth. ***Not to be chewed or swallowed.***

Short acting nicotine doses (Available in Trust)

Nicotine inhalator	15mg/cartridge (maximum 6 cartridges in 24 hours) ***On the hour every hour initially*** Whenever cravings occur
Nicotine chewing gum	2mg as required (maximum 15 in 24 hours) ***On the hour every hour initially*** Whenever cravings occur
Nicotine lozenges	2mg as required (maximum 15 in 24 hours) ***On the hour every hour initially*** Whenever cravings occur
Nicotine microtabs	2mg as required (maximum 15 in 24 hours) ***On the hour every hour initially*** Whenever cravings occur
Nicotine nasal spray	2 sprays each nostril ***On the hour every hour initially*** Whenever cravings occur

Long acting nicotine

Long acting nicotine comes in the form of patches. Patches ideally need to be applied to a hairless area of skin such as the upper arm. Patches can cause skin irritation though this is usually mild. Patches come in 16 hour and 24 hour forms. One of the most powerful indicators of a smoker's addiction is how quickly they smoke after waking up. We use this information to help decide whether a 16 hour patch or a 24 hour patch is best for them.

If they smoke within 30 minutes of waking up then they need a 24 hour patch to help alleviate these early morning cravings. However the 24 hour patch is likely to cause more sleep disturbance.

If it takes longer than 30 minutes to smoke after waking then they can have a 16 hour patch with is likely to cause less sleep disturbance and shouldn't affect early morning cravings.

NRT Summary Prescribers Guide

NRT Type	Doses Available	Frequency	Abbreviation of route on drug kardex	Other information	Pack size (For GP letter)
Nicotine patches 24hr	1mg 14mg 7mg	OD Max. 1 /24hr	TOP	Use to ease early morning cravings. Apply to non-hairy, dry skin. Rotate site. Slow release.	Boxes of 7
Nicotine patches 16hr	25mg 15mg 10mg	OD Max. 1 /24hr	TOP	Use if sleep disturbance on 24hr patches/awake longer b4 smokes. Other as above.	Boxes of 7
Nicotine gum	4mg 2mg	PRN Max. 15 pieces /24hr	PO	Do not chew continually. Chew and rest for approx. 30mins. Use regularly.	**Small box** = 25 or 30 pieces **Large box** = 96, 105 or 210 pieces
Nicotine lozenges	4mg 2mg 1mg (not widely available	PRN Max. 15 /24hr	PO	Do not suck continually. Suck and rest for approx. 30mins. Use reg.	**Small box** = 72 lozenges **Large box** = 96 or 144 lozenges
Nicotine inhalator	15mg	PRN Max. 6 caps /24hr	INH	Do not drag or inhale. Puff or suck to avoid coughing and throats irritation. Use regularly, little and often.	**Starter pack** = 4 capsules **Follow on pack** = 20 or 36 caps a box *Each box contains a new inhalator tube
Nicotine microtabs	2mg	PRN Max. 80mg / 24hr	BUCCAL	Allow to absorb sub-lingually. Use regularly.	Pack of 100 microtabs
Nicotine nasal spray	500mcg / per spray	PRN Max. 64 sprays /24hr	Nasal	Quickest acting. Same 7 second relief as cigs. May cause nasal irritation. Use regularly.	Singles 200 sprays per bottle 10mg /ml
Nicotine mini lozenges	500mcg / per spray	PRN Max. 15 /24hr	Not included on PGD	Do not suck continually. Suck and rest for approx. 30mins. Use regularly.	Mini's = Singles or pack of 3 (4weeks supply) Cools = singles or pack of 4
Nicotine oral strips	2.5mg	PRN Max. 15 / 24hr	Not included on PGD	Place film on tongue and press gently onto roof of mouth. Do not chew or swallow.	Pack of 15 or 60 *Difficult to get hold of at moment
Nicotine Mouthspray	1mg /per spray	PRN Max. 4 sprays / per hr	Not included on PGD	Spray into side of cheek not to back of throats to avoid hiccups, indigestion and sore throat. Demonstrate how to open / use	Singles or pack of 2

*If using combination therapy remember is correct dose for CPD but half the maximum number per day
*If too specific in box size can result in delay to patient while item is ordered, therefore I often use 'large box' 'small box'

