

**HASTINGS PRINCE EDWARD PUBLIC HEALTH  
MEDICAL DIRECTIVES**

<b>Section:</b>	TOBACCO CONTROL
<b>Directive Title:</b>	<b>Determine Eligibility for / Dispense NRT</b>
<b>Directive #:</b>	TC-01
<b>Approved by:</b>	Medical Officer of Health
<b>Date:</b>	February 21, 2023

**ORDER / DELEGATED PROCEDURE:**

Determine eligibility for / dispense over-the-counter, combination system Nicotine Replacement Therapy (NRT), off-label, to Recipient Clients who use nicotine through conventional cigarette, cigar and / or alternative delivery systems (e-cigarettes<sup>1</sup>, “heat not burn” products, chews, snus), as per

- Appendix A - The Centre for Addiction and Mental Health [CAMH List of Assessment Tools](#)
  - Hooked on Nicotine Checklist (HONC) and E-cigarette Dependence Scale (EDS)
  - E-cigarette Fagerstrom Test of Cigarette Dependence  
[for Penn State E-cigarette Dependence Index – see CAMH List of Assessment Tools]
- Appendix B - Guidelines for Titration of Combination System NRT
- [NRT Decision-Making Algorithm](#)
- Vaping Formula Determination for NRT as per Figure 1
  - The vaping formula determination for NRT will guide the dosage of NRT as per Figure 1.
  - The first part (x mg / 1 ml) is the dose / strength of the e-juice being used, e.g. 3, 6, 10, 12, 18 mg / ml times the second part, the consumption of e-juice per day.

**Figure 1 - Vaping Formula Determination for NRT**

$$\frac{x \text{ mg}}{1 \text{ mL}} \times \frac{x \text{ mL}}{\text{day}} = x \text{ mg/day}$$

- For example, a vaper using 10 mg / ml E juice and consuming 2 ml / day would have a recommended NRT dose of 20 mg / day.
- Since usage patterns can be variable, calculations should be based on usage reported over the past week or month.
- Most heavy smokers who switch to vaping start at a concentration of 18 mg / ml, but the starting point is less clear for youth vapers who were never smokers.  
**Note:** For some youth vapers using nicotine salt products like JUUL, the concentration can be well over 20 mg/ml.
- According to the Healthy Schools Program nurses, most students reported using 50 mg/ml pods. Pods are 2 mls and come 3 in a pack. Generally the students say this lasts 1 week, sometimes 2 weeks.<sup>2</sup>
- [Nicotine Strength Cigarette Equivalent Guide \(approximate\) based on anecdotal evidence](#)<sup>3</sup>
  - 3 mg - up to 5 cigarettes a day
  - 6 mg - up to 10 cigarettes a day
  - 12 mg - up to 15 cigarettes a day
  - 18 mg - up to 20 cigarettes a day
  - 24 mg - up to 60 cigarettes a day

<sup>1</sup> CAMH, 2022. Use of smoking cessation medications for vaping cessation would be considered ‘off-label’ in most jurisdictions. Healthcare providers should inform clients that medication options are based on tobacco cessation treatment approaches.

<sup>2</sup> This dose would result in quite high amounts of nicotine resulting in serious withdrawal and inability to focus upon cessation.

<sup>3</sup> CAMH vaping guidelines pending

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**RECIPIENT CLIENTS:**

Adults and youth  $\geq 12$  years of age <sup>4 5</sup> who have requested smoking / vaping (with substance containing nicotine) cessation assistance, have undergone assessment, and have been found to be eligible for NRT.

**AUTHORIZED IMPLEMENTERS:**

Registered Nurses (RNs), Registered Practical Nurses (RPNs), and Health Promoters (HPs) who accept the delegation to determine eligibility for and to dispense combination system NRT and have completed the core course from the Centre for Addiction and Mental Health CAMH TEACH (Training Enhancement in Applied Cessation Counselling and Health) program or other recognized organization.

