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Smoking / Tobacco Cessation Counselling: Information for Physicians

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Summary: Tobacco use is a chronic, relapsing medical condition and the leading cause of premature, preventable death and disease worldwide. As a result, tobacco cessation counseling is one of the most cost-effective interventions a clinician can perform.

Case, Part 1

- Jennifer is a 35-yo, married female that you are seeing for her yearly checkup, accompanied to the appointment by her 5-yo child
- History is significant for hypertension, anxiety
- Family history of diabetes and cardiac issues
- Smoking history shows that she smokes cigarettes on-and-off for 12 years and currently smokes five cigarettes per day
- You ask her how she feels about her smoking, and she admits that she'd like to quit, but on the other hand, life is stressful and overwhelming for her right now, that she doesn't know if this is a good time to quit…

Overview

- Smoking is the practice of burning tobacco, followed by inhaling the resulting smoke so that it can be tasted, and so that nicotine, the primary addictive component of tobacco, can be absorbed into the bloodstream
- After smoking tobacco, arterial levels of nicotine peak within seconds.
- Nicotine increases levels of dopamine, eliciting feelings of pleasure, euphoria, and well-being, and is thus extremely self-reinforcing.
- Nicotine levels then rapidly decline, producing a drop in dopamine, which leads to withdrawal symptoms.
- For this reason, quitting or reducing tobacco intake is extremely difficult.
- Furthermore, in order to maintain high levels of dopamine, and to relieve withdrawal symptoms, smokers will seek to inhale more tobacco to maintain nicotine levels close to their personal threshold.

Epidemiology

- More than 60% of smokers want to quit, 40% will make at least one attempt to quit each year, but only 5% will be successful without assistance.
- Smokers who try to quit with the help of best practice counselling and cessation medications will experience 2-4X the success with quitting compared to those who try to quit “cold turkey.”
- Physician advice to quit boosts motivation by 30-40%.
- On average, 30% of patients are ready to quit, 40% will be ready in the next 6 months, and 30% are not yet ready to quit.

Signs/Symptoms

Symptoms of nicotine toxicity (acute nicotine poisoning):

- Nausea
- Vomiting
- Salivation
- Pallor
- Abdominal pain
- Diarrhea
- Cold sweat

Withdrawal symptoms begin within a few hours of the last cigarette, are strongest within the first few days of smoking cessation, and subside within 2-3 weeks:

- Irritability
- Aggression
- Poor concentration
- Lightheadedness
- Night-time awakenings/insomnia
- Constipation
- Oral ulcers
- Cravings/urges to smoke
- Depression, anxiety
- Cognitive and attention deficits
- Sleep disturbances
- Increased appetite

Diagnosis

DSM-5 Tobacco Use Disorder

A problematic pattern of tobacco use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Tobacco taken in larger amounts or over longer periods of time
2. Persistent desire or unsuccessful efforts to cut down or control use
3. A great deal of time is spent on activities necessary to obtain or use tobacco
4. Craving or a strong desire or urge to use tobacco
5. Recurrent tobacco use resulting in a failure to fulfill major role obligations at work, school, or home
6. Continued tobacco use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by effects of tobacco (e.g., arguments with others about tobacco use)
7. Important social, occupational, or recreational activities are given up or reduced because of tobacco use
8. Recurrent tobacco use in situations in which it is physically hazardous (e.g., smoking in bed)

9. Tobacco use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by tobacco
10. Tolerance, as defined by one of the following:
    a. The need for markedly increased amounts of tobacco to achieve the desired effect
    b. A markedly diminished effect with continued use of the same amount of tobacco
11. Withdrawal, as manifested by either of the following:
    a. The characteristic withdrawal syndrome for tobacco
    b. Tobacco (or a closely related substance, such as nicotine) is taken to relieve or avoid withdrawal symptoms

Screening

The following screening questions are based on the Ottawa Model for Smoking Cessation in Primary Care.

1) Ask (30 seconds)

- Ask all patients, at all visits (the 5th vital sign)
- Clinician:
  - “Have you used any form of tobacco in the past 7 days?”
  - “Have you used tobacco in the past?”

2) Advise (2 minutes)

- Patients require assistance, not a lecture. Patients need clear, strong, personalized, and non-judgemental support.
- Clinician:
  - “If you would like to stop smoking, I can help you.”
  - “Are you willing to make a quit attempt now?”
  - “The final decision about cessation is up to you. You can book an appointment any time if you change your mind.”
  - “I will ask you about your smoking status at every visit”

3) Act (8–15 minutes)

- Set up a 'quit plan' visit and follow-up visits.