Long acting nicotine

When prescribing nicotine replacement therapy remember the three CURE questions:

1. How many cigarettes do you smoke?

2. How many cigarettes do you smoke a day?

3. How long have you been awake before you smoke your first cigarette?

These questions can stratify smokers into three levels of addiction which informs the choice of NRT:

Low level addiction <10 cigarettes per day	Prescribe a short acting nicotine according to patient preference
Moderate level addiction 10-19 cigarettes per day	Prescribe either a short acting or a long acting nicotine replacement therapy (consider combination therapy) 14mg/24hr patch (smokes within 30 minutes of waking) 15mg/16hr patch (does NOT smokes within 30 minutes of waking)
High level addiction >20 cigarettes per day	Prescribe both short acting and long acting nicotine replacement 21mg/24hr patch (smokes within 30 minutes of waking) 25mg/16hr patch (does NOT smokes within 30 minutes of waking)

In the CURE project all clinicians are being encouraged to prescribe NRT as soon as a patient is admitted to hospital. The prescription is competed in line with the CURE protocol (see below). For this initial prescription all short acting nicotine is in the form of nicotine lozenges for cost effectiveness purposes. During the CURE team specialist assessment you can assess how this short acting nicotine is suited to each individual patient and suggest alternative short acting nicotine products if required to improve compliance and effectiveness.

CURE Initial Inpatient Treatment Protocol

Low Level Addiction
≤ 10 Cigarettes/day

1 Prescribe a short acting nicotine replacement ("reach for" nicotine)
Advise patients to use short acting nicotine frequently and when cravings occur

First line:

☐ **Nicotine lozenges *2mg as required***
usual maximum 15 in 24 hours

Options if patient would prefer an alternative short acting NRT

☐ **Nicotine inhalator *15mg/cartridge***
maximum 6 cartridges in 24 hours

☐ **Nicotine microtabs *2mg as required***
usual maximum 24 in 24 hours

Discuss Varenicline with all smokers -
see varenicline section

Advice for patients on short acting nicotine

Inhalator: The user ***'puffs'*** on the device so the medication enters the mouth and is absorbed through the gums. It is not inhaled into the lungs.

Lozenges: Suck like a sweet to release the nicotine which is then absorbed through the gums. If the patient suffers heartburn, nausea or hiccups (nicotine being swallowed) then try parking the lozenge between the lip and gum.

Microtabs: Place under the tongue and allow to dissolve. They are not chewed, sucked or swallowed.

Moderate Level Addiction
10-19 Cigarettes/day

1 & 1

Prescribe a long acting nicotine patch AND CONSIDER adding a short acting "reach for" nicotine replacement.

☐ **Nicotine Patches *14mg/24 hour***
(Smokes within 30 minutes of waking)

☐ **Nicotine Patches *15mg/16 hour***
(Does NOT smoke within 30 minutes of waking)

☐ **Short acting nicotine replacement**
(As per low level addicion pathway)

Advice for patients
Patches

Advise patients to use a clean & hairless area of skin to apply the patch. Skin irritation can occur but is generally mild

24 hour patches are ideal for patients that smoke within 30 minutes of waking but can cause sleep disturbance.

Discuss Varenicline with all smokers -
see varenicline section

High Level Addiction
≥20 Cigarettes/day

1 & 1

Prescribe a long acting nicotine patch AND a short acting "reach for" nicotine replacement. Discuss the following options with the patient:

☐ **Nicotine Patches *21mg/24 hour***
(Smokes within 30 minutes of waking)

☐ **Nicotine Patches *25mg/16 hour***
(Does NOT smoke within 30 minutes of waking)

☐ **Short acting nicotine replacement**
(As per low level addicion pathway)

Advice for patients
Patches

Advise patients to use a clean & hairless area of skin to apply the patch. Skin irritation can occur but is generally mild

24 hour patches are ideal for patients that smoke within 30 minutes of waking but can cause sleep disturbance.

Discuss Varenicline with all smokers -
see varenicline section

Chapter 5: Pharmacotherapy for tobacco addiction: varenicline

Varenicline is a highly effective tobacco addiction treatment with smokers over three times more likely to stop with the help of this medication. It has been proven to be more effective than NRT and bupropion in a head to head randomised controlled trial. Varenicline should be prescribed in combination with specialist and behavioural support. but if such support is refused or is not available, this should not preclude treatment with varenicline

Mode of Action:

Varenicline is a nicotinic receptor agonist and antagonist. It causes dopamine release via its agonist action and alleviates cravings for nicotine and also prevents dopamine release from nicotine in cigarette smoke through its antagonist action. It is a highly effective treatment for tobacco addiction through both relief of cravings and preventing positive impact from smoking that reinforces the addiction.