**INDICATIONS:**

Determine eligibility for and dispense the appropriate dose of combination system NRT—continuous transdermal patches, short-acting NRT gum, lozenges, inhaler, or oral spray—for client who will

- attend either a support group, smoking / vaping cessation class, clinic, meeting, phone interview or home visit  
OR
- under special circumstances, to be determined, a client who cannot attend a smoking / vaping cessation clinic visit, due to, but not limited to, illness or mobility issues, or during a pandemic, may undergo a phone / video conference interview / consultation, then NRT may be dispensed on their behalf to a designated substitute

In addition, client will

- have an individualized smoking / vaping cessation plan, addressing lifestyle changes and behavioural interventions
- be educated about the proper uses of NRT

**Clients on prescription medications on [Drug Interactions with Tobacco Smoke list](#) <sup>6</sup>**

- Agree to have their health care provider (HCP) notified by fax if they are commencing NRT and are on prescription medications listed on Drug Interactions with Tobacco Smoke (Related Links), since some drugs may require monitoring during smoking cessation (due to tobacco smoke in most cases, **not** the nicotine) due to an altered pharmacologic response; fax notification should include:
  1. Notification of Initiation of NRT about enrolment in the We Can Quit Initiative, with a potential maximum daily patch dose of 84 mg NRT
  2. Notification of HCP about Drug Interactions with Tobacco Smoke and Smoking Cessation
  3. Drug Interactions with Tobacco *Smoke* list
- Agree to allow Hastings Prince Edward Public Health (HPEPH) to share medical records with HCP, as noted in electronic medical records (EMRs)
- If client does not have an HCP, give them the list to take with them to the clinic on their next visit and note “Client does not have HCP” in Oscar

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<sup>4</sup> American Academy of Pediatrics, 2019; NRT off-label under the age of 18 but low risk outweighs potential harm

<sup>5</sup> Canadian Pediatric Society, 2022. NRT Recommended...for regular smokers 12 to 18 years of age

<sup>6</sup> American Academy of Family Physicians, 2019

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**Clients with medical conditions requiring notification of HCP**

- heart attack in the last 2 weeks
- severe or worsening angina
- life-threatening arrhythmias
- recent cerebral vascular incident
- severe psychiatric condition, not well controlled
- Agree to have their HCP notified by fax, including
  1. Notification of Initiation of NRT—about enrolment in the We Can Quit Initiative, with a potential maximum daily patch dose of 84 mg NRT
  2. Notification of HCP about Drug Interactions with Tobacco Smoke and Smoking Cessation, if they are on prescription medications on the list
  3. Drug Interactions with Tobacco Smoke list
- Client will also agree to allow HPEPH to share medical records with HCP, as noted in EMRs
- If client does not have a HCP, give them the list to take with them to the clinic on their next visit and note “Client does not have HCP” in Oscar
- For all ages, be aware of disease-related cautions when prescribing NRT, including cardiovascular disease, diabetes, and hyperthyroidism; however, it is important to note that these cautions are relative, not absolute: **NRT is safer than continued tobacco use.**
- The decision to prescribe a drug is the responsibility of the medical provider, who must weigh the risks and benefits of using the drug for a specific situation.

**Pregnancy <sup>7</sup>**

- There is evidence that the use of NRT may increase cessation rates, and, relative to continued smoking, the benefits of NRT to aid smoking / vaping cessation in pregnant women, who cannot stop smoking / vaping without such therapy, substantially outweigh the risks of either continual smoking / vaping or NRT.<sup>8</sup>
- The benefits of cessation are greatest if the cessation occurs early in pregnancy when it can still help protect against some health problems for developing babies, such as low birth weight or premature birth.<sup>9</sup>
- First line treatment: Smoking / vaping cessation counselling about lifestyle and behavioural changes (CAMH, 2022).
- Second line treatment: The Society of Obstetricians and Gynecologists of Canada suggest offering NRT at the lowest effective dose if counselling alone fails (CAMH, 2022), along with an informed discussion of the benefits and risks of NRT therapy,<sup>10</sup> keeping in mind that quit smoking medicines are much safer than smoking (CDC, 2022).
  - Patch(es) may be considered to a maximum daily dose of 42 mg; the patch(es) should be removed at bedtime to reduce fetal nicotine exposure unless the pregnant client wakes up at night to smoke (Nicorette, Oct 2019).
  - Patches may be preferred if the client is suffering from nausea during the pregnancy.
  - According to the CAMH Vaping Cessation Guidelines, when developing a treatment plan, HCPs should consider the impact of the stage of pregnancy on nicotine metabolism. If NRT is being used, higher doses may be needed, especially by the latter

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<sup>7</sup> If pregnant client does not have an HCP or obstetrician, the RN/RPN will advise them to attend a walk-in clinic for initial prenatal care / referral since we do not have the capacity to support them until an appointment comes up with an obstetrician.

<sup>8</sup> Diamanti, 2019

<sup>9</sup> CDC Pregnancy, 2020

<sup>10</sup> RNAO, 2018. Tobacco smoke contains more than 7,600 chemicals, at least 70 of which are known to cause cancer.

