

**Provincial Clinical Knowledge Topic  
Tobacco Reduction, Adult – Inpatient  
V 1.0**

### Document History

Version	Date	Description of Revision	Completed By / Revised By
1.0	Sept. 2017	Final Document completed	Dr. Brent Friesen

## Important Information Before you Begin

The recommendations contained in this knowledge topic have been provincially adjudicated and are based on best practice and available evidence. Clinicians applying these recommendations should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care. This knowledge topic will be reviewed periodically and updated as best practice evidence and practice change.

The information in this topic strives to adhere to Institute for Safe Medication Practices (ISMP) safety standards and align with Quality and Safety initiatives and accreditation requirements such as the Required Organizational Practices. Some examples of these initiatives or groups are: Health Quality Council Alberta (HQCA), Choosing Wisely campaign, Safer Healthcare Now campaign etc.

## Rationale

While tobacco use has declined in Canada's general population over the past few decades, the prevalence of tobacco use among Albertans remains at 15.5%, higher than in other jurisdictions such as British Columbia (10%), Ontario (11%)<sup>3</sup>, Prince Edward Island (12%), New Brunswick (14%), Quebec (14%) and Manitoba (15%). The prevalence of tobacco use in Alberta also varies by zone with the highest prevalence seen in the North Zone at 21% and the lowest in Calgary zone at 12%.<sup>4</sup>

A report by the Canadian Centre on Substance Abuse (CCSA) reported an estimated total of 37,209 Canadians die from tobacco use in a single year, with 8% of those deaths occurring in Alberta.<sup>5</sup> Tobacco related deaths account for about 17% of all Canadian deaths; a potential of 515,607 years of life lost. Cancer was the leading cause of death (17,679 deaths) followed by cardiovascular disease (10,853) and respiratory disease (8,282). 'Vulnerable populations carry a disproportionate burden of tobacco use and dependence. This includes youth, low income adults, those with mental illness or substance use disorders, Aboriginal Peoples, prison inmates and homeless individuals'.<sup>34</sup>

When looking at patients admitted to hospitals in Canada, the prevalence of smoking is said to further increase to 20%<sup>6</sup>. The odds of hospitalization for current daily users of tobacco, even when controlled for variables such as level of education and income, are 80% higher than for those who never smoked daily. The CCSA reported that tobacco related illness accounted for 2,210,155 days of acute care in hospital, representing over 10% of all days spent in Canadian acute care hospitals.<sup>5</sup> This is also attributable to the mean number of days spent in hospital being significantly higher for current daily users of tobacco, with an average number of excess hospital days ranging from 1.5 days at ages 45-54 to 6.0 days at ages 65-74.<sup>7</sup>

An economic evaluation of hospital-initiated smoking intervention in Ontario shows that providing care through an integrated model of smoking cessation to 15,326 patients who smoke, would generate 4,689 new quits.<sup>8</sup> This translated to a cost-effectiveness ratio of \$1,386 per quality adjusted life-year gained by each new quit. The estimated lifetime value gained by reducing the risk of premature mortality in the average former smoker (usually determined by abstinence for one year) is reported at approximately \$413,000.<sup>9</sup> In turn, the healthcare cost saving realized at the time an individual quits smoking is estimated to be \$8,533.<sup>9</sup> Implementing an in-hospital pathway contributes to reductions in health care costs and improved health system functioning through reducing avoidable readmissions. The Ottawa Model has found a 6.1% absolute risk reduction in readmissions and significant reductions in mortality at one year. A 6.1% absolute risk reduction in all cause readmissions among those who smoke within 30 days in AHS translates to 361 avoided readmissions per month. The average cost per hospital stay in Alberta 2016/17 was \$7024 so this would mean an estimated \$ 2,526,421 health care costs saved per month.<sup>6</sup>

In summary, treatment or admission to a health care facility provides an important opportunity to support temporary and long term tobacco cessation, thus realizing a significant potential benefit to healthcare costs in Alberta through improved public health. Canadian best practice guidelines recommend that healthcare professionals use these opportunities to perform a brief tobacco intervention with every client who is identified as a person who uses tobacco.<sup>2</sup>

## Goals of Management

To provide a framework for care providers to assist patients in adhering to the Tobacco and Smoke Free Environments Level 1 policy by abstaining from tobacco use during their visit to an Alberta Health Services (AHS) facility and implement tobacco reduction or cessation strategies and techniques in their daily practice. The goals of management will ensure:

- Patients are aware of the Tobacco and Smoke Free Environment policy
- Tobacco use status of every patient is identified
- Withdrawal comfort measures such as pharmacological therapies are offered to all tobacco users
- Behavioral /psychological aspects of tobacco, nicotine addiction are treated with advice and counselling

The Tobacco Reduction Clinical Knowledge Topic will also inform the development of a dashboard of indicators for use to establish, capture and report tobacco treatment performance data to inform patient care and quality improvement across the province.

### Benefits of Tobacco Cessation on Health Care and Recovery of Patients

1. Improved wound and bone healing
2. Reduced risk of wound infections
3. Decreased risk of peripheral vascular disease complications, ischemic heart disease and repeated heart attacks
4. Decreased risk of chronic respiratory problems
5. Decreased need of postoperative intensive care
6. Improved surgical results
7. Decreased risk for secondary primary tumors in patients with lung, head and neck cancer
8. Decreased hospital length of stay

Information for consideration of special populations and those in specific care settings can be found in the Tobacco Free Futures Guidelines:

- *Specific Populations:*
  - [Addiction and Mental Health](#)
  - [Reproductive Years](#)
  - [Adults with Cancer](#)
  - [Youth and Family](#)
- *Specific Care Settings:*
  - [Surgical Care](#)
  - [Emergency and Urgent Care](#)
  - [Home Care](#)
  - [Public Health](#)
  - [Transitional and Continuing Care](#)

## Clinical Decision Support

### Reminder:

- Identification of patients who have used tobacco /tobacco-like products within the last 30 days for health clinicians for provision of the AHS Tobacco and Smoke Free Environments Policy and harm reduction measures.  
Rationale: To appropriately assess for potential nicotine withdrawal and promote tobacco reduction and harm reduction purposes. Required field for registration/admission or intake to ask re tobacco usage on admission/intake/registration – All patients are asked 'have you used tobacco/tobacco-like products in the last 30 days?'.
  - The response is entered into the ADT system to flag clinicians of tobacco/tobacco-like product use.

### Alerts

- **Tobacco/Tobacco Like Product Use Alert:**
  - Trigger
    - Clinicians are alerted to patients who provide a positive response to having used tobacco or tobacco/like products in the last 30 days such as the allergy alerts in clinical information systems

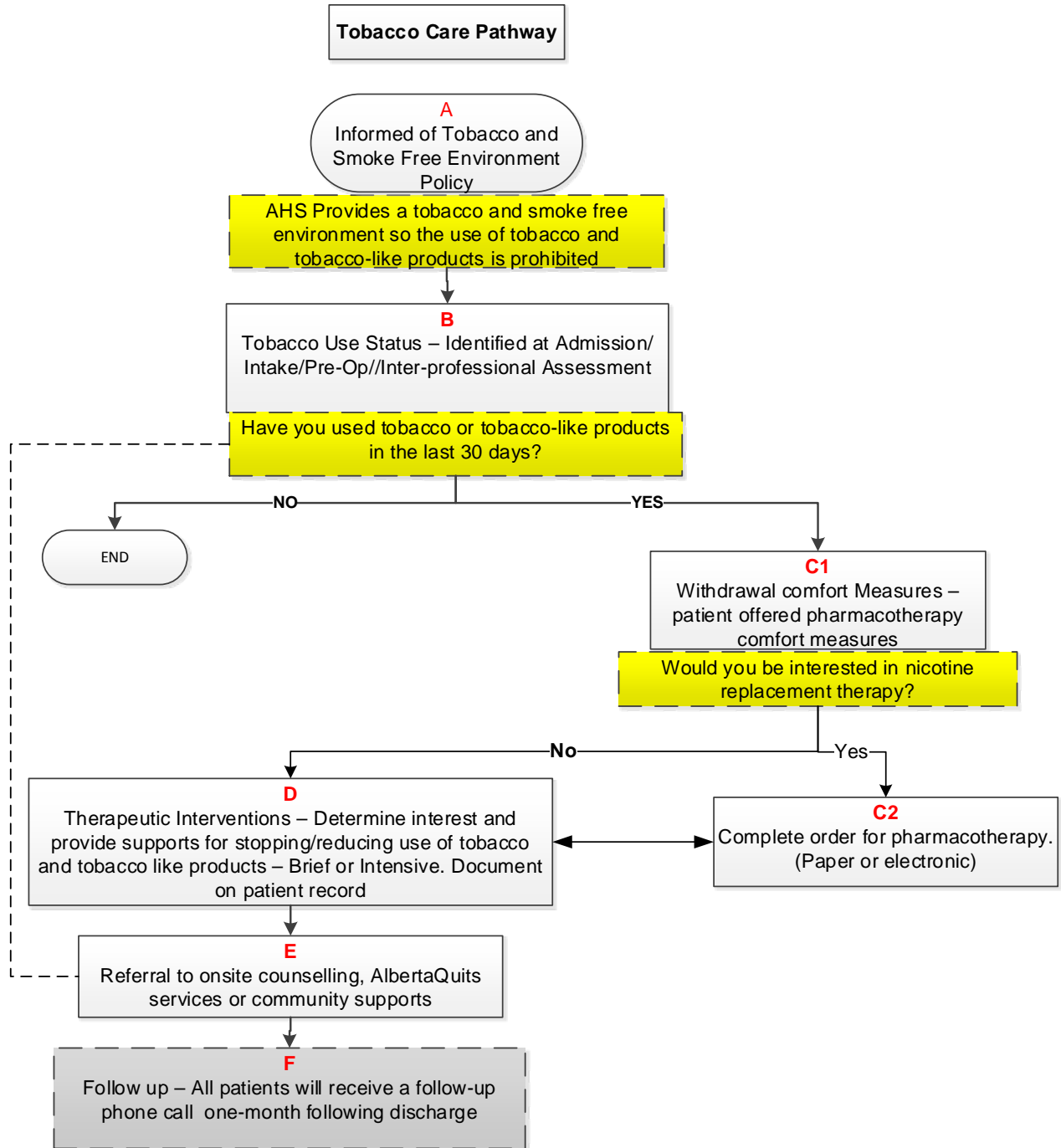
### Assist

- An automatic referral is generated to AlbertaQuits for all patients with a positive response to patient's having used tobacco or tobacco/like products in the last 30 days