Evidence Base:

The EAGLES study is the only randomised controlled trial to evaluate the effectiveness of the three main pharmacotherapy strategies (nicotine replacement therapy, varenicline and bupropion) in tobacco addiction head to head and versus placebo. Over 8000 patients were randomised between the four arms. Varenicline was the most effective treatment (33.5% quit rate at 9-12 weeks):

Side effects:

Warn about nausea (advise to take medication with food and water), *sleep disturbance, taste disturbance, dizziness, dry mouth, headaches, drowsiness and vivid dreams.* **The dose can be reduced to 0.5mg BD if intolerable side effects**

Dose

0.5mg once daily Day 1-3
0.5mg twice daily Day 4-7
1mg twice daily Day 8+

In the outpatient setting, varenicline is started prior to a quit date

- This quit date is ideally within 1-2 weeks of starting varenicline but can be at any time within the 12 weeks of treatment.
- Whilst the course length is 12 weeks it can be extended to 24 weeks.
- Further courses of varenicline in the event of relapse are appropriate.

In the inpatient setting varenicline is prescribed alongside nicotine replacement therapy with the aim of stopping NRT at a subsequent date (equivalent to the 'quit date' in the outpatient setting).

Note

There is no increased risk of moderate to severe neuropsychiatric adverse events with varenicline (EAGLES study 2016, The Lancet). The act of stopping smoking carries a small risk of moderate to severe neuropsychiatric events and this is regardless of the treatment used. The risk is higher in those with a history of psychiatric illness (5%) versus those without (2%). ***Advise patients to seek help in the event of a neuropsychiatric event.*** In the long term, stopping smoking improves mental health disease, e.g. stopping smoking is more effective than antidepressants in treating depression.

Chapter 6: Pharmacotherapy for tobacco addiction: bupropion

Mode of Action:

Bupropion is a nicotinic receptor antagonist. It prevents dopamine release from nicotine in cigarette smoke through its antagonist action. It is an effective treatment for tobacco addiction through the preventing positive impact from smoking that reinforces the addiction. However it has a number of drug interactions and side effects such that it should only be prescribed following multiple unsuccessful quit attempts with varenicline or NRT and under the guidance of a specialist tobacco addiction treatment service.

Evidence Base:

In the EAGLES study bupropion was more effective than placebo in smoking cessation (22.6% quite rate at 9-12 weeks versus 12.5%).
One therapy was not shown to be superior to another between bupropion and NRT (OR 0.96 95% CI 0.83-1.11, p0.58)

Side effects:

Warn about seizures, mania, insomnia *dry mouth, headaches, feeling sick or dizzy* and hypertension **(weekly BP monitoring if given with NRT).**

Contraindications:

Avoid in acute alcohol withdrawal, *children under 18 years of age*, acute benzodiazepine withdrawal, bipolar disorder, CNS tumour, eating disorders, history of seizures and severe hepatic cirrhosis.

Cautions:

Due to seizure risk avoid in patients with the potential for lowered seizure threshold e.g. alcohol abuse, diabetes with hypoglycaemic episodes, head trauma. Due to mania risk avoid in bipolar disease. Avoid prescription with tamoxifen – reduced serum levels of tamoxifen.

Dose

150mg OD day 1-6
150mg BD day 7+

Prescribing notes

Treatment course = 7-9 weeks. **Discontinue if abstinence not achieved at 7 weeks**
Reduce dose to 150mg OD in the elderly, renal impairment, hepatic impairment or any of the following medications:

- Anti-psychotics
- Anti-depressants
- Anti-malarials
- Tramadol
- Theophylline
- Corticosteroids
- Quinolones
- Anti-histamines.

Note:

There is no increased risk of moderate to severe neuropsychiatric adverse events with bupropion (EAGLES study 2016, The Lancet). The act of stopping smoking carries a small risk of moderate to severe neuropsychiatric events and this is regardless of the treatment used. The risk is higher in those with a history of psychiatric illness (5%) versus those without (2%). **Advise patients to seek help in the event of a neuropsychiatric event**. In the long term, stopping smoking improves mental health disease, e.g. stopping smoking is more effective than antidepressants in treating depression.