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part of the second trimester. Nicotine metabolism tends to revert back to normal by 4 weeks post partum, so the NRT dose may need to be reduced to prevent side effects.

- Studies have shown there are no significant adverse effects from using the NRT patch(es) during pregnancy, and smoking / vaping cessation leads to healthier pregnancies and deliveries and fewer developmental impairments.<sup>11</sup>
- Studies of the effectiveness of NRT in pregnant clients are inconclusive to date, but real-world studies suggest effectiveness in clinical practice. The Mayo Clinic (2022) reports nicotine replacement products are safe during pregnancy, and counselling, with NRT, is the most effective way to quit.

**Note:** HCPs should consider extending treatment during post-partum and post-breastfeeding / chestfeeding periods.

### Breastfeeding / Chestfeeding

- The benefits of NRT for breastfeeding / chestfeeding clients and their infants outweigh the risks of smoking and offer great potential benefit to the infant because of reduced exposure to harmful second-hand smoke <sup>12</sup> In addition, the amount of nicotine from NRT is less than that from cigarettes (Quit Victoria, 2021).
- First line treatment: Smoking / vaping cessation counselling about lifestyle and behavioural changes is recommended (CAMH, 2022).
- Second line treatment: short-acting NRT / patch(es) (CAMH, 2022) at the lowest effective dose may be considered to a maximum daily dose of 49 mg, along with an informed discussion of the benefits and risks of NRT, keeping in mind that any smoker is safer with NRT (Pipe 2012).

**Note:** If an increased dose is indicated, the Recipient Client will agree to consult with their HCP prior to the increase.

- Short-acting NRT should be avoided, if possible, for at least one hour before breastfeeding / chestfeeding; instead, it should be used, if needed, immediately afterwards (Nicorette, Oct 2019).

### Precautions

- Past history of adverse effects to NRT such as rash or serious cardiovascular symptoms, advise the client to consult with HCP.
- If there are concerns about the accuracy of the medical information provided, e.g. list of medications or physical and mental health status, advise the client to consult with HCP.
- Smoking / vaping reduces the effects of caffeine, so once the client quits smoking / vaping, the side effects from caffeine will likely increase:
  - **caffeine consumption should be reduced by 50%** (or more, during pregnancy) while quitting smoking to reduce the side effects of too much caffeine, e.g. palpitations, sweating, anxiety, insomnia, difficulty concentrating, impatience, restlessness.
  - it is not advisable to stop smoking and abruptly stop drinking all caffeinated beverages at the same time, as the symptoms of caffeine withdrawal—headache and fatigue—may be mistaken for nicotine withdrawal.
- The dosage of NRT may need to be reduced if the client experiences side effects of **excess nicotine** such as racing or irregular heartbeat or (listed in decreasing rate of frequency) headaches, insomnia, dizziness, depression, irritability, fatigue / weakness, nausea,

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<sup>11</sup> [Ottawa Model Smoking Cessation](#) (University of Ottawa Heart Institute), 2022, FAQs Pregnancy

<sup>12</sup> Quit 2021. Infants exposed to secondhand smoke have twice the risk of Sudden Infant Death Syndrome.

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drowsiness, stomach upset, diarrhea or anxiety. Some symptoms are similar to those from nicotine withdrawal.

- Nicotine overdose / poisoning is unlikely from smoking, but the liquid nicotine in e-cigarettes poses a danger to users and children. If it occurs, vomiting is the most common symptom. Other signs and symptoms are listed in Table 1:

**Table 1 - Signs and Symptoms of Nicotine Poisoning** <sup>13</sup>

<b>Early phase symptoms after ingestion include</b> <ul style="list-style-type: none"><li>• Nausea and vomiting. Vomiting occurs in more than 50% of people with symptoms</li><li>• Increased salivation</li><li>• Abdominal pain</li><li>• Pale skin color</li><li>• Sweating</li><li>• Increased blood pressure</li><li>• Increased heart rate</li><li>• Rapid, heavy breathing (hyperpnea)</li><li>• Loss of full control of body movements (ataxia), loss of balance, difficulty walking</li><li>• Tremors</li><li>• Headache, dizziness, mental confusion</li><li>• Disturbed hearing / vision</li><li>• Muscle twitching</li><li>• Seizures</li></ul>
<b>Late phase symptoms include</b> <ul style="list-style-type: none"><li>• Diarrhea</li><li>• Low blood pressure (hypotension) and slow heart rate (bradycardia)</li><li>• Abnormal heart rhythms</li><li>• Shock</li><li>• Coma</li><li>• Muscle weakness/paralysis</li><li>• Shallow breathing, difficulty breathing, respiratory failure</li></ul>