## Decision Making

### Tobacco Care Pathway

**Figure 1.** Tobacco Care Pathway



## **A. Tobacco and Smoke Free Environments Policy (TSFE)**

Alberta Health Services is committed to providing a safe and healthy environment for our patients, visitors, staff, physicians and volunteers. As part of this commitment, AHS has a Tobacco and Smoke Free Environments Policy which prohibits the use of tobacco and tobacco-like products on all AHS properties throughout Alberta. Exposure to others using tobacco or tobacco-like products can be potentially harmful to a patient's recovery. Tobacco free policies not only prevent harmful exposure, they contribute to tobacco cessation and quit attempts.

As part of the patient care pathway, patients will be informed of the TSFE policy - tobacco and tobacco-like product use is not permitted on property so they, their family members and visitors will need to go off property if they choose to use tobacco/tobacco-like products.

It is of note that smoking tobacco or tobacco-like products poses a significant safety risk to patients who are on continuous oxygen therapy. While provincial guidelines on O<sub>2</sub> Therapy and Smoking Safety are in development, it is recommended that patients are not permitted to smoke while in need of continuous oxygen therapy, on or off property.

In addition to policy signage at entryways, patients and visitors may be provided with a policy information postcard upon admission/intake/registration.

### **AHS Tobacco and Smoke Free Environments Policy**

## **B. Tobacco/ Tobacco-like Product Use Status**

Health care professionals and health care delivery systems have unparalleled access to those who use tobacco products. In acute care settings tobacco use is a key indicator of health risk and is directly linked to many inpatient health outcomes such as reason for admission, length of stay, success of treatment, recovery time, etc. It has been proposed that the devastating health impact of tobacco use warrants an institutional response of expanding vital signs to include asking about a patient's tobacco use.<sup>10</sup> Consistent with this, the Canadian Action Network-Advancement Dissemination Adoption Practice-informed Tobacco Treatment (CAN-ADAPTT) Guidelines<sup>2</sup> recommend that all hospitals should have systems in place to identify all people who smoke/use tobacco. This care pathway has been expanded to include all tobacco and tobacco-like products due to the potential health risks and higher than average use of tobacco products like spit tobacco in Alberta.

In order to systematically identify all patients who use tobacco, all AHS patients will be asked 'Have you used tobacco or tobacco-like products within the last 30 days?' Ideally tobacco use status patients will be identified at admission/intake/ registration or on an Inter-professional Assessment and this will flag a care need in the chart/electronic client record for subsequent steps in the pathway. Patients who are not able to respond at the time of intake/registration should be asked if or when they can appropriately respond.

### **C1. Tobacco/ Tobacco-like Product Use Withdrawal Comfort Measures**

As Alberta Health Services patients are not permitted to use tobacco or tobacco-like products (like e-cigarettes or spit tobacco) on AHS property, patients may experience uncomfortable and unnecessary nicotine withdrawal during their inpatient stay. Offering nicotine replacement therapy (NRT) pharmacotherapy to prevent agitation and other withdrawal symptoms allow patients to more fully focus on their health issues and healing/recovery. It also provides patients with the experience



of using pharmacotherapy instead of tobacco, this has shown to increase their likelihood of continuing or subsequently using it after discharge.<sup>11</sup>

Within the Emergency setting, patients who have identified tobacco use will be offered withdrawal comfort measures by the triage nurse and provided to the patient based on the pharmacotherapy guideline.

Upon hospital admission, the nurse, or other health care provider, who completes the bedside assessment will ask patients who have identified tobacco use, if they would be interested in nicotine replacement therapy/pharmacotherapy to keep them comfortable during their stay. The type and amount of tobacco use will be determined by the health care provider who has offered the patient nicotine replacement therapy (NRT) for the purpose of managing their withdrawal and harm reduction. This will aid the health care provider to determine the level of tobacco dependence and ascertain the appropriate amount of NRT to provide according to the recommendations built into the Nicotine Replacement Order Set.

**Note:** At this point, pharmacotherapy is offered for the purpose of withdrawal comfort, not cessation. Interest in continued use of pharmacotherapy for stopping tobacco use longer term will be explored during therapeutic intervention.

#### Withdrawal Comfort Measures & Tobacco-like Product Use

Tobacco-like products present a few challenges such as determining the concentration of nicotine in the e-liquid as patients may not have the bottles with labels in their possession, and determination of the amount of consumption given differing methods of consumption in each vaping 'session'. Therefore, where the patient identifies use of tobacco-like products such as electronic cigarettes, specific dosing recommendations for NRT are not available, at this time. In this circumstance, low-dose NRT should be provided and the patient closely monitored for withdrawal symptoms to titrate the NRT dose accordingly. Regular or heavy users of cannabis may benefit from provision of nabilone to reduce withdrawal symptoms. Refer to [Marijuana for Medical Purposes Policy #](#)

#### **C2. Pharmacotherapy Comfort Measures**

Refer to the pharmacotherapy information section and also the Nicotine Replacement therapy order set for further information regarding withdrawal and appropriate nicotine replacement dosages and methods.

#### **D. Tobacco/Tobacco-like Product Use Therapeutic Intervention**

Treatment or admission to a health care facility provides an important opportunity to support temporary and long-term cessation. The majority (63%) of people who smoke report a desire to quit, and half of people who smoke/use tobacco will have made a quit attempt in the last 12 months.<sup>12</sup> Patients who are admitted for treatment of smoking related illness are often even more motivated to overcome their addiction. There is a strong dose-response relationship between session length and/or number of sessions, and the success of the treatment. Evidence reveals that even a brief prompt with limited counselling can lead to a quit rate of 3% to 13%, while more intensive intervention that includes follow-up sessions can lead to a 13% to 40% quit rate in Canada.<sup>1</sup>

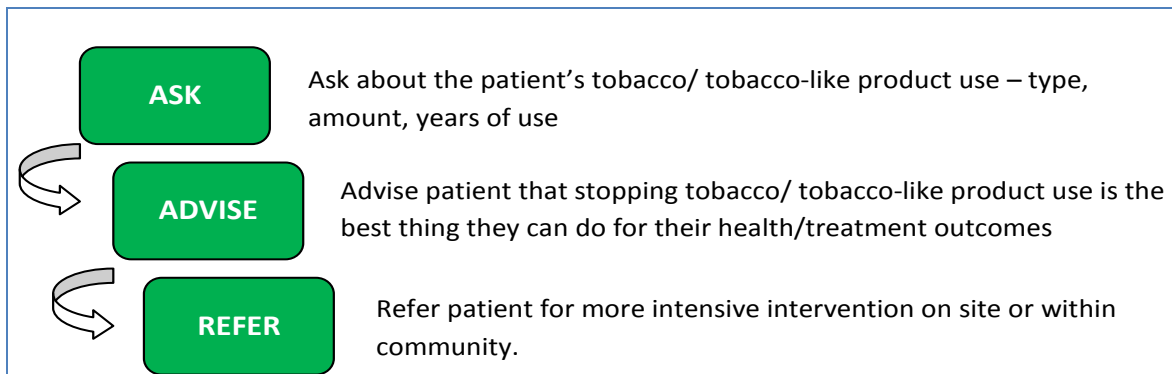
Therefore, whenever possible, more intensive interventions should be used to improve cessation rates. Therapeutic intervention for tobacco use can be provided by a number of health care professionals in the acute setting such as Physician, Nurse, Respiratory Therapist, Pharmacist, etc. Health care professionals who are in the position to spend additional time and see their patient four or more times are able to offer intensive intervention.

Provision of therapeutic intervention for tobacco/tobacco-like product use is an important performance/ accountability measure for Alberta Health Services, therefore this indicator will be built into AHS' Clinical Information System.