History

The following are examples of more detailed questions that a clinician might ask:

Tobacco History	• Have you used any form of tobacco in the last seven days? • Have you used any form of tobacco in the past? • What types of tobacco do you use? • How many cigarettes do you smoke per day? • After waking up, when do you smoke your first cigarette? • How old were you when you started smoking? • For how many years have you smoked? • Total number of years of smoking: How many years have you smoked? • Pack years = number of packs per day × number of years of smoking • Where does smoking take place at home? • Any other smokers inside the home?
Reasons for smoking	• What are the positives of smoking for you? • Typical reasons, e.g. dealing with stress; its relaxing; its social

Reasons to quit smoking	• What are the negatives of smoking for you? • If you quit smoking, how would things be better? E.g. what would be some benefits or advantages? E.g. impact on your health, relationships, money
Cessation/ Relapse	• Past attempts at quitting • Have you tried to quit before? • How many attempts to quit have you made in the past year? • What has been your longest period of abstinence? • What's worked in the past? • What's made it difficult for you to quit? • What might you do differently this time? • Longest period of abstinence • Reason(s) for relapse • Quit smoking pharmacotherapy history • Response to previous use of pharmacotherapy
Triggers	• Meals, stress, other smokers, drinking, the smell or sight of cigarettes
Motivation for quitting	• What are your motivators for wanting to quit? • Typical reasons: Social Stigma, pressure from family/friends, concerns about long term health, exercise improvement
Worries about quitting	• Any worries or concerns that get in the way of quitting? • Typical reasons ◦ Having to use medications to quit, cost of any medications, fear of addiction to prescription medications, stress, weight gain, spouse/significant others who smoke, withdrawal symptoms, cravings, mood changes, fear of change, misguided conception that it is too late to experience significant health benefits

Physical Exam

Vitals	Physical effects of nicotine: Increased HR, increased BP Physical effects of nicotine withdrawal/tobacco cessation include: Slow HR
General Observations	Any strong odors of tobacco use? Weight loss commonly associated with tobacco use) Weight gain commonly associated with tobacco cessation). Tar-stained teeth Premature skin aging.
Head and Neck	Examine oral cavity including mouth, lips and tongue looking for dry mucous membranes, signs of tar or resin stains which are prominent on the lips or tongue.
Respiratory / Cardiovascular	Conduct a thorough respiratory and cardiovascular exam.

Mental Status Exam (MSE)

Anxiety and depression commonly coexist with tobacco use. The early phases of withdrawal may present with more irritability, anxiety, and agitation.

Mood/Affect	Any problems with mood / affect?
Thought Content	Inquire about the patient's safety and probe further if the patient endorses suicidal or homicidal ideation.

Management: Pharmacological

- Prescribe smoking cessation pharmacotherapy to deliver as much medication as is necessary for as long as necessary (i.e. for as long as the patient continues to experience cravings or withdrawal symptoms)
- Not unusual to provide for several months or more
- Early discontinuation of medication will increase the likelihood of relapse, therefore patients should be advised to use a full course of medication, even if they are smoke-free

Explain use of medication:

- Efficacy and safety (double to triple greater success in quitting)
- Review specific instructions of use with patients (e.g. inhaler technique)
- Address common side-effects
- Withdrawal symptoms are not the same as symptoms of adverse events
    - Address adherence to medications; patients should be advised to use the full course of medication, even if they are smoke-free

Types of medication:

1. Nicotine Replacement Therapy (NRT)

- Delivers pure nicotine slowly via the venous system (peaks within 5 minutes), producing steady-state levels and helping to minimize withdrawal and cravings.
- Less nicotine than smoking (regardless of dose); none of the 4000–7000 chemicals in cigarettes; no carcinogens; no carbon monoxide
- Doubles quit rates and can be combined with other therapies
- Best practice = combination NRT (patch + short acting agents)
- Dosing based on the degree of nicotine addiction:
- # of cigarettes per day, time to first cigarette in the morning, patient history with cessation attempts

Long Acting NRT (Patch)	Can be titrated up/down and combined with short-acting NRT, as needed. No danger of overdosing on a nicotine patch or becoming addicted to the patch Side effects: nausea, dizziness, sleep disturbances, headache, upset stomach, skin irritation (NOTE: Skin irritation is due to the patch adhesive, not nicotine)
Short Acting NRT (Gum, Lozenges, Spray, Inhaler)	All short-acting NRT (gum, lozenges, spray, or inhaler) can be used to deal with “breakthrough cravings”. Can be used independently for mild smokers (<5 cigarettes per day). Often combined with NRT for breakthrough cravings Gum side effects: Sore throat, hiccups, stomach irritation Inhaler side effects: throat and mouth irritation, headache, nausea, indigestion Spray side effects: throat and mouth irritation, headache, hiccups, nausea, vomiting, indigestion, increased saliva production, dry mouth

2. Bupropion (Zyban)

- Stimulates noradrenergic receptors in the brainstem, and dopaminergic regions in the forebrain
- Initiated 7-days prior to quit date, and up-titrated across 12-weeks
- Side effects: Dry mouth, arthralgia, insomnia/sleep disturbances, dizziness, pruritus, rash
- Adverse event: Seizure! (rare; do not use in patients with a history of seizures)
- Can be taken up to 24-weeks or longer
- Dosage: Start at 150 mg once daily for 3 days; increase to 150 mg twice daily; treatment should continue for 7 to 12 weeks (maximum dose: 300 mg daily).