- According to the American Academy of Pediatrics, as little as one teaspoon of liquid nicotine can be fatal to a 26-pound child; even liquid nicotine spilled on the skin can be poisonous within minutes.<sup>14</sup>
- Liquid refills are sold in quantities of 10 mL to more than 30 mL (about two to six teaspoons) in a variety of nicotine strengths. The products come in flavors with attractive scents and inviting packaging. If you purchase e-cigarettes and nicotine refill products, store them out of reach of your children and pets.<sup>15</sup>

**Note:** Advise clients to avoid certain flavours shown to cause harm, e.g. cinnamon, cherry, menthol and products containing diacetyl (CAMH, 2022).

In addition, a number of the chemicals found in the aerosol produced from vaping devices have known toxicity (e.g. formaldehyde).<sup>16</sup>

<sup>13</sup> Cleveland Clinic, 2022

<sup>14</sup> Cleveland Clinic, 2022

<sup>15</sup> Cleveland Clinic, 2022

<sup>16</sup> PHO, 2021

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- Patch(es) should be removed immediately if the client shows signs of excess nicotine or overdosage as per Table 1, and they should seek immediate medical care by contacting a physician or local poison-control centre. The skin surface should be flushed with water and dried. Hands should be washed with plain water after applying (or removing) the patch.  
<sup>17</sup>Nicotine will continue to be delivered into the bloodstream for several hours after removal of the system because of a depot of nicotine in the skin.
- **Keep new or used short-acting NRT or long-acting NRT patches out of the reach of children and pets to avoid swallowing, chewing or sucking** since a small amount of nicotine can produce severe toxicity. The lethal dose of nicotine in a small child is approximately 10 to 15 mg.<sup>18</sup>
- Dispose of patches as directed, with sticky sides together. Each patch contains up to 114 mg of nicotine; approximately 60% of that amount is absorbed transdermally, which could leave up to 68 mg of available nicotine on the discarded patch.  
**Note:** If nicotine is ingested, contact poison control; activated charcoal should be given as soon as possible.
- Patch(es) should be removed at night if the client experiences vivid dreams, insomnia or a sleep disturbance. Day-only patches result in a reduction of the daily dose of NRT.
- Up to 50% of clients will have a local skin reaction to the patch; it is usually mild and self-limiting. Suggest rotating sites and using hydrocortisone cream to continue use of this method.
- Patch(es) should be removed prior to magnetic resonance imaging (MRI) testing as a burn may occur underneath the patch(es).
- Short-acting NRT gum should be avoided in clients with an active jaw disorder, such as temporomandibular joint disorder (TMJ), dentures or dental problems.
- Short-acting NRT should be reduced if it results in dyspepsia or irritation of the oral mucosa.
- Inhalers should be used with caution in clients with chronic throat diseases or asthma.  
**Note:** Vasoconstrictors can reduce the effects of nicotine nasal spray
- NRT lozenges and gum are sugar free.  
**Note:** Acidic beverages (e.g. coffee, juices, carbonated soft drinks) may inhibit buccal absorption of nicotine from gum, lozenge or orally inhaled NRT.<sup>19</sup>
- Clients allergic to soya should carefully check the ingredients in lozenges as some contain soy.<sup>20</sup>
- Transferred dependence on NRT is possible, but it is rare, less harmful, and easier to overcome than smoking dependence. The amount of nicotine in NRT products is low, and compared with cigarettes, it takes longer for the nicotine in NRT products to get to the brain and produce the rush that is a big part of nicotine dependence.<sup>21</sup>

### CONTRAINDICATIONS:

- Severe hypersensitivity or allergy to any components of the NRT.<sup>22</sup>

<sup>17</sup> HealthLinkBC, 2021

<sup>18</sup> Pfizer, Aug 2019

<sup>19</sup> American Society of Health-System Pharmacists, 2022

<sup>20</sup> Nicotine - Continuing education activity, 2022

<sup>21</sup> CAMH, 2018

<sup>22</sup> Components of specific NRTs are listed on the NRT Fact Sheets.