Depending on time and scope of practice, the following interventions can be provided:

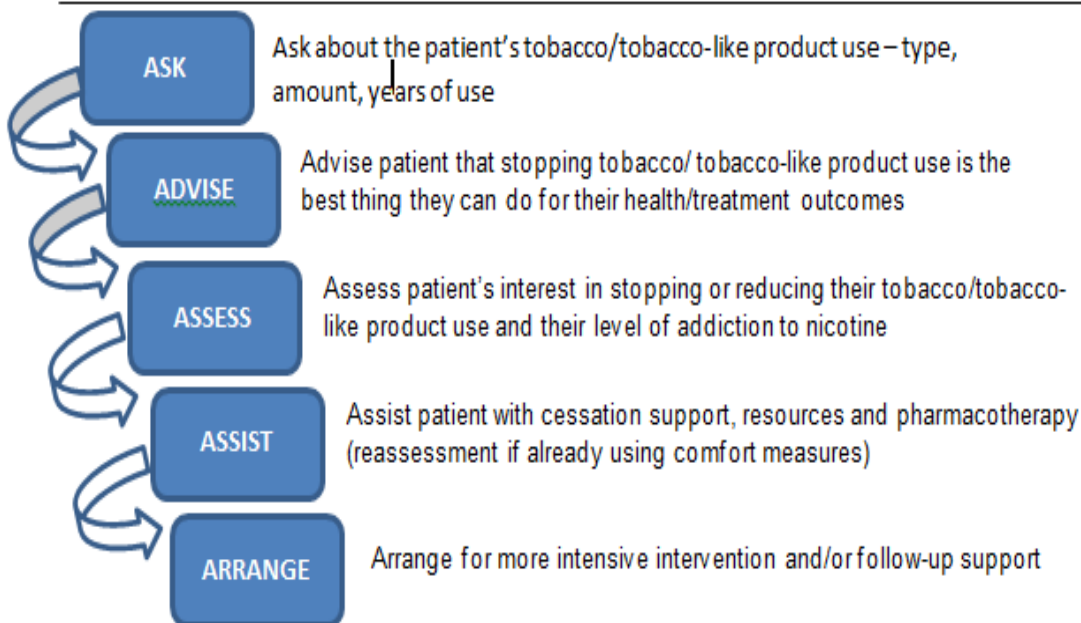
- **Option One** – for areas with limited time to focus on Tobacco Reduction combined with offering nicotine replacement therapy e.g. Emergency

**Figure 2** AAR – Abbreviated Brief Tobacco Intervention (under 2 minutes)



- **Option Two** – for areas with more focused time and access to resources combined with offering Nicotine replacement therapy

**Figure 3** 5 A's – Best Practice Brief Tobacco Intervention (5-7 minutes)



## Therapeutic Intervention Forms, Training and Tools

**Table 1** Therapeutic Intervention Forms, Training and Tools

<i>Brief Tobacco Intervention</i>	<ul style="list-style-type: none"> <li>• <a href="#">Brief Tobacco Intervention Form</a> #18251</li> <li>• AAR Training Video</li> <li>• 5 A's Brief Intervention Training <a href="#">mylearninglink</a></li> </ul>
<i>Intensive Tobacco Intervention</i>	<ul style="list-style-type: none"> <li>• <a href="#">Intensive Tobacco Intervention Form</a> # 18252</li> <li>• Intensive Tobacco Intervention Training <a href="#">mylearninglink</a></li> </ul>

Additional resources are available from the Tobacco Cessation Counsellor's Toolkit to assist with assessment and interventions for tobacco and tobacco-like products

- Tobacco Assessment Tools/Scales:
  - [Assessing nicotine Withdrawal](#)
  - [Hooked on nicotine Checklist](#)
  - [Fagerstrom Test for nicotine Dependence \(Adults\)](#)
  - [Patient Health Questionnaire PHQ-2 Overview](#)
  - [Patient Health Questionnaire PHQ-9](#)
  - [Tobacco Use as a Vital Sign](#)
  - [Heaviness of Smoking Scale](#)
  - [Autonomy Over Tobacco Scale](#)
  - [Readiness Ruler](#)
  - [Quit Plan](#)
  - [Tobacco Tracker](#)
  - [Tobacco Use as a Vital Sign Patient Labels](#)
  - [Decision to Change](#)
  - [Tobacco Change Plan](#)

### Therapeutic Intervention and Tobacco-Like Products

Health Canada advises not to purchase or use electronic smoking products, as these products may pose health risks and have not been fully evaluated for safety, quality and efficacy by Health Canada. Electronic smoking products have not been approved as smoking cessation aids by Health Canada. Little is known about the short or long-term effects of these products. In the absence of formal intervention approaches for the reduction or cessation of tobacco-like product use, intervention should take a harm reduction approach by advising users of AHS and Health Canada's current position. Federal regulations surrounding tobacco-like products are being developed. Formal intervention approaches to tobacco-like product use cessation will be developed pending the federal regulations becoming available.

Cannabis is not a benign drug; there are risks and harms associated with its use. Patients should be advised of the risks and any potential effects to their health status/conditions and offered support to abstain or reduce risk. Regular or heavy users of cannabis may benefit from provision of nabilone to reduce withdrawal symptoms. Refer to [Marijuana for Medical Purposes Policy #](#) Cannabis that is smoked or vaporized is defined as a tobacco-like product and Health Canada recommends that others should not be exposed to second-hand cannabis smoke. 16% of cannabis users smoke a mixture of tobacco and cannabis. These users may also benefit from low dose NRT therapy. The protection provided by the AHS Tobacco and Smoke-Free Environments policy

prohibiting the use of tobacco-like products extends to the use of marijuana that is smoked or vaporized.

#### **E. Tobacco/ Tobacco-like Product Use Referral**

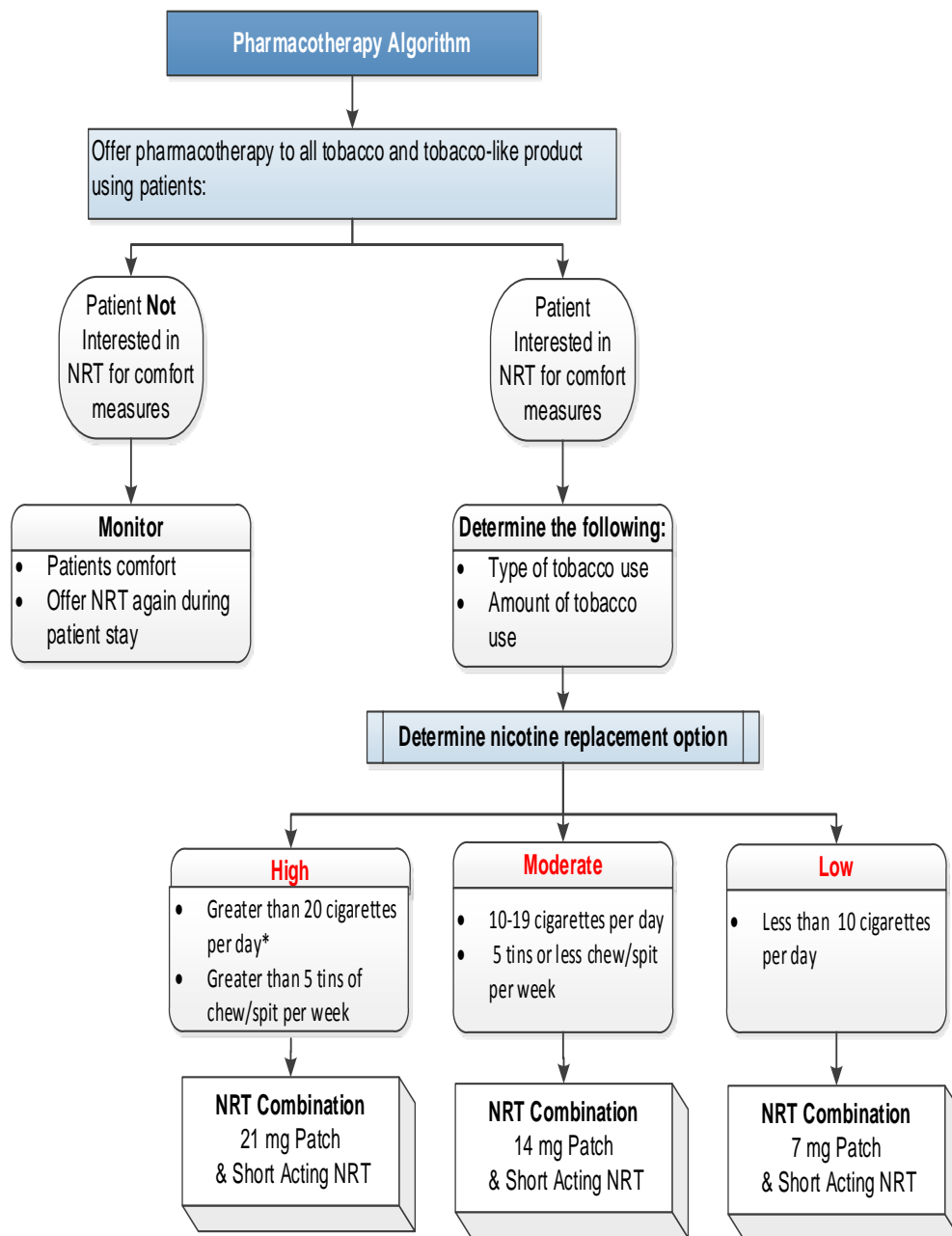
Referral is an important part of the patient care pathway in that it links patients to more intensive or follow-up cessation supports and services. Referrals can be made to an onsite tobacco reduction counsellor or clinic, AlbertaQuits services (Helpline/Online/Quitcore), family physician/primary health clinic, community Pharmacist providing cessation counselling or Tobacco Reduction/Addiction Counsellor through community Addiction and Mental Health Services. Whenever possible a referral should be a direct/active referral, as opposed to just providing information, to increase likelihood of patient follow-through. ([Appendix A](#))

Referrals can be made by fax or encrypted email using the Tobacco/ Tobacco-like Product Use Referral form # 09973 [AlbertaQuits Help Line Referral Form #09973.pdf](#) . Provision of a referral for further and follow-up tobacco/ tobacco-like product support is an important performance/accountability measure for Alberta Health Services.