Chapter 7: e-cigarettes

E-cigarettes are a highly debated and at times controversial topic in the tobacco addiction community. Whatever your thoughts on e-cigarettes they are a very popular device amongst smokers. 60% of smokers in the UK have tried an e-cigarette and approximately 20% are regular users. It is important that Greater Manchester Healthcare Professionals have provide a consistent message about e-cigarettes to our patients.

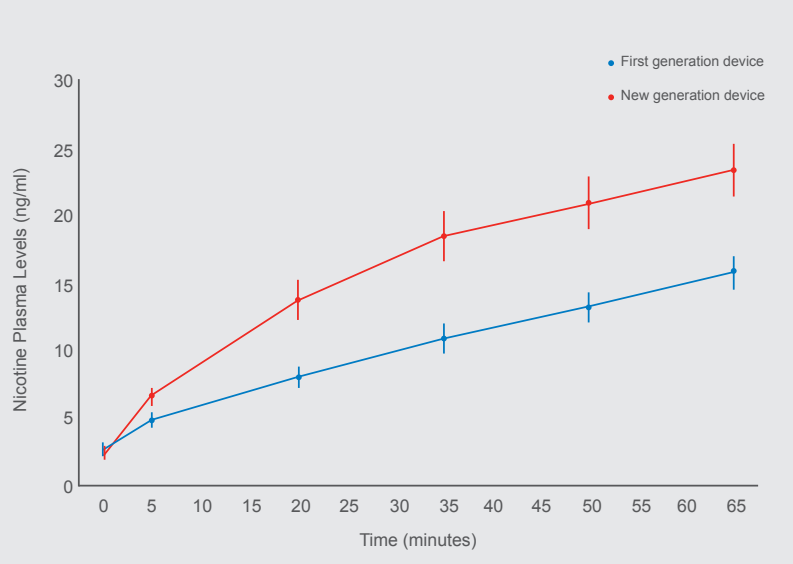
'E-cigarettes' is not a good name for these devices are they are **not cigarettes** and they contain ***no tobacco***. They contain a liquid that is heated to create a vapour that is inhaled into the lungs. E-cigarettes contain:

- Nicotine liquid
- Glycerine (the substance used to make dry smoke in theatres)
- Propylene glycol
- +/- flavouring

E-cigarettes are significantly less harmful than cigarettes and will expose users to less toxic chemicals, though not none entirely, and they **are less harmful, not safe**.

The best way to think about e-cigarettes is another device for providing short acting nicotine.

- Like the nicotine inhalator, they are likely to be popular as they mimic the action of smoking cigarettes.
- One advantage of an e-cigarette, particularly the third/fourth generation devices, is they are able to deliver a high dose of nicotine at a speed far closer to cigarettes than NRT



- Just like with short acting nicotine it is important to encourage patients to use regularly and remind them they cannot overdose on nicotine and need to use it in sufficient quantity to alleviate carvings and reduce the chance of relapse to cigarettes. Advise smokers to use the higher doses of nicotine liquid for maximal reduction of cravings
- Advice smokers to switch entirely to an e-cigarette with zero cigarette use. Approximately 50% of the risk of a heart attack comes in the first cigarette and 30% of the stroke risk. Exposure to toxic chemicals is relatively similar between dual cigarette and e-cigarette users and cigarette users.
- E-cigarettes can be combined with other tobacco addiction treatments such as NRT and varenicline in a multi-faceted approach to a quit attempt.
- It is imperative smokers are offered the treatments with a robust evidence for effectiveness, particularly NRT and varenicline. Those smokers that chose to include e-cigarettes within their quit attempt strategy should be supported in doing so.

E-cigarettes are not medicinal and cannot be prescribed. They are a consumer device. To ensure the least risk of harm e-cigarettes must be carefully and thoroughly regulated and the chemicals contained within the liquid also regulated. Advise patients to buy e-cigarette and its components from a licenced vender.

A licenced vender will also be able to advise on different generations of e-cigarettes and the technique used to maximise nicotine intake, something that is slightly different to the technique of smoking a cigarette.