3. Varenicline (Champix)

- Considered the ‘gold standard’ of smoking cessation pharmacotherapy
- Acts on α4β2 nicotinic acetylcholine receptors
- Dual activity
    - Agonist effect: provides relief from craving and withdrawal
    - Antagonist effect: blocks satisfaction and rewarding effects of nicotine when patient smokes

- Initiated 8-35 days prior to quit date
- Side Effects: Nausea, vomiting, sleep disturbances, headache, constipation, mood changes, allergic reaction
- Dosage:
    - Initial: Days 1 to 3: 0.5 mg once daily, then Days 4 to 7: 0.5 mg twice daily
    - Maintenance (≥ Day 8):
        - US labeling: 1 mg twice daily for 11 weeks
        - Canadian labelling: 0.5 to 1 mg twice daily for 11 weeks
    - Note: Start 1 week (US labelling) or 1 to 2 weeks (Canadian labelling) before the target quit date.

Management: Behavioural

Withdrawal

- Symptoms of withdrawal are normal
- Will lessen in the weeks following quitting (usually last 3-5 days)
- Cessation pharmacotherapy will help reduce/eliminate the symptoms

Cravings (4DS)

- Delay: cravings pass in 3-5 minutes
- Distract: occupy with a task
- Drink water: helps to flush out the chemicals and toxins
- Deep breaths: aid in relaxation and help cravings subside
- Substitute
- Use short-acting NRT (inhaler, gum, lozenges)

Routines

- Avoid the trigger or situation
- Change the trigger or situation
- Find an alternative or substitute to the cigarette in response to the trigger or situation (e.g. short-acting NRT)

Modify

- Modify triggers (morning coffee, work breaks, entering the car, etc)
- Diet and exercise
- Caffeine: Cut caffeine intake by half, or switch to decaffeinated beverages

Management: Not Ready to Quit

Not Ready to Quit	Reduce to Quit (RTQ) • Method to assist patients who are not yet ready to quit or prefer not selecting a target quit date • Steps ◦ Assist patient in setting a target number of cigarettes per day to cut down (at least 50%) ◦ Assist patient in setting a target date to achieve a 50% reduction ◦ Support patient in continuing to cut down the number of cigarettes per day ◦ Encourage patients to cut back the amount they smoke. ◦ Assist patient in a ‘practice’ run of being smoke-free ◦ “Try asking family and friends who smoke to not smoke around you or offer you cigarettes” ◦ Assist patient in planning rewards for staying ‘smoke-free

Ready to Quit	Quit Date: • 50% of patients find this useful, 50% of patients find this stressful. Let patient know there may be no perfect date to quit, but to avoid choosing a date close to a special occasion or critical event • Step 1: Set a quit date ∘ Select a date that is relatively routine ∘ Avoid selecting a date near a major deadline ∘ Avoid selecting a date near a special event • Step 2: Quit smoking medication (see below) ∘ NRT (Patch, Inhaler, Gum, Lozenge, Spray) ∘ Verenicline (Champix) ∘ Bupropion (Zyban) • Step 3: Follow-up support ∘ HCP appointment ∘ Smokers' quit lines/online support ∘ Community resources

Management: Follow-up

The first weeks of quitting smoking are critical

- Schedule follow-up visit 2–4 weeks following scheduled quit date, and 8–10 weeks after the scheduled quit date
    - Follow-up visits in the early weeks following an attempt to quit is effective in the prevention of relapse, as more than 75% of unaided quitters relapse within the first week
- Recommend resources such as
    - Smokers' quit lines,
    - Online supports, and
    - Community resources

2–4 Weeks after Quit Attempt

- Assess progress and problems
- Titrate medication (if needed)
- Reduce dose of medication for patients who experience side effects
- Increase dose of medication for patients who experience withdrawal symptoms and cravings
- Consider type, amount, length of treatment, and combo
- Support relapse prevention
- Boost motivation and confidence

8–10 Weeks after Quit Attempt

- Determine if an extension of pharmacotherapy is necessary
- Determine if an extension of follow-up is required
- Support patient in relapse prevention

Clinician questions to ask at follow-up visits:

- "Have you used any form of tobacco since your last visit?"
    - Number of cigarettes in last 7 days
    - Number of cigarettes since quit plan visit
    - Any other types of tobacco use (ecigarettes, hookah, etc)
    - Offer congratulations for reduction/abstinence
- "How many caffeinated beverages, on average, do you consume a day?
- "How many alcoholic beverages, on average, do you consume a week?"
- Any recreational drug use?
- Smoking cessation medications
    - "Are you still taking the prescribed medications?"