#### **F. Tobacco/ Tobacco-like Product Use Status – Post Discharge**

In order to evaluate the Tobacco/ Tobacco-like Product withdrawal comfort measures and cessation support patient care pathway and measure tobacco/ tobacco-like product related performance/accountability measures, patients who have identified tobacco use while inpatient will be contacted through an interactive voice response system and asked questions regarding the tobacco/ tobacco-like product related care they received during their hospital stay as well as their current tobacco/ tobacco-like product use status. Tobacco/ tobacco-like product related performance/ accountability measures will be captured for provincial/site/program reporting and may be built into a reporting dashboard.

**Figure 4** Pharmacotherapy Algorithm <sup>13</sup>



\* For those who smoke greater than 25 cigarettes per day a consultation with a Pharmacist is recommended to assess NRT therapy

## Combination Pharmacotherapy for Tobacco Reduction

**Table 2 Pharmacotherapy for Tobacco Reduction<sup>13</sup>**

<b>NRT Combination Pharmacotherapy Options*</b>	
<ul style="list-style-type: none"> <li>Greater than 19 cigarettes per day</li> </ul>	<ul style="list-style-type: none"> <li>nicotine patch 21 mg /day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>nicotine gum or lozenge 2 mg or 4 mg based on time to first cigarette every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul>
<ul style="list-style-type: none"> <li>10-19 cigarettes per day</li> </ul>	<ul style="list-style-type: none"> <li>nicotine patch 14 mg/day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>nicotine gum or lozenge 2 mg or 4 mg based on time to first cigarette every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul>
<ul style="list-style-type: none"> <li>Less than 10 cigarettes per day</li> </ul>	<ul style="list-style-type: none"> <li>nicotine patch 7 mg/day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>nicotine gum or lozenge 2 mg or 4 mg based on time to first cigarette every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul>

\* For people who smoke more than 25 cigarettes per day they may benefit from combining patch strengths so that they receive approximately 1 mg of nicotine per each cigarette they consume. A consult with a Pharmacist is recommended. <sup>13</sup>

## Combination Pharmacotherapy for Smokeless Tobacco Reduction

**Table 3 Pharmacotherapy for Smokeless Tobacco Reduction<sup>13</sup>**

<b>NRT Smokeless Tobacco Pharmacotherapy Options</b>	
<ul style="list-style-type: none"> <li>More than 5 tins per week</li> </ul>	<ul style="list-style-type: none"> <li>nicotine patch 21 mg/day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>nicotine gum or lozenge 2 mg or 4 mg pieces (maximum 24 pieces/day) every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul>

- 
- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• three – five tins per week</li> </ul> | <ul style="list-style-type: none"> <li>• nicotine patch 21 mg/day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ nicotine gum or lozenge 2 mg or 4 mg pieces (maximum 24 pieces/day) every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>○ nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>○ nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul> |
|--|--|
- 
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• two or less tins per week</li> </ul> | <ul style="list-style-type: none"> <li>• nicotine patch 14 mg /day</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ nicotine gum or lozenge 2 mg or 4 mg pieces (maximum 24 pieces/day) every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>○ nicotine inhaler – use one 4 mg cartridge every 1-2 hours as needed</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>○ nicotine mouth spray – use one 1 mg spray (maximum 4 sprays/hour) every 1-2 hours as needed</li> </ul> |
|---|---|
- 

Titration once the initial dose of NRT medication is optimized

- Use starting dose for 6 weeks and reduce dose by 7 mg every 2 weeks thereafter. If strong cravings return when attempting downward titration, consider remaining at the higher dose for longer Patch can be used for 10-12 weeks or longer if necessary.
- The short acting NRT selected to be used with the NRT patch may be used for longer than 12 weeks as needed to manage cravings.

For Addiction and Mental Health patients a consult with Pharmacy may be recommended to ensure adequate response to the NRT. Some patients may require a higher dosage.

For further options for pharmacotherapy refer to the AlbertaQuits Tobacco algorithm [https://www.albertaquits.ca/Tobacco\\_Algorithm.pdf](https://www.albertaquits.ca/Tobacco_Algorithm.pdf)

### Additional Pharmacotherapy Resources

- [nicotine Replacement Gum](#)
- [nicotine Replacement Patch](#)
- [nicotine Replacement Lozenge](#)
- [nicotine Replacement Mouth Spray](#)
- [nicotine Replacement Inhaler](#)
- [buPROPion SR](#)
- [varenicline](#)
- [Summary of Cessation Pharmacology](#)

## Order Set: Nicotine Replacement Therapy – Inpatient

### Order Set Components

**Order Set Key Words:** nicotine, tobacco, cigarettes, NRT, patch, buPROPion, varenicline, smokeless, smoking cessation

#### Monitoring

- Monitor for signs of nicotine toxicity, including headache, increased heart rate, dizziness, confusion, agitation, restlessness, lethargy, hypersalivation, nausea
- Notify the physician of any signs of nicotine toxicity

#### Medications

*Pharmacotherapy, when used in combination, increases chances of successful long-term cessation. Interventions for smoking cessation should be initiated during hospitalization as they may be more effective than those initiated afterward. Smoking tobacco can alter the metabolism of a number of medications, as well as caffeine. This is primarily due to substances in tobacco smoke. For patients who smoke more than 25 cigarettes a day a consultation with a Pharmacist is recommended.*

*NRT should only be offered in pregnancy when counselling has failed and after an informed discussion with the patient regarding the risks of tobacco and risk benefits of NRT. Low dose intermittent NRT's (e.g. lozenges, gum etc.) are preferred over the continuous dose of the patch. Titration once the initial dose of NRT is optimized:*

*Use the starting dose for 6 weeks and reduce dose by 7 mg every 2 weeks thereafter. If strong cravings return when attempting downward titration instruct patient to remain at the higher dose for longer. Nicotine patch can be used for 10-12 weeks or longer if necessary. The short acting NRT being used in combination with the patch can be used for longer than 12 weeks as needed.*

#### 1. nicotine Replacement Therapy (NRT)

*Patch, gum, lozenge, inhaler, or mouth spray, may be combined with the nicotine patch*

##### **Tobacco Users**

- nicotine patch \_\_\_ mg daily TOPICALLY X \_\_\_ days. Patient may administer. (Tobacco use greater than 25 cigarettes per day) *Consult with a Pharmacist*
- nicotine patch 21 mg daily TOPICALLY X \_\_\_ days. Patient may administer. (Tobacco use greater than 19 cigarettes per day)
- nicotine patch 14 mg daily TOPICALLY X \_\_\_ days. Patient may administer. (Tobacco use 10 - 19 cigarettes per day)
- nicotine patch 7 mg daily TOPICALLY X \_\_\_ days. Patient may administer. (Tobacco use less than 10 cigarettes per day)

##### **AND**

- nicotine \_\_\_\_\_mg gum PO every 1 hour PRN for withdrawal symptoms. Patient may administer. *(Recommended dosage 2 mg or 4 mg)*

##### **OR**

- nicotine \_\_\_\_\_mg lozenge PO every 1 hour PRN for withdrawal symptoms. Patient may administer. *(Recommended dosage 2 mg or 4 mg)*

##### **OR**

- nicotine inhaler 1 cartridge (4mg) INHALED every 20 minutes PRN for nicotine withdrawal symptoms. Patient may administer.

##### **OR**



- nicotine mouth spray 1 to 2 spray(s) (1 mg) TOPICALLY every 30 minutes PRN for nicotine withdrawal symptoms. Patient may administer. Medication is not to be inhaled. (Maximum 2 sprays at a time and 4 sprays per hour)
- nicotine patch Remove

**Tobacco-like Product Users (Smokeless Tobacco)**

- nicotine patch \_\_\_\_ mg daily TOPICALLY X \_\_\_\_ days. Patient may administer. (Tobacco like product use greater than 5 tins per week) (*Consult with a Pharmacist*)
- nicotine patch 21 mg daily TOPICALLY X \_\_\_\_ days. Patient may administer. (Tobacco like product use 3 to 5 tins per week)
- nicotine patch 14 mg daily TOPICALLY X \_\_\_\_ days. Patient may administer. (Tobacco like product use less than 3 tins per week.)