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- NRT is not contraindicated in pregnancy. The decision to use NRT should be made with a risk benefit assessment as early on in the pregnancy as possible with the aim of discontinuing use as soon as possible.<sup>23</sup>
- NRT is not contraindicated in lactation. Nicotine from smoking and NRT is found in breast milk; however, the amount of nicotine the infant is exposed to is relatively small and less hazardous than the second-hand smoke they would otherwise be exposed to.<sup>24</sup>

### CONSENT:

Informed consent will be obtained as per the current College of Nurses of Ontario (CNO) Practice Guidelines and the HPEPH Policy, Consent to Treatment.

### GUIDELINES FOR IMPLEMENTATION:

- Authorized Implementers should use their clinical judgment on a case-by-case basis to determine which tool is best suited to their client to assess dependence as per Appendix A and [CAMH List of Assessment Tools](#) and to determine the NRT treatment pathway based on level of dependency (CAMH, 2022).
- Initiate one-on-one or Facilitated Small Group Sessions to implement youth cessation strategies, if appropriate, as per procedure [Youth Centred Vaping / Tobacco Cessation](#).
- Follow the Vaping Dosing Guidelines as per Figure 1 and [E-cigarette Fact Sheet](#) <sup>25</sup>
  - Dosing is based on the client's level of nicotine dependence, which can be measured using [CAMH List of Assessment Tools](#) at the discretion of the Authorized Implementer
  - [Clients who are motivated to quit should use as much safe, FDA-approved NRT as needed to avoid smoking or vaping.](#)
  - Err on the side of a little extra NRT, so the client does not become discouraged; however, youth are more sensitive to NRT, especially the patch, so counsel them on side effects of too much NRT, e.g. nausea, and when to remove patch.
  - If client weighs under 45 kg (99 lbs) start with lowest level patch unless significant history to suggest a higher dose.  
**Note:** There is variation in nicotine content across e-cigarette products, and variation in use-patterns across individuals. For example, there is a marked difference in nicotine delivery among e-cigarette products that use salt-based nicotine solutions (e.g., JUUL) and other brands that use freebase nicotine. **Salt-based nicotine solutions deliver dramatically higher levels of nicotine** without creating harsh, unpalatable effects.
  - Work with each client to determine a starting dosage of NRT that is most likely to help them quit successfully.
  - If a lower dose is prescribed but doesn't seem to be working, assess adherence and move the client to a higher dose or consider a longer schedule for use and weaning/stepping down.
  - Work together to wean NRT over time, when the client feels that they are no longer at risk of returning to tobacco or nicotine use.
- Review the NRT Clinic Follow-up Assessment at each support group, smoking / vaping cessation class, clinic, meeting, phone interview, or home visit to reconfirm eligibility.
- Determine eligibility for and dispense Recipient Client's NRT supply, during, but not prior to, a regularly scheduled support group, smoking / vaping cessation class, clinic, meeting,

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<sup>23</sup> Nicorette, Oct 2019

<sup>24</sup> Nicorette, Oct 2019

<sup>25</sup> American Academy of Pediatrics, 2019

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phone interview or home visit, following the guidelines in the NRT Decision-Making Algorithm (Supporting Documents) and Guidelines for Titration of Combination System NRT – Appendix B, based on the client's individual needs and high trigger times. Currently, the maximum recommended dose of NRT from patches is 84 mg.<sup>26</sup>

- Advise the client
  - to follow specific directions for applying or taking NRT
  - to follow the NRT Fact Sheet and the Inhaler / Oral Spray Information, Set-Up and Directions Fact sheet
  - to understand that the word *inhaler* is misleading, since the “inhaler” NRT should **not** be inhaled into the lungs; instead it should be absorbed by the oral mucosa by means of shallow intakes / puffs of air, similar to the way one smokes a cigar
  - that about 50 % of the released nicotine in an inhaler cartridge is systemically available, so a 4 mg cartridge will deliver 2 mg during 20 minutes of frequent puffing at 20°Celsius. This is the equivalent to once hourly chewing of NRT 2 mg gum. The inhaler dose increases by almost 30% if the surrounding temperature is 30°C, and about 50% at 40°C.<sup>27</sup>
  - to contact HPEPH, consult their HCP, remove the patch(es) or stop using the gum, lozenges, inhaler or oral spray if they experience symptoms of **excess nicotine**, as per the NRT Fact Sheets
- **Note:** Youth may be more sensitive to the patch than to short-acting NRT so advise removal of patch if nauseated
- If, despite maximizing the daily patch dose to 84 mg NRT, the client is still experiencing symptoms of nicotine withdrawal, consult with the MOH or designate for reassessment of the maximum dose of NRT or advise the client to contact their HCP as another approach may be considered
  - common symptoms of **nicotine withdrawal** due to smoking / vaping cessation include irritability, frustration, anger, anxiety, difficulty concentrating, restlessness, trouble sleeping, increased appetite, headaches or a strong desire to smoke
  - withdrawal symptoms should resolve once the proper balance of NRT is achieved
- Support the client in gradually reducing their NRT daily dosage, for example
  - suggest that they use NRT for fewer hours each day
  - if they are using 2 mg lozenges / gum, suggest that they try 1 mg lozenges / gum
  - if they are using the inhaler cartridges, suggest they gradually reduce the number and length of their sessions
  - if they are using the Oral Spray, suggest they gradually reduce the number and frequency of their sprays
  - if they are wearing two patches and smoke the majority of their cigarettes per day (CPD) in the morning, suggest removing one patch during the afternoon
  - if they smoke the majority of their CPD after work, suggest applying the patch(es) near the end of the work day
  - if they are reluctant to reduce their NRT, suggest they reduce the amount of continuous nicotine by removing a patch and adding some short-acting NRT, if symptomatic; reassure them they can always return to their previous dose the following day, if necessary