Some patients find adding a non-tobacco flavour to an e-cigarette makes them more usable and helps to break the addiction and association to tobacco, this is of course a personal choice.

There are wider concerns about e-cigarettes including a potential gateway to smoking in young adults and children, the renormalisation of smoking in today's society and strengthening the tobacco industry's presence in this market once again. Clearly these are important cultural issues for us to debate but for an individual smoker seeking specialist support in Greater Manchester, in whom stopping smoking is the single greatest intervention for their health they can do, we will offer that smoker evidence based treatments and support them with appropriate information and counselling if they chose to use this form of short acting nicotine device.

Chapter 8: Training needs & specialist courses

Training	Description	How	Cost
CURE Level 1	• Understanding Tobacco Addiction • Providing brief advice to smokers • Supporting a smokefree site	Trust specific eLearning platform	**FREE**
CURE Level 2	• Introduction to treating tobacco addiction • Prescribing nicotine replacement therapy - the CURE protocol • Additional treatments for tobacco addition • Discharging patients on treatment for tobacco addiction	Trust specific eLearning platform	
NCSCT	*Practitioner training:* • Core competencies in helping people stop smoking	Online	
	Specialty courses for staff with Practitioner training: • Mental Health & smoking cessation • Pregnancy & smoking cessation • E-Cigarettes: A guide for healthcare professionals • Stop smoking medications • Very brief advice on smoking for pregnant women • Very Brief advice in smoking cessation • Very brief advice on second hand smoke	Online	
MECC E-Cigarette Practitioner Workshops	The sessions are aimed to support frontline staff to offer appropriate advice on using nicotine-containing products on general sale, including NRT and nicotine-containing e-cigarettes. (NICE guidance 92 Stop smoking interventions and services). The sessions also provide a safe platform to ask questions, share best practice and raise concerns.	Face-to-face Book via: phpn.north@hee.nhs.uk	

Chapter 9: Suggested reading

Please see below a list of suggested reading to support and enhance the knowledge gained through training:

Stop Smoking Interventions and Services
NICE Guidelines NG92

Smoking: Supporting People to Stop
NICE Guidelines QS43

Smoking: Acute, Maternity and Mental Health Services
NICE Guidelines PH48

Towards a Smokefree Generation: Tobacco Control Plan for England
July 2017

Greater Manchester Tobacco Control Plan
July 2017

• Ottawa Smoking Cessation Model - read about the model and keep up to date on how they are progressing: https://ottawamodel.ottawaheart.ca/

- o https://ottawamodel.ottawaheart.ca/sites/ottawamodel.ottawaheart.ca/files/omsc_hmpg/omsc_highlight_document_2016.pdf

• Innovation in Medicine 2018: Providing smoking cessation for patients in hospitals will save lives and money https://www.rcplondon.ac.uk/projects/outputs/hiding-plain-sight-treating-tobacco-dependency-nhs

• Preventing Ill Health CQUIN publications – case studies

- o Tees Esk and Wear Valley NHS Foundation Trust
  Innovative ways to support smokers requiring nicotine management in a mental health organisation

- o Tobacco-free NHS – the journey for one London trust
  https://publichealthmatters.blog.gov.uk/2017/02/14/tobacco-free-nhs-the-journey-for-one-london-trust/

- o How one mental health Trust in Leicestershire is using e-cigarettes as a tool to go smokefree
  https://publichealthmatters.blog.gov.uk/2017/07/25/how-one-mental-health-trust-in-leicestershire-is-using-e-cigarettes-as-a-tool-to-go-smokefree/

Chapter 10: Frequently Asked Questions

What if smokers are dual users?

E.g. NRT and cigarettes or e-cigarettes and cigarettes

This is a common situation and many smokers will start the process of a quit attempt by introducing NRT or e-cigarettes alongside their cigarette use.

This is perfectly fine and in fact, there is evidence to suggest the dual users are much likely to quit in the long term than non-dual users because it shows some motivation to work towards quitting.

Remember the following points:

- Dual nicotine therapy helps highly addicted patients who smoke to successfully stop
- Be positive about the steps they are taking to begin a quit attempt
- Remind smokers that although it is a very positive step the ultimate aim will be **zero cigarette use (remember that 50% of the risk of a heart attack from smoking is in one cigarette and 30% of the stroke risk)**