**AND**

- nicotine \_\_\_\_ mg gum PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. (*Recommended dosage 2 mg or 4 mg*)

**OR**

- nicotine \_\_\_\_ mg lozenge PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. (*Recommended dosage 2 mg or 4 mg*)

**OR**

- nicotine inhaler 1 cartridge(s) (4 mg) INHALED every 20 minutes PRN for nicotine withdrawal symptoms. Patient may administer

**OR**

- nicotine mouth spray 1 to 2 spray(s) (1 mg) TOPICALLY every 30 minutes PRN for nicotine withdrawal symptoms. Patient may administer. Medication is not to be inhaled. (Maximum 2 sprays at a time and 4 sprays per hour)

- nicotine patch Remove

**2. Tobacco Cessation Therapy – buPROPion SR**

*buPROPion and nicotine replacement therapy (NRT) can be used concurrently for the first week. NRT can then be either tapered or stopped. If strong cravings return continue NRT. Doses may need to be adjusted for renal/hepatic insufficiency.*

*buPROPion and varenicline should only be considered with pregnant and breastfeeding women after behavioral and NRT interventions have failed.*

- buPROPion SR 150 mg PO daily X 3 days (Initial dose) Start Date: \_\_\_\_\_

**AND THEN**

- buPROPion SR 150 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

**3. Tobacco Cessation Therapy – varenicline**

*varenicline and nicotine replacement therapy (NRT) can be used concurrently for the first week. Strongly consider adding PRN NRT during the first week after starting varenicline. NRT can then be tapered or stopped. If strong cravings return continue NRT.*

*Doses may need to be adjusted in renal impairment.*

- varenicline 0.5 mg PO DAILY X 3 days **THEN** varenicline 0.5 mg PO BID X 4 days (Initial dose) Start Date: \_\_\_\_\_

**AND THEN**

- varenicline 1 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

**OR**

- varenicline 0.5 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

### **Transitions and Referrals**

- Consult Pharmacy
- AlbertaQuits Helpline Referral.

AlbertaQuits Helpline referral will contact within 3 business days. If no contact has been received the patient may call them directly. The AlbertaQuits helpline operates daily and can be reached at the toll free number 1-866-710-QUIT (7848)

## Order Set: Nicotine Replacement Therapy Discharge Transition

### Order Set Components

**Order Set Key Words:** nicotine, tobacco, cigarettes, NRT, patch, buPROPion, varenicline, smokeless, smoking cessation

#### Self-Monitoring

- Ensure patient is aware of signs of nicotine toxicity. Advise patient to watch for signs of nicotine toxicity, including headache, increased heart rate, dizziness, confusion, agitation, restlessness, lethargy.
- Patient to contact their Primary Care Physician or Pharmacist to discuss further nicotine replacement therapy or if signs of nicotine toxicity are not resolved by decreasing nicotine replacement dosing

#### Medications

*Pharmacotherapy, when used in combination, increases chances of successful long-term cessation. Smoking tobacco can alter the metabolism of a number of medications, as well as caffeine. This is primarily due to substances in tobacco smoke. Contact Pharmacy as required.*

*NRT should only be offered in pregnancy when counselling has failed and after an informed discussion with the patient regarding the risks of tobacco and the risk benefits of NRT. Low dose intermittent NRT's (e.g. lozenges, gum etc.) are preferred over the continuous dose of the patch.*

*Titration once the initial dose of NRT is optimized:*

*Use starting dose for 6 weeks and reduce dose by 7 mg every 2 weeks thereafter. If strong cravings return when attempting downward titration instruct patient to remain at the higher dose for longer. Nicotine patch can be used for 10-12 weeks or longer if necessary. The short acting NRT being used in combination with the patch can be used for longer than 12 weeks as needed.*

#### 1. nicotine Replacement Therapy (NRT)

*Patch, gum, lozenge, inhaler, mouth spray, may be combined with the nicotine patch plus buPROPion SR or varenicline*

*Patients should be instructed to follow up with a primary care provider following discharge to discuss further nicotine replacement therapy and also be made aware of signs of nicotine toxicity*

#### Tobacco Users

- nicotine patch \_\_\_ mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use greater than 25 cigarettes per day) *Consult with a Pharmacist*
- nicotine patch 21 mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use greater than 19 cigarettes per day)
- nicotine patch 14 mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use 10 - 19 cigarettes per day)
- nicotine patch 7 mg daily TOPICALLY X \_\_\_\_\_ days Patient may administer. (Tobacco use less than 10 cigarettes per day)

#### AND

- nicotine \_\_\_\_\_mg gum PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. *(Recommended dosage 2 mg or 4 mg)*

#### OR

- nicotine \_\_\_\_\_ mg lozenge PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. *(Recommended dosage 2 mg or 4 mg)*

#### OR

- nicotine inhaler 1 cartridge (4 mg) INHALED every 20 minutes PRN for nicotine withdrawal symptoms. Patient may administer.
- OR**
- nicotine mouth spray 1 to 2 spray(s) (1mg) TOPICALLY every 30 minutes PRN for nicotine withdrawal symptoms. Patient may administer. Medication is not to be inhaled. (Maximum 2 sprays at a time and 4 sprays per hour).
- nicotine patch Remove

**Tobacco-like Product Users (Smokeless Tobacco)**

- nicotine patch \_\_\_\_\_ mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use greater than 5 tins per week) (*Consult with a Pharmacist*)
- nicotine patch 21 mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use 3 to 5 tins per week)
- nicotine patch 14 mg daily TOPICALLY X \_\_\_\_\_ days. Patient may administer. (Tobacco use less than 3 tins per week)

**AND**

- nicotine \_\_\_\_\_ mg gum PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. (*Recommended dosage 2 mg or 4 mg*)
- OR**
- nicotine \_\_\_\_\_ mg lozenge PO every 1 hour PRN for nicotine withdrawal symptoms. Patient may administer. (*Recommended dosage 2 mg or 4 mg*)
- OR**
- nicotine inhaler 1 cartridge(s) (4 mg) INHALED every 20 minutes PRN for nicotine withdrawal symptoms. Patient may administer
- OR**
- nicotine mouth spray 1 to 2 spray(s) TOPICALLY every 30 minutes PRN for nicotine withdrawal symptoms. Patient may administer. Medication is not to be inhaled. (Maximum 2 sprays at a time and 4 sprays per hour.)

**2. Smoking Cessation Therapy – bupropion SR**

*buPROPion and nicotine replacement therapy (NRT) can be used concurrently for the first week. NRT can then be tapered or stopped. If strong cravings return continue NRT. Doses may need to be adjusted for renal/hepatic insufficiency. buPROPion and varenicline should only be considered with pregnant and breastfeeding women after behavioral and NRT interventions have failed.*

- buPROPion SR 150 mg PO DAILY X 3 days (Initial dose) Start Date: \_\_\_\_\_

**AND THEN**

- buPROPion SR 150 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

**3. Smoking Cessation Therapy – varenicline**

*varenicline and NRT can be used concurrently for the first week. Strongly consider adding PRN NRT during the first week after starting varenicline. NRT can then be tapered or stopped. If strong cravings return continue NRT. Doses may need to be adjusted in renal impairment*

- varenicline 0.5 mg PO DAILY X 3 days **THEN** varenicline 0.5 mg PO BID X 4 days (Initial dose) Start Date: \_\_\_\_\_

**AND THEN**

- varenicline 1 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

**OR**

- varenicline 0.5 mg PO BID (Maintenance dose) Start Date: \_\_\_\_\_

**Transitions and Referrals**

- Consult Pharmacy
- AlbertaQuits Helpline Referral.

*AlbertaQuits Helpline referral will contact within 3 business days. If no contact has been received the patient may call them directly. The AlbertaQuits helpline operates daily and can be reached at the toll free number 1-866-710-QUIT*

## Disposition Planning

- Information on smoking cessation referrals and treatments should be made available in the patient discharge summary to their primary care provider to ensure continuation of treatment and follow-up
- Instructions and orders for pharmacotherapy treatment that was initiated or continued during hospitalization should be communicated to primary care provider
- Patients who have documented tobacco and tobacco-like product use are referred to the AlbertaQuits helpline and information provided
- Patients provided with information on eligibility and coverage for Nicotine Replacement therapy [https://www.albertaquits.ca/Alberta\\_Drug\\_Benefit](https://www.albertaquits.ca/Alberta_Drug_Benefit)

### Considerations: Long Term nicotine Replacement Therapy (NRT)

Long-term use of NRT does not present a known health risk and has been reported to be a strategy to maintain or prolong tobacco abstinence, not a sign of dependence.<sup>23, 24</sup> The Ontario Medical Association recommends that people who use tobacco or tobacco-like products should be encouraged to use NRT for as long as needed to maintain or prolong tobacco abstinence. Therefore, use of these safer alternative nicotine delivery systems can be part of a long-term harm-reduction strategy.<sup>26</sup>

The safety of varenicline at one year has also been established, along with a 35% increase on the already excellent one year quit rate if the initial 12 week course is continued for a further 12 weeks.<sup>25</sup> buPROPion SR has also been approved by the U.S. Food and Drug Administration (FDA) for use as a long-term maintenance indication. Periodic assessments to evaluate the continued use of nicotine should also be offered to the patient.<sup>23</sup> This approach should be considered with people who smoke/use tobacco who report persistent withdrawal symptoms during the course of pharmacotherapy or who express desire for long-term therapy.<sup>25</sup>

### Considerations: Addiction and Mental Health

Individuals with serious mental illness die, on average, 25 years earlier than those without mental illness and the leading cause of death for these individuals is tobacco-related illness.<sup>32</sup> This is occurring despite research that shows that people with psychiatric and substance use disorders have the same levels of motivation and desire to quit as the general population.<sup>33</sup>

A consistent tobacco reduction care pathway within Alberta Health Services reduces this disparity for individuals with addiction and mental health issues. Failure to provide adequate withdrawal comfort measures and therapeutic intervention may lead to patient distress and, in rare cases, unauthorized departures or elopements.

### Considerations: Transition Care

Since AHS Tobacco and Smoke Free Environments Policy came into effect in 2011, many continuing care sites do not accept new clients who smoke. Clients who choose to continue with smoking are waitlisted for the few sites that permit smoking, resulting in longer wait times in transition care.

