This guideline is about interventions to support tobacco smoking cessation. This guideline is for primary care practitioners, defined as health professionals who provide accessible, continuous, comprehensive, coordinated care and who are the first contact in the health system.

Population

This guideline on tobacco smoking cessation applies to non-pregnant adults aged 18 years or older who currently smoke tobacco cigarettes. This includes those who smoke regularly or occasionally and those motivated or not motivated to quit.

Key Recommendations

- As part of good clinical care, providers are expected to be knowledgeable about their patients' smoking status. We recommend that all people who smoke tobacco cigarettes be encouraged to stop and be offered one or more of our recommended smoking cessation interventions (strong recommendation, high certainty).
    - Individuals who smoke should be engaged in shared decision-making about which interventions to use. With shared decision-making, healthcare providers engage in a collaborative process to help people who smoke to make choices that align with evidence and their own values and preferences
- We recommend several behavioural, pharmacotherapy, and combined intervention options (strong recommendation):
    - Combined pharmacotherapy and behavioural approaches (low certainty of effect estimates)
    - Behavioural (low to high certainty of effect estimates across interventions)
        - Advice or education from a healthcare provider
        - Individual or group counselling from a trained tobacco cessation counsellor
        - Mobile phone text message-based interventions
        - Self-help materials
    - Pharmacotherapy (low to moderate certainty of effect estimates across interventions)
        - Bupropion
        - Cytisine
        - NRT
        - Varenicline
- We suggest that interactive computer-based or online programs <u>with</u> additional behavioural support may be considered (conditional recommendation, very low certainty of effect estimates).
- We suggest against using interactive computer-based or online programs <u>without</u> additional behavioural support (i.e., those only involving interaction between the individual and a website or app) (conditional recommendation, very low certainty of effect estimates).

- We recommend against several alternative interventions (strong recommendation, very low to low certainty of effect estimates across interventions):
    - Acupuncture
    - Continuous auricular stimulation (using indwelling needles or other means to apply continuous stimulation to the auricle)
    - Hypnotherapy
    - Laser therapy (applying low level lasers to specific anatomical locations)
    - Electrostimulation (applying electrical current to specific anatomical locations on the head)
    - S-Adenosyl-L-Methionine (SAMe)
    - St. John's wort
- We suggest against using e-cigarettes for smoking cessation except in certain circumstances (conditional recommendation, low certainty of effect estimate).
    - For people who have unsuccessfully attempted other interventions, are otherwise unwilling to try other interventions, or express a strong preference, practitioners may engage in shared decision-making regarding the possible use of e-cigarettes with or without nicotine.
    - People who decide to use e-cigarettes to quit smoking should be informed of the uncertainties related to e-cigarettes. These include the lack of approved therapeutic products with consistent formulations, the lack of long-term safety data, and that ongoing use of e-cigarettes with nicotine does not address their addiction to nicotine since it would continue to be consumed.

Putting Recommendations into Practice

Clinicians in primary care settings are advised to:

- To routinely assess smoking status and advise patients who smoke to quit as part of standard care.
- Engage in a collaborative process using a menu-based and shared decision-making approach to align effective cessation options with each patient's values, preferences, smoking behaviours, and life circumstances.
    - Shared decision-making should inform and empower patients—not persuade them to use a specific intervention
- Expect that patients may need multiple quit attempts with different or combined approaches; if they relapse, re-engage them using shared decision-making to explore new or repeated options.
- Focus on supporting patients to try evidence-based interventions. The Task Force's menu of effective options can guide discussions. There is not a single best choice for all patients and providers, but a full review of every option is not required with each person.

- Reducing tobacco-related inequities requires coordinated efforts beyond primary care; this guideline also informs public and policymaker actions. Recommendations apply to commercial tobacco (including hand-rolled), excluding traditional or ceremonial use.

Burden of Illness

In 2022, 11% of Canadians aged 15 or older were currently smoking tobacco (13% of males and 9% of females), and approximately 75% of them were smoking daily. Populations in Canada with high prevalence include people who are single, separated or divorced, or widowed; identify as gay or bisexual; have lower levels of education; are workers whose jobs do not require training or a specific level of education; identify as First Nations, Inuit or Metis; or have mental health diagnoses or substance use disorder. Most of the harm from cigarettes is due to the 7000 chemicals with about 70 carcinogens produced when smoked. People who smoke tobacco regularly do so due to the highly addictive nature of nicotine. This drives ongoing smoking despite the potential desire to quit.

Consequences of continuing to smoke tobacco

Tobacco smoking is the leading cause of preventable disease and death in Canada due to increased risk of multiple types of cancer, respiratory disease, cardiovascular disease, and other health conditions

In 2012, smoking was responsible for 45,464 deaths and approximately 599,390 potential years of life lost in Canada, with an additional 993 deaths attributed to secondhand smoke exposure. Smoking contributes to various cancers (e.g., lung, mouth, bladder, cervix, colon, rectum), cardiovascular diseases (e.g., coronary heart disease, stroke, atherosclerosis, aortic aneurysm, peripheral artery disease), and lung conditions (e.g., emphysema, chronic bronchitis). It also affects reproductive health (e.g., infertility, spontaneous abortion, premature birth, low birth weight), and is linked to neonatal death, sudden infant death syndrome, early menopause, and osteoporosis.

Basis of recommendation

Evidence

Systematic reviews were conducted to assess the benefits and harms of smoking cessation interventions, including a review on e-cigarettes and an overview of Cochrane reviews on behavioural, pharmacological, and other approaches.

- Both behavioural and pharmacological approaches increase smoking cessation: combined pharmacologic and behavioural approaches (52 RCTs), brief advice (26 RCTs), individual (27 RCTs) or group (9 RCTs) counselling from a trained counsellor delivered in person or by telephone, mobile phone SMS interventions (12 RCTs), self-help materials (24 RCTs), bupropion (4 RCTs), cytisine (2 RCTs), NRT (8 RCTs), and varenicline (27 RCTs).
- Twelve RCTs suggest that nicotine-containing e-cigarettes may offer a small to moderate cessation benefit at 6-month follow-up compared to non-nicotine e-cigarettes or no intervention, when both groups receive behavioural support or have access to NRT. Non-nicotine e-cigarettes may provide a small benefit.
- Evidence on harm identified:
    - Most behavioural interventions either had no harms identified or were associated with little to no harm.

- Bupropion and cytisine may cause little to no increase, or a small increase, in adverse events.
- NRT likely causes a small increase in palpitations or chest pain, with little to no other harms.
- Varenicline is associated with a small increase in adverse events.
- E-cigarettes were associated with little no harm over the short term, but long-term data on harms of using e-cigarettes is not available, and studies showed many people continue using them long term after quitting smoking.

Rationale

- Unsuccessful quit attempts and continued smoking cause ongoing harm due to prolonged tobacco exposure.
- For behavioural interventions, while most benefit data were low certainty, consistent positive effects across similar interventions strengthen our confidence, and there were little to no harms identified and favourable feasibility, acceptability, and equity considerations.
- Pharmacotherapies are also strongly recommended; they offer low-to-moderate certainty of benefit, with small but important harms, outweighed by the significant harms of continued smoking.
- E-cigarettes are conditionally not suggested for most individuals due to a number of important uncertainties, including lack of long-term data on potential harms. However, e-cigarettes may help some people quit, and there are well-established harms of continued smoking. We acknowledge that e-cigarettes could be an option for some, when unwilling to use other options.
- Other therapies have very low-certainty evidence, or show little to no benefit. A strong recommendation is made against their use.