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<sup>26</sup> CAMH, 2018. PFSD, 2018. Recommended by OMSC

<sup>27</sup> CAMH, 2018. PFSD, 2018. Recommended by OMSC pg 2



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### DOCUMENTATION AND COMMUNICATION:

- Dispensed NRT will be documented in EMRs and will include the client's name, date NRT was dispensed, type of NRT, amount—including number of boxes of lozenges, gum, inhaler or spray—and any adverse reactions.
- Lot number(s) and expiry date(s) will be documented on the dispensed NRT

### REVIEW AND QUALITY MONITORING GUIDELINES:

Review annually as per the Medical Directives Policy.

### ATTACHMENTS:

Appendix A – Hooked on Nicotine Checklist (HONC) and E-cigarette Dependence Scale (EDS)  
Appendix B - Guidelines for Titration of Combination System NRT

### SUPPORTING DOCUMENTS:

- [Agency-Wide Tobacco Use Screening Policy](#)
- Clinic / Prenatal Follow-up Assessment Form (EMR)
- Medical Notification of Initiation of NRT (EMR)
- Community Health Centre Smoking Cessation Fax Referral Form [fda://document/33333](#)
- Pharmacist Smoking Cessation Fax Referral Form [fda://document/33332](#)
- Physician Smoking Cessation Fax Referral Form [fda://document/33331](#)
- Regional Care Coordinators Smoking Cessation Fax Referral Form [fda://document/33334](#)
- [NRT Fact Sheet](#); [NRT Inhaler / Oral Spray Information, Set-Up and Directions Fact Sheet](#)
- NRT Decision-Making Algorithm\_HPEPH [fda://document/33021](#)
- [Youth Centred Vaping / Tobacco Cessation](#) (Healthy Schools Team - pending)

### RELATED LINKS:

[Best Start Resource Centre 2022 Key Messages for Ontario Prenatal Education Smoking](#)

[CAMH Centre for Addiction and Mental Health. List of Assessment Tools](#)

Centres for Disease Control and Prevention [CDC Pregnancy - Pregnant? Don't Smoke!](#) Feb 2020

[CDC Tips from Former Smokers 2022](#)

[Drug Interactions with Tobacco Smoke](#) 2019. University of California. Zevin, S. & Benowitz.N.L.

[HealthLinkBC 2021 Nicotine Patch - Transdermal](#)

[Lower Risk Nicotine Use Guidelines](#) (LRNUG) –CAMH: e-cigarettes and vaping  
[https://www.nicotinedependenceclinic.com/en/electronic-nicotine-delivery-systems-\(ends\)](https://www.nicotinedependenceclinic.com/en/electronic-nicotine-delivery-systems-(ends))

The Lower-Risk Nicotine Use Guidelines (LRNUG) present the current state of evidence on tobacco/nicotine products, highlighting modifiable behaviours that can help reduce the negative health outcomes associated with tobacco/nicotine product use. They have been designed to guide people who use, or are thinking about using nicotine, on how to lower the risk associated with various nicotine products. The products covered in the Guidelines include heated tobacco products, smokeless tobacco (chew and snus), waterpipes, and e-cigarettes/vapes.