Where possible, it is recommended that an intensive tobacco intervention approach is taken to address tobacco dependence in patients in transition care awaiting long term care placement, to maximize potential for tobacco cessation and long-term abstinence. Further information on how health care providers can support tobacco dependent patients receiving transition care can be found in the [Transitional and Continuing Care](#) chapter of the Tobacco Free Futures Guidelines.

## Considerations: Reduce or Reduce to Quit

Patients may express a desire to reduce their tobacco use upon discharge from acute care, with or without an intention to stop tobacco use. An onward referral for further support with tobacco reduction (e.g. AlbertaQuits Helpline) will support patients in their tobacco reduction goals. Pharmacotherapy interventions that began in the inpatient setting can also be titrated to support attempts to reduce or reduce to quit, as follows:

---

**Table 1.** nicotine Titration Guidelines<sup>13</sup>

---

<b>Reduce to Quit on Target Date</b>	<ul style="list-style-type: none"> <li>• Set target quit date in next 30 days</li> <li>• Begin using NRT 2-4 weeks before target quit date</li> <li>• Set goal to reduce daily cigarette consumption by 50%–75% by target quit date</li> <li>• If using faster acting NRTs (gum, lozenge, inhaler, mouth spray) should be used to replace omitted cigarettes and when experiencing cravings</li> <li>• On target quit date, stop smoking cigarettes and follow regular dosing and titration regimen</li> </ul>
<b>Reduce Smoking</b>	<ul style="list-style-type: none"> <li>• Begin Using Medication (nicotine replacement therapy NRT)</li> <li>• Set reduction goal (e.g. decrease daily cigarettes by 50%-75% over time)</li> <li>• Consider setting quit date if motivation to quit increases during treatment</li> <li>• Use for up to 6 months or longer if required (NRT)</li> <li>• If no change in smoking behavior, consider other medication</li> </ul>

---

**Analytics**

**Clinical Analytics – Outcome Measure #1 – Tobacco & Tobacco-like Product Use**

<b>Measure</b>	100%* of AHS patients will be asked about their tobacco-use at point of entry (intake/registration/admission)
<b>Definition</b>	Tobacco & Tobacco-like product use status will be identified at point of entry (intake/registration/admission)
<b>Rationale</b>	A centralized approach for documenting tobacco use on admission is favourable compared to decentralized approaches where the responsibility is more diffuse and lies with hundreds of clinicians in a given hospital. <sup>1</sup> The ideal process should involve a standardized question in a no bypass field that is asked when all patients first register at the hospital. <sup>1</sup>
<b>Notes for Interpretation</b>	Comprehensive tobacco control and prevention efforts must be implemented in an equitable manner without leaving out specific and vulnerable populations, in order to reduce disparities in tobacco use. <sup>2</sup> *Patients who are not able to respond at the time of intake/registration should be asked if or when they can appropriately respond
<b>Cited References</b>	1. Montesanti S, Lavis J, Wilson M. Evidence Brief: Expanding the Uptake of Hospital-based Tobacco-use Cessation Supports across Ontario. McMaster Health Forum. 2012. Hamilton, Canada. 2. Molyneux A, Lewis S, Leivers U, Anderton A, Antoniak M, Brackenridge A, Nilsson F, McNeill A, West R, Moxham J & Britton J. Clinical trial comparing nicotine replacement therapy (NRT) plus brief counselling, brief counselling alone, and minimal intervention on smoking cessation in hospital inpatients. <i>Thorax</i> . 2003; 58: 484-488.

**Clinical Analytics – Outcome Measure #2 – Withdrawal Comfort Measures**

<b>Measure</b>	100% of tobacco using AHS patients will be offered pharmacotherapy treatment for the purposes of withdrawal comfort/harm reduction.
<b>Definition</b>	AHS patients who identify as tobacco users will be offered: <ul style="list-style-type: none"> <li>Pharmacotherapy treatment for purposes of withdrawal comfort</li> </ul> <b>Note:</b> Pharmacotherapy will be titrated and reassessed for the purposes of cessation during Therapeutic Intervention
<b>Rationale</b>	<ul style="list-style-type: none"> <li>In the presence of a Tobacco and Smoke-Free Environments policy, tobacco and tobacco-like product users are required to abstain temporarily from use, which can precipitate nicotine-withdrawal. Nicotine-replacement therapy offers a way to reduce the discomfort of nicotine withdrawal in the hospital and increase patient compliance with the policy.</li> </ul>
<b>Notes for Interpretation</b>	The TSFE Level 1 policy outlines that patients should be provided with withdrawal comfort measures to manage any tobacco withdrawal symptoms while on the property and requires that patients are made aware of tobacco cessation supports and offered ongoing supports by AHS.



### Clinical Analytics – Outcome Measure #3 – Therapeutic Intervention

<b>Measure</b>	Minimum of 65% of tobacco using AHS patients will be provided minimally a brief intervention related to tobacco use
<b>Definition</b>	AHS patients who identify tobacco or tobacco-like product use will be provided with a therapeutic intervention.
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• 64.4% of those who smoke/use tobacco report that they are seriously considering quitting in the next 6 months.<sup>1</sup> NRT should be given with brief counselling as a routine therapy to all people who smoke/use tobacco admitted to hospital who indicate that they are prepared to try to stop smoking.<sup>2</sup></li> <li>• Patients currently using pharmacotherapy for withdrawal comfort measures should be re-assessed to ensure withdrawal comfort, and pharmacotherapy discussed as a part of interest in cessation post discharge</li> </ul>
<b>Notes for Interpretation</b>	The TSFE Level 1 policy requires that patients are made aware of tobacco cessation supports and offered ongoing supports by AHS.
<b>Cited References</b>	<ol style="list-style-type: none"> <li>1. Reid J, Hammond D, Rynard V, Burkhalter R. <i>Tobacco Use in Canada: Patterns and Trends</i>. 2015 Edition. Waterloo, ON. Propel Centre for Population Health Impact, University of Waterloo.</li> <li>2. Molyneux A, Lewis S, Leivers U, Anderton A, et al. Clinical trial comparing nicotine replacement therapy (NRT) plus brief counselling, brief counselling alone, and minimal intervention on smoking cessation in hospital inpatients. <i>Thorax</i>. 2003; 58: 484-488.</li> </ol>

### Clinical Analytics – Outcome Measure #4 – Referral

<b>Measure</b>	Minimum of 55% of tobacco using AHS patients will be referred for support or follow-up related to tobacco use
<b>Definition</b>	AHS patients who identify tobacco/tobacco-like product use will be provided with a referral for support or follow-up.
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• In a study where systematic smoking intervention practices were implemented, 55% of patients were referred to a stop smoking service after discharge.<sup>1</sup></li> </ul>
<b>Notes for Interpretation</b>	There is no evidence of an effect of less intensive counselling interventions, such as those delivered only during hospitalization. <sup>6</sup> Therefore, post-discharge follow-up support is an important component of interventions that begin during hospitalization. <sup>2</sup>
<b>Cited References</b>	<ol style="list-style-type: none"> <li>1. Murray RL, Leonardi-Bee J, Marsh J, Jayes L, Li J, Parrott S &amp; Britton J. Systematic identification and treatment of those who smoke/use tobacco by hospital based cessation practitioners in a secondary care setting: cluster randomised control trial. <i>BMJ</i>. 2013; 343:f4004.</li> <li>2. Rigotti N, Clair C, Munafo M, Stead L. Interventions for smoking cessation in hospitalized patients. <i>Cochrane Database of Systematic Reviews</i>. 2012; Issue 5. Art. No.: CD001837. DOI: 10.1002/14651858.CD001837.pub3.</li> </ol>

## Clinical Analytics – Outcome Measure 5 – Tobacco-like Product Use Intervention

<b>Measure</b>	AHS patients who identify as tobacco-like product users will be informed of Health Canada's current position on the use of tobacco-like products.
<b>Definition</b>	100% of AHS patients using nicotine containing tobacco-like products will be offered pharmacotherapy treatment for the purposes of withdrawal comfort/cessation
<b>Rationale</b>	<p>Health Canada advises not to purchase or use electronic smoking products, as these products may pose health risks and have not been fully evaluated for safety, quality and efficacy by Health Canada. Electronic smoking products have not been approved as smoking cessation aids by Health Canada. Little is known about the short or long-term effects of these products. In the absence of formal intervention approaches for the reduction or cessation of tobacco-like product use, intervention should take a harm reduction approach by advising users of AHS and Health Canada's current position.</p> <p>Cannabis is not a benign drug; there are risks and harms associated with its use. Patients should be advised of the risks and any potential effects to their health status/conditions and offered support to abstain or reduce risk.</p> <p>Cannabis that is smoked or vaporized is defined as a tobacco-like product and Health Canada recommends that others should not be exposed to second-hand cannabis smoke. Therefore, the protection provided by the AHS Tobacco and Smoke-Free Environments policy prohibiting the use of tobacco-like products extends to the use of marijuana that is smoked or vaporized.</p>
<b>Notes for Interpretation</b>	Federal regulations surrounding tobacco-like products are being developed. Formal intervention approaches to tobacco-like product use cessation will be developed pending the federal regulations becoming available.