        - Early discontinuation of medication increases the likelihood of relapse
    - “Have you experienced any side effects from the medication ?”
        - If yes, document frequency, time of day, and intensity
- “What are the situations most likely to stimulate a return to smoking?”
- Offer simple and strategic advice to help patients modify or avoid trigger(s)
- “On a scale of 1–10, how confident are you that you can stay smoke-free?”

Key Points

- Number of previous quit attempts is a powerful predictor of cessation success.
- Emphasize quitting as a process, not an event.
- Remind patient that quitting can be a long process.
- Has the patient had a slip? Encourage them to get back on track with a new cessation attempt.
- Put slips and relapses into perspective – Use ‘slip’ as a learning experience and encourage patients to not let a slip throw off their quit plan.
- Do you feel tempted to lecture? Lectures usually end up making a patient feel worse, and they may shut down or stop listening to you. Instead, thank them for trying, and normalize that it is hard to quit. Encourage another quit attempt or a recommitment to total abstinence.
- Assist patient with strategies to achieve long-term abstinence.
- Offer congratulations on any type of success.
- Strongly encourage patients to remain smoke-free.

When and Where to Refer

- **Provincial / Municipal Cessation Supports**
    - Refer the patient making a quit attempt to an appropriate organization that offers cessation counseling/support or provide information on local smoking cessation resources.
    - Quit Smoking Program at the University of Ottawa Heart Institute - https://www.ottawaheart.ca/clinic/quit-smoking-program
- **Cardiologist or Respirologist**
    - Heart disease and Chronic Obstructive Pulmonary Disease are both major unfortunate end-points for tobacco use.
    - There is evidence to suggest that, for patients with serious cardiovascular disease, compliance with a comprehensive smoking cessation counseling program is comparable to that of ACE inhibitors.
    - Following a cardiac event, continued smoking may greatly increase a patient’s mortality risk.
    - Smoking cessation is one of the most beneficial treatments for COPD.
    - **Referral to a Cardiologist or Respirologist may be indicated if:**
        - Patient’s smoking is refractory to primary care interventions (i.e. referral to specialized cardiac or pulmonary rehabilitation programs)
        - There is evidence/concern for ongoing, worsening, or newly developed tobacco-related cardio-respiratory disease (e.g. worsening shortness of breath, angina, medication titration, or decline in physical activity tolerance)
        - Re-analysis of cardiac/lung functions following cessation in a patient with cardiac or pulmonary disease.
- **Psychiatrist**
        - Indications for referral to a psychiatrist include:
            - Severe psychiatric co-morbidity
            - Close monitoring of medication side effects
    - Smokers with a history of major depressive disorder are at risk for developing another depressive

episode after quitting, or experiencing enhanced withdrawal symptoms during abstinence.
  - Smoking cessation may increase blood levels of certain psychotropics.
  - Do ensure the patient is psychiatrically stable to make a cessation attempt.
  - Don't expect a patient to be able to quit in the midst of an acute mental health illness such as major depression.

Case, Part 2

- Jennifer is a 35-yo mother whom you are seeing for an annual checkup, accompanied at the appointment by her 5-yo child
- When you ask her about her smoking, she admits that she'd like to quit, but on the other hand, life is stressful and overwhelming for her right now, that she doesn't know if this is a good time to quit
- You ask more about her reasons for smoking, and you validate that indeed, it does sound like she has a lot of stress, and that indeed, you can appreciate her wanting to smoke in order to reduce stress
- You ask about any negatives to smoking, and she admits that now that she has a young child, she really would like to quit smoking
- You ask her if there might be any other benefits of stopping smoking, and she states that saving money from quitting would be another added bonus
- She states that, after having talked through things with you, that she would like to try to quit smoking
- You discuss various options with her, and she agrees to the patch
- At the next visit, she is pleased to tell you that she has reduced her smoking
- You let her know how lucky her children are, to have a mother that is so concerned and motivated to look after her health, as well as her children's health
  You plan to meet again with her in a few weeks to reassess and provide support as needed

1. Which of the following are DSM-5 criteria that are used to diagnose tobacco use disorder?

- ○ Tobacco taken in larger amounts or over longer periods of time
- ○ Tolerance
- ○ Withdrawal
- ○ Recurrent tobacco use resulting in a failure to fulfill major role obligations at work, school, or home
- ○ All of the above

2. Which of the following is considered long acting nicotine replacement therapy (NRT)?

- ○ Gum
- ○ Lozenges
- ○ Patch
- ○ Inhaler
- ○ All of the above.

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