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[Lung Health Foundation News Release](#) July 8, 2021

Helping young Canadians get their health back on track after more than a year of COVID-19 pandemic lockdown

[Nicotine – Continuing Education Activity](#), July 2022

[PHO Youth Health Trends in Ontario: Vaping Infographic](#), 2021

[RNAO International Affairs & Best Practice Guidelines. Fact Sheet](#). Need Help to Quit or Reduce Your Tobacco Use? Feb 2018

[Smoke Free Curious](#) Quitting is Possible - Heart & Stroke / Canadian Cancer Society

[Vaping Cessation Guidance Resource](#) –CAMH Feb 2022

This resource is meant to guide healthcare providers to support their clients who want to quit vaping (i.e., people seeking treatment who use e-cigarettes or who use both e-cigarettes and tobacco).

This resource can be used for both adults and youth (ages 15 to 24).

- Severity and Dependence
- Approaches
- Treatment Approaches
- Dual Use (people who use both tobacco and electronic cigarettes)
- Pharmacotherapy Strategies
- Behavioural Therapy Strategies
- Harm Reduction (related to vaping device)
- Relapse Prevention

### REFERENCES

American Academy of Family Physicians (AAFP). (2019). Drug Interactions with Tobacco Smoke. Available from: [https://www.aafp.org/dam/AAFP/documents/patient\\_care/tobacco/drug-interactions.pdf](https://www.aafp.org/dam/AAFP/documents/patient_care/tobacco/drug-interactions.pdf)

American Academy of Pediatrics. (2019). Fact Sheets - E-cigarettes. Available from: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Richmond-Center/Pages/Electronic-Nicotine-Delivery-Systems.aspx>

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## HASTINGS PRINCE EDWARD PUBLIC HEALTH MEDICAL DIRECTIVES

<b>Section:</b>	TOBACCO CONTROL
<b>Directive Title:</b>	<b>Determine Eligibility for / Dispense NRT</b>

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**HASTINGS PRINCE EDWARD PUBLIC HEALTH  
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<b>Section:</b>	TOBACCO CONTROL
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Ethan Toumishey, MD, MPH, CCFP, FRCPC  
Medical Officer of Health and Chief Executive Officer  
Hastings Prince Edward Public Health

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Date

Replaces: MD-008  
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# HASTINGS PRINCE EDWARD PUBLIC HEALTH MEDICAL DIRECTIVES

**Section:** TOBACCO CONTROL  
**Directive Title:** Determine Eligibility for / Dispense NRT

## Appendix A

**The Hooked on Nicotine Checklist (HONC)** is scored by tallying the number of Yes responses, from 0-10. Any score greater than zero indicates that the youth has lost some autonomy over their smoking / vaping. This indicates that nicotine addiction has begun. (American Academy of Pediatrics - Updated Nov 2019)

<b>HONC—Smoking</b>	YES	NO
1) Have you ever tried to quit, but couldn't?		
2) Do you smoke now because it is really hard to quit?		
3) Have you ever felt like you were addicted to tobacco?		
4) Do you ever have strong cravings to smoke?		
5) Have you ever felt like you really needed a cigarette?		
6) Is it hard to keep from smoking in places where you are not supposed to, like school?		

When you tried to stop smoking... (or, when you haven't used tobacco for a while...)

7) did you find it hard to concentrate because you couldn't smoke?		
8) did you feel more irritable because you couldn't smoke?		
9) did you feel a strong need or urge to smoke?		
10) did you feel nervous, restless or anxious because you couldn't smoke?		

<b>HONC—Vaping</b>	YES	NO
1) Have you ever tried to stop vaping, but couldn't?		
2) Do you vape now because it is really hard to quit?		
3) Have you ever felt like you were addicted to vaping?		
4) Do you ever have strong cravings to vape?		
5) Have you ever felt like you really needed to vape?		
6) Is it hard to keep from vaping in places where you are not supposed to, like school?		

When you tried to stop vaping... (or, when you haven't vaped for a while...)

7) did you find it hard to concentrate because you couldn't vape?		
8) did you feel more irritable because you couldn't vape?		
9) did you feel a strong need or urge to vape?		
10) did you feel nervous, restless or anxious because you couldn't vape?		

### **Four-Item E-cigarette Dependence Scale for Assessing Adolescent E-cigarette Nicotine Dependence**

To score the measure, take the mean of the item scores.