**Clinical Analytics – Outcome Measure #6 – Tobacco/Tobacco-like Product Use Status – Post Discharge**

<b>Measure</b>	<ul style="list-style-type: none"> <li>• 55% of tobacco using patients will make a quit attempt while inpatient</li> <li>• 20% of tobacco using AHS patients will make a quit attempt post discharge</li> <li>• 25% of tobacco using AHS patients will report non-tobacco use status</li> <li>• 30% of tobacco using clients used the referral provided post discharge</li> </ul>
<b>Definition</b>	<p>Tobacco using patients:</p> <ul style="list-style-type: none"> <li>• Will make a quit attempt while inpatient</li> <li>• Will make a quit attempt post discharge</li> <li>• Will report non-tobacco use status</li> <li>• Will use the referral provided post discharge</li> </ul>
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• 55-58% of patients hospitalized where systematic tobacco intervention was in place and provided with NRT plus brief counselling were abstinent at discharge.<sup>1,2</sup></li> <li>• 19% of patients who received smoking cessation intervention during hospitalization quit smoking between discharge and 6 month follow-up<sup>2</sup></li> <li>• 18% of patients self-reported abstinence at 3 months following in patient NRT and counselling.<sup>1</sup> The rate of abstinence is known to be higher the closer the follow-up call to the time of discharge.<sup>2</sup> AHS patients will be followed-up one month post-discharge</li> <li>• 31% of patients who received systemic smoking intervention during hospitalization received support from a stop smoking service after discharge.<sup>2</sup></li> <li>• 31.2% of those who smoke/use tobacco report considering quitting in the next month.<sup>4</sup></li> </ul>
<b>Cited References</b>	<ol style="list-style-type: none"> <li>1. Molyneux A, Lewis S, Leivers U, Anderton A, et al. Clinical trial comparing nicotine replacement therapy (NRT) plus brief counselling, brief counselling alone, and minimal intervention on smoking cessation in hospital inpatients. <i>Thorax</i>. 2003; 58: 484-488.</li> <li>2. Murray RL, Leonardi-Bee J, Marsh J, Jayes L, Li J, Parrott S &amp; Britton J. Systematic identification and treatment of those who smoke/use tobacco by hospital based cessation practitioners in a secondary care setting: cluster randomised control trial. <i>BMJ</i>. 2013; 343:f4004.</li> <li>3. Rigotti N, Clair C, Munafo M, Stead L. Interventions for smoking cessation in hospitalized patients. <i>Cochrane Database of Systematic Reviews</i>. 2012; Issue 5. Art. No.: CD001837. DOI: 10.1002/14651858.CD001837.pub3.</li> <li>4. Reid J, Hammond D, Rynard V, Burkhalter R. <i>Tobacco Use in Canada: Patterns and Trends</i>. 2015 Edition. Waterloo, ON. Propel Centre for Population Health Impact, University of Waterloo.</li> </ol>

## References

1. Alberta Health Services. Alberta Quits. *Tobacco Free Futures Guidelines*. 2014. <https://www.albertaquits.ca> . Accessed August 2016.
2. Canadian Action Network-Advancement Dissemination Adoption Practice-informed Tobacco Treatment. (CAN-ADAPTT) *Canadian Smoking Cessation Clinical Practice Guidelines*. 2011 <https://CAN-ADAPTTCanadianSmokingCessationGuideline> Accessed August 2016
3. Health Canada. *Canadian Tobacco, Alcohol and Drugs Survey Supplementary Tables 2015*. <http://healthycanadians.gc.ca/science-research-sciences-recherches/data-donnees/ctads-ectad/tables-tableaux-2015-eng.php> Accessed November 2016.
4. Statistics Canada Table 105-0501 - Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories, health regions (2013 boundaries) and peer groups, occasional. *CANSIM (database)*. 2016; Mar. <http://www5.statcan.gc.ca/cansim> . Accessed August 2016.
5. Rehm J, Baliunas D, Brochu S, Fischer B, Gnam W, et.al. *The Cost of Substance Abuse in Canada 2002*. Prepared for the Canadian Centre on Substance Abuse. In collaboration with Adlaf, E., Recel, M. & Single, E. <http://www.ccsa.ca> . Released 2006.
6. University of Ottawa Heart Institute. *Ottawa Model for Smoking Cessation Inpatient Implementation Guideline*. Ottawa, ON. Author. 2009
7. Wilkins K, Sheilds M. & Roterman M. Smokers' use of acute care hospitals – A prospective study. *Health Reports*. Component of Statistics Canada Catalogue No. 82-003-X. 2009
8. Mullen K, Coyle D, Manuel D, Nguyen H, Pham B, Pipe A, et al. Economic evaluation of a hospital-initiated intervention for smokers with chronic disease in Ontario, Canada. *Tobacco Control*. 2014; Vol. 0:1-8.
9. Industrial Economics Incorporated. *Economic Evaluation of Health Canada's Proposal to Amend the Tobacco Product Information Regulations: Final Report 2009*. Industrial Economics Incorporated. Cambridge (MA). Accessed October 2016
10. Fiore M. The new vital sign. Assessing and documenting smoking status. *JAMA*. 1991; 266: 3183–4.
11. Regan S, Reyen M, Richards A, Lockhart A, et al. Nicotine Replacement Therapy Use at Home After Use During a Hospitalization. *Nicotine & Tobacco Research*. 2012; 14 (7): 885-889.
12. Health Canada. *Canadian Tobacco, Alcohol and Drugs Survey Supplementary Tables 2015*. Accessed November 2016. <http://healthycanadians.gc.ca/2015>
13. Reid R, Pritchard G, Walker K, Aitken D, et al. Managing smoking cessation. *CMAJ* 2016 Oct; 188: E484-E492
14. Fiore M, Jaén, C, Baker T, Bailey W, Benowitz, N, Curry S, Dorfman S, et al. *Treating tobacco use and dependence: 2008 update*. (Clinical Practice Guideline). Rockville, MD: U.S. Department of Health and Human Services.
15. Ebbert J, Burke M, Hays J, Hurt, R.D. Combination treatment with varenicline and nicotine replacement therapy. *Nicotine and Tobacco Research*. 2009; 11(5), 572–576.
16. Ebbert J, Croghan I., Sood A., Schroeder D, Hays J, Hunt, R. varenicline and buPROPion sustained-release combination therapy for smoking cessation. *Nicotine and Tobacco Research*. 2009; 11(3): 234–239.
17. Els C, Kunyk D, Sidhu, H. Smoking cessation and neuropsychiatric adverse events: Are family physicians caught between a rock and a hard place? *CFP*. 2011; 57: 647–649.
18. Fiore M, Bailey W, Cohen S, Dorfman S, Goldstein M, Gritz, E, Heyman R, et al. *Treating tobacco use and dependence*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service. 2000 Lexicomp. Lexicomp Online. 2011 Retrieved from <http://online.lexi.com>.
19. Shiffman S, Ferguson S, & Strahs, K. Quitting by gradual smoking reduction using nicotine gum: A randomized controlled trial. *Am J Preventive Med*. 2009;36(2), 96–104

20. Canadian Pharmacists Association. (n.d.). Zyban. Retrieved from [www.e-therapeutics.ca](http://www.e-therapeutics.ca)
21. Canadian Pharmacists Association. (n.d.). Champix. Retrieved from [www.e-therapeutics.ca](http://www.e-therapeutics.ca).
22. Agency for Health Care Research and Quality. *Clinical Guidelines for Prescribing Pharmacotherapy for Smoking Cessation*. 2012; December. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/prescrib.html>
23. Hughes J. Dependence on and abuse of nicotine replacement medications: an update. In: Benowitz N, editor. *Nicotine Safety and Toxicity*. New York, NY: Oxford University Press. 1998;147-157.
24. Ontario Medical Association. *Rethinking Stop Smoking Medications: Treatment myths and medical realities*. OMA Position Papers. 2008 [Stop-smokingmedications.pdf](#)
25. Warner K, Slade J, Sweanor D. The emerging market for long-term nicotine maintenance. *JAMA*. 1997 Oct; 278(13):1087-1092.
27. Sarna L, Bialous S, Wells M. Frequency of Nurses' Smoking Cessation Interventions: Reports from a National Survey. *J Clin Nurs*. Vol.18 2009 14: 2066-2077.
28. The Joint Commission Keeping Your Hospital Property Smoke-Free: Successful strategies for effective policy enforcement and maintenance. Online resource: 2011; [http://www.jointcommission.org/assets/1/18/Smoke\\_Free\\_Brochure2.pdf](http://www.jointcommission.org/assets/1/18/Smoke_Free_Brochure2.pdf)
29. Reid J, Hammond D, Rynard V, Burkhalter R. *Tobacco Use in Canada: Patterns and Trends*, 2015 Edition. Waterloo, ON: Propel Centre for Population Health Impact, University of Waterloo.
30. Molyneux A, Lewis S, Leivers U, Anderton A, et al. Clinical trial comparing nicotine replacement therapy (NRT) plus brief counselling, brief counselling alone, and minimal intervention on smoking cessation in hospital inpatients. *Thorax*. 2003; Vol. 58:pp.484-488.
31. Murray R, Leonardi-Bee J, Marsh J, Jayes L, et al. Systematic identification and treatment of smokers by hospital based cessation practitioners in a secondary care setting: cluster randomised control trial. *BMJ*. 2013; Vol 343:f4004.
32. Colton, C & Manderscheid, R. (2006) Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Prev Chronic Dis*. 2006; 3:A42.
33. Acton, G, Kunz, J, Wilson, M and Hall, S. The construct of internalization: conceptualization, measurement, and prediction of smoking treatment outcome. *Psychol. Med*. 2005; 35:395–408
34. Canadian Public Health Association. Canadian Public Health Position Paper. *The Winnable Battle. Ending Tobacco Use in Canada*. Canadian Public Health Association. Ottawa. Can. 2011; Dec.