Higher scores indicate higher levels of dependence. (Abridged)

<b>Instructions:</b> Please respond to each question marking one box per row.	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Almost always (4)
I find myself reaching for my e-cigarette without thinking about it.					
I drop everything to go out and get e-cigarettes or e-juice.					
I vape more before going into a situation where vaping is not allowed.					
When I haven't been able to vape for a few hours, the craving gets intolerable.			-		
<b>Total:</b>					

# HASTINGS PRINCE EDWARD PUBLIC HEALTH MEDICAL DIRECTIVES

**Section:** TOBACCO CONTROL  
**Directive Title:** Determine Eligibility for / Dispense NRT

## Appendix B - Guidelines for Titration of Combination System NRT

First visit / meeting		
Start by replacing each cigarette with 1 mg NRT from patch plus a maximum of 20 mg short-acting If using more than 20 mg short-acting daily (e.g. 10 cartridges), consider additional 7 mg patch		
<b>&lt;10 cigarettes per day (CPD)</b> <b>Vaping &lt; 6 mg / day</b> <b>Light smoker / vaper</b> <ul style="list-style-type: none"> <li>Offer lifestyle counselling &amp; behavioural interventions</li> <li>Start with 7* -14 mg patch and / or short-acting NRT, as needed, to <b>maximum</b> of 20 mg (may combine types)               <ul style="list-style-type: none"> <li>10 pieces of gum or lozenges per day (1 or 2 mg each); /</li> <li>10 inhaler cartridges (4 mg each but only release 2 mg each); /</li> <li>1 oral spray per hour (1 mg each) during the day</li> </ul> </li> </ul>	<b>10 – 29 CPD</b> <b>Vaping &lt; 14 mg / day</b> <b>Moderate smoker / vaper</b> <ul style="list-style-type: none"> <li>14* - 21 mg patch along with lifestyle counselling / behavioural interventions</li> <li>Consider adding short-acting NRT, as needed, to a <b>maximum</b> of 20 mg (may combine types)               <ul style="list-style-type: none"> <li>10 pieces of gum or lozenges per day (1 or 2 mg each); /</li> <li>10 inhaler cartridges (4 mg each but only release 2 mg); /</li> <li>20 oral sprays (1 mg each) during the day</li> </ul> </li> </ul>	<b>30+ CPD</b> <b>Vaping &gt; 24 mg / day</b> <b>Heavy smoker / vaper</b> <ul style="list-style-type: none"> <li>21* - 28 mg patch (21 + 7); or 35 (21 + 14); or 42 (21 x 2); or 63 (21 x 3); or (84 (21 x 4) along with lifestyle counselling / behavioural interventions</li> <li>Consider adding short-acting NRT, as needed, to a <b>maximum</b> of 20 mg               <ul style="list-style-type: none"> <li>10 pieces of gum or lozenges per day (1 or 2 mg each); /</li> <li>10 inhaler cartridges (4 mg each but only release 2 mg each); /</li> <li>20 oral sprays (1 mg each) during the day</li> </ul> </li> </ul>
<p><i>*If client weighs less than 45 kg (99 lb), start at lowest recommended dose for patch and adjust, as necessary</i></p> <p><b>Pregnant or Breastfeeding / Chestfeeding (PG/BF/CF) Clients</b></p> <ul style="list-style-type: none"> <li>First-line treatment: lifestyle counselling and behavioural interventions</li> <li>Second-line treatment: NRT - short-acting and / or day-only patch(es) up to 49 mg, <b>as indicated above</b>, in lowest effective dose, since research shows that medicinal NRT safer than smoking/vaping</li> </ul>		

Modelled after University of Ottawa Heart Institute

Adapted from Centre for Addiction and Mental Health

### Subsequent visits / meetings (every 1 to 2 weeks)

- NRT Follow-up Assessment and NRT Decision-Making Algorithm
- If still smoking / vaping, adjust NRT daily dose:
  - 1 – 5 CPD - Add 7 mg patch to current dose plus short-acting NRT
  - 6 – 9 CPD - Add 14 mg by patch to current dose plus short-acting NRT
  - 10+ CPD - Add 1 or more 21 mg patch(es) to current dose plus short-acting NRT

**NRT maximum daily dose from patch is 84 mg (21 x 4) plus short acting\***
- If client still has withdrawal symptoms, despite maximum dose of **84+ mg**, consult MOH or designate, or advise client to consult HCP to reassess
- When client is ready to reduce NRT, reduce by 7 mg patch every 1 to 2 weeks until off patches, if possible; then reduce short-acting NRT until no longer needed

#### PG/ BF/CF Clients

- Continue **as indicated above** (if appropriate patch dose will exceed 42 mg, consult HCP)
- NRT should be discontinued if PG/BF/CF client does not reduce # CPD / vapes