## Acknowledgements

We would like to acknowledge the contributions of the clinicians who participated in the development of this topic. Your expertise and time spent is appreciated.

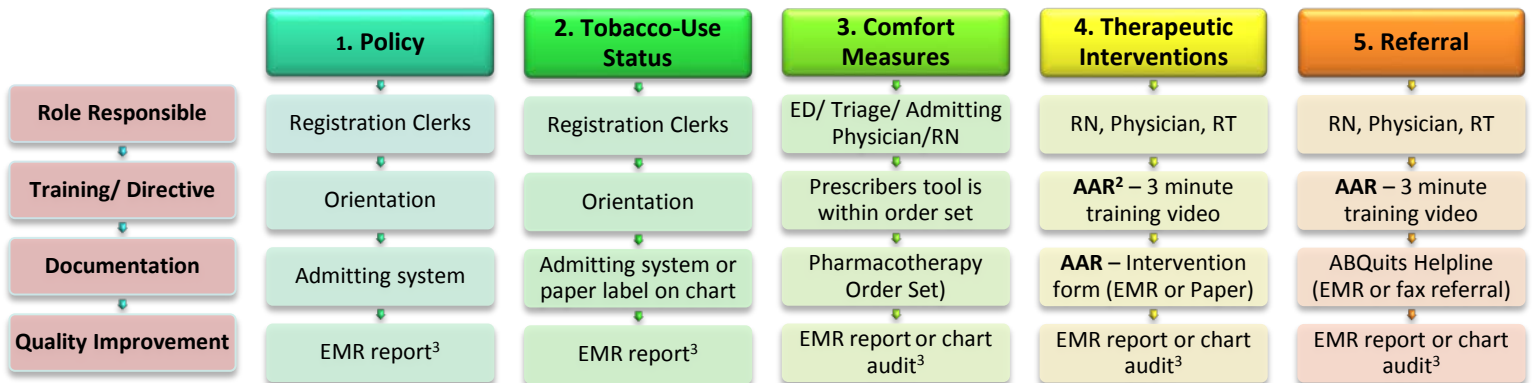
We would like to acknowledge the contributions of the clinicians who participated in the development of this topic. Your expertise and time spent are appreciated

Tobacco Reduction, Adult – Inpatient Clinical Knowledge Topic Working Group Membership		
Name	Title	Zone
<i>Knowledge Lead</i>		
Dr. Michael Bullard	Provincial Clinical Knowledge Lead– Cross Departmental	Provincial
<i>Topic Lead</i>		
Dr. Brent Friesen	Provincial Clinical Topic Lead. Medical Officer of Health	Provincial
<i>Working Group Members</i>		
Melissa Worrell	Program Consultant – Tobacco Reduction Program	Provincial
Tasha Allen	Team Lead – Tobacco Reduction Program	Provincial
Dr. Sandeep Aggarwal	Cardiologist, Cardiac Sciences	Calgary
Dr. Lloyd Clarke	Associate Zone Medical Director	South
Dr. Jennifer Parker	Physician – Acute Care/ED	North
Dr. Christopher Sikora	Physician – Public Health and Preventative Medicine	Edmonton
Christine Couturier	Clinical Design Lead Alberta Cancer Legacy Fund	Central
Michelle Nummi	Integration Lead Alberta Cancer Legacy Fund	Calgary
Matthew Chow	Pharmacist	Calgary
<i>Clinical Support Services</i>		
James Wesenberg	<i>on behalf of</i> Laboratory Services - Provincial Networks	Provincial
Carlota Basualdo & Marlis Atkins	<i>on behalf of</i> Nutrition & Food Services	Provincial
Bill Anderson	<i>on behalf of</i> Diagnostic Imaging Services	Provincial
Taciana Pereira	<i>on behalf of</i> Pharmacy Information Management Group (PIM-GC) – Pharmacy Services	Provincial
<i>SCN or Provincial Committee</i>		
CKCM Provincial Clinical Knowledge Leads		Provincial
<i>Clinical Informatics Lead</i>		
Carla Milligan		Provincial

*Thank you to the following clinicians who participated in the colleague review process. Your time spent reviewing the knowledge topics and providing valuable feedback is appreciated.*

*Members of the Tobacco Reduction Program, Darrel Melvin, Dolores McCallum, Kendri Cudrak, Sherry Pysak, Lauren McGowan, Sandeep Cheema*



## Appendix A Tobacco Reduction, Adult – Inpatient Care Pathway – Implementation Summary



## Appendix B: Tobacco and Tobacco like Product Use Referral Options





### Tobacco/Tobacco-like Product Use Referral Options

#### AlbertaQuits Services

 <p><b>Online</b></p> <p><b>FREE</b> web-based support that's available 24/7.</p> <p>As a AlbertaQuits member, patients receive a personalized dashboard, supportive timely notifications, interactive activities, a guided quit plan and community support.</p>	 <p><b>Phone</b></p> <p><b>FREE</b> personalized support from a trained Cessation Counsellor.</p> <p>Open 8am – 8pm seven days a week, a Cessation Counsellor will help patients develop a quit plan, deal with cravings, and provide ongoing support to keep them motivated.</p>	 <p><b>Text</b></p> <p><b>FREE</b> 24/7 support whenever and wherever it's needed.</p> <p>The text program delivers evidence-based, supportive messages based on the patient's quit date. They can use keywords at any time for additional support.</p>	 <p><b>Group support</b></p> <p><b>FREE</b> support of a group under the guidance of a professional.</p> <p>Patients come together to share experiences, struggles and milestones with one another. Program consists of six 90-minute sessions with different learning goals each week.</p>
---	--	--	--

[Learn more at www.AlbertaQuits.ca](http://www.AlbertaQuits.ca)

#### Community Services

 <p><b>Community Pharmacist</b> providing cessation counselling</p>	 <p><b>Family Physician</b></p>	 <p><b>Primary Health Clinics</b></p>	 <p><b>Tobacco Reduction/Addictions Counsellor</b> through Community Addiction &amp; Mental Health Services</p>
--	--	--	--

#### On Line Services

 <p><b>Specialty Clinics</b></p>	 <p><b>Tobacco Reduction Counsellor</b></p>
---	--

**Referrals should be directive/active to increase the likelihood of patient follow through**  
 Note: Provision of information only is an indirect referral





## Appendix C: Tobacco Reduction Accountability Measures – Targets and Rationale

**Tobacco/Tobacco like  
Product Status Use**

**100% of AHS patients' tobacco use status will be identified at intake/registration**

- A centralized approach for documenting tobacco use on admission is favourable compared to decentralized approaches where the responsibility is more diffuse and lies with hundreds of clinicians in a given hospital. The ideal process should involve a standardized question in a no bypass field that is asked when all patients first register at the hospital.<sup>27</sup>

**Tobacco/Tobacco-like  
Product Use  
Intervention**

**100 % of tobacco using AHS patients will be offered pharmacotherapy treatment for the purposes of comfort**

AHS Tobacco and Smoke Free Environments Policy (Level 1) prohibit the use of tobacco and tobacco like products on AHS property. For effective policy enforcement/maintenance, protocols should be in place to assist admitted patients in dealing with nicotine withdrawal during their stay.<sup>28</sup>

**65% of tobacco using AHS patients will be provided with pharmacotherapy treatment for the purposes of cessation**

64.4% of users of tobacco report that they are seriously considering quitting in the next 6 months.<sup>29</sup> NRT should be given with brief counselling as a routine therapy to all users of tobacco admitted to hospital who indicates that they are prepared to stop smoking.<sup>30</sup>

**65 % of tobacco using AHS patients will be provided minimally a brief intervention related to tobacco use**

64.4% of users of tobacco report that they are seriously considering quitting in the next 6 months.<sup>29</sup> Brief counselling (with NRT) should be a routine therapy for all users of tobacco admitted to hospital who indicate that they are prepared to stop smoking.<sup>30</sup>

**55% of tobacco using AHS patients will be referred for support or follow-up related to tobacco use**

In a study exploring where systematic smoking intervention practices were implemented, 55% of patients were referred to a stop smoking service after discharge.<sup>31</sup>

**Tobacco/Tobacco-like product use –  
Post discharge**

**55% of tobacco using patients will make a quit attempt while inpatient**

55-58% of patients hospitalized where systematic tobacco intervention was in place and provided with NRT plus brief counselling were abstinent at discharge.<sup>30, 31</sup>

**20% of tobacco using AHS patients will make a quit attempt post discharge**

19% of patients who received smoking cessation intervention during hospitalization quit smoking between discharge and 6 month follow-up.<sup>31</sup>

**25% of tobacco using AHS patients will report non-tobacco use status**

18% of patients self-reported a 3 month point prevalence abstinence following in patient NRT + counselling.<sup>30</sup> This rate gets higher the closer the follow-up call is made to time of discharge.<sup>31</sup> AHS patients will be followed up one month post discharge.

**30% of tobacco using clients used the referral provided post discharge**

31% of patients who received systematic smoking intervention during hospitalization received support from a stop smoking service after discharge.<sup>31</sup> 31.2% of users of tobacco were considering quitting in the next month.<sup>29</sup>