Algorithm for tailoring pharmacotherapy

Ask about tobacco use.
“How many cigarettes do you smoke a day?” ________/day

Advise your patient to quit.
“I am concerned about your tobacco use and advise you to quit. Would you mind if we spend a few minutes so that I can better understand your smoking addiction?”

Assess readiness to quit on a scale of 1 - 10.
1. Desire to quit - “How important is it for you to quit smoking?” _______/10
2. Confidence - “How confident are you that you can quit smoking?” _______/10

Desire to quit / Confidence ≥ 5
Desire to quit / Confidence ≤ 5

Assist with smoking cessation.
1. How would you like to quit: cold turkey or with assistance?
2. Do you want to quit abruptly or gradually?
3. What type of assistance do you need pharmacotherapy, counseling

Arrange follow-up 1-4 weeks post quit date.
Determine response to therapy.

Motivational Interviewing (MI)
Explore the 5R’s using reflective listening:
- **Relevance**: why is quitting relevant to health, family, social situation?
- **Rewards**: potential benefits of quitting - health, money, taste & smell
- **Risk**: Acute (shortness of breath), chronic (CVD, cancer, COPD)
- **Roadblocks**: withdrawal symptoms, fear of failure, weight gain
- **Repetition**: repeat MI every time the patient visits the clinic

Assess med adherence
Adjust dose
Increase counseling

Partial response
Full Response
Maintenance

Assess tobacco use.
“How many cigarettes do you smoke a day?” ________/day

Cold turkey
Arrange follow-up

Pharmacotherapy +/- counseling
If patient smokes > 10 cigarettes/day, offer pharmacotherapy

Reduce to quit
See reverse for steps

Cold turkey
Arrange follow-up

Pharmacotherapy +/- counseling
If patient smokes > 10 cigarettes/day, offer pharmacotherapy

Reduce to quit
See reverse for steps

Varenicline
Bupropion
NRT

NRT Dosing

<10 CPD
“Light” Smoker
14mg patch x 1-4 weeks

10 - 29 CPD
“Moderate” Smoker
2tmg patch x 1-4 weeks

30+ CPD
“Heavy” Smoker
28mg patch (21 + 7) x 1-4 weeks

Start with:
*Choose one short-acting NRT (gum, lozenge, mouth spray or inhaler) for breakthrough cravings as needed

Follow up 1-4 weeks post quit date and assess smoking

Continue with the above guidelines (adding patches if necessary).
NOTE: Maximum is 84mg (4 x21mg)

Combination therapy

- Bupropion SR + Varenicline
- Varenicline - same dosing as above
- Bupropion - same dosing as above
- Bupropion + Patch
- Bupropion + Gum

- Varenicline + NRT
- Patch (different doses over 12 weeks)
- Varenicline - same dosing as above

- Bupropion SR + NRT
- Patch (14mg) + Gum (2mg)
- Patch + Inhaler or Spray or Lozenge

- Two forms of NRT
- Bupropion SR + Patches
- Bupropion + Gum

- Combination therapy
- If smoking 0 CPD
- Continue on current dose
- If still smoking
- 10-14 CPD: Add a 21mg patch to current dose
- 6-9 CPD: Add a 14mg patch to current dose
- 1-5 CPD: Add a 7mg patch to current dose

*limited data on safety

Varenicline + NRT
Patch (different doses over 12 weeks)
Varenicline - same dosing as above

Bupropion SR + NRT
Bupropion + Patch
Bupropion + Gum

Bupropion SR + NRT
Bupropion + Patch
Bupropion + Gum
## Giles and More

### First line pharmacotherapy

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Varenicline (Champix*)</th>
<th>Nicotine Replacement Therapy (NRT)</th>
<th>Bupropion (Wellbutrin SR®, Zyban*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
<td>Most effective - highest quit rates. No drug interactions except with NRT (may increase risk of adverse events.)</td>
<td>Safe in stable cardiac disease. Patch is the most effective form of NRT.</td>
<td>Minimal weight gain, helps depression, can use with NRT, as effective as NRT.</td>
</tr>
<tr>
<td>Quit Date</td>
<td>7-14d (up to 35) after starting</td>
<td>Same day up to 4 weeks after starting</td>
<td>7-10d after starting</td>
</tr>
<tr>
<td>Caution</td>
<td>Risk of increased cardiac events in patients with heart disease; Steven-Johnson Syndrome; anticoagulants; erythema multiforme. Reduce dose in renal disease. Avoid driving/machinery if sedated</td>
<td>Inhaler: still has nicotine when finished - dispose properly. Patch: OK if smokers, leave patch on and try to quit again</td>
<td>Seizures, mood changes, suicide, drug interactions. Contaminations: Seizure disorders, bulimia/anorexia (recent or remote), liver failure, monoamine oxidase inhibitors</td>
</tr>
<tr>
<td>Side Effects</td>
<td>Nausea, nightmares, insomnia</td>
<td>Patch: abnormal dreams/insomnia (remove before bed). All other forms of NRT - mouth irritation, dyspepsia.</td>
<td>Dry mouth, constipation, agitation, insomnia, headache, tremor</td>
</tr>
<tr>
<td>Dose</td>
<td>Day 1 - 3: 0.5mg PO once daily. Day 4 - 7: 0.5mg PO BID. Day 8 - onwards: 1mg PO BID x 12 - 24 weeks</td>
<td>Patch: different doses tapered over 12 weeks. Inhaler: cartridge=10mg nicotine=1mg menthol, PRN max12/d. Gum: Nicorette® (2/4mg), Thrive® (1/2mg), max 20/d. Spray: 1mg per spray, 1-2 sprays q30-60min, max 4 sprays/hr. Lozenges: 2mg/25 cig/day, 4mg/25 cig/day, max20/d.</td>
<td>150mg SR PO qam x 3d; then BID x 7-12 weeks</td>
</tr>
</tbody>
</table>

### CAN-ADAPTT Summary Statements

**Counseling & Psychosocial Approaches**

1. **Combining counseling and smoking cessation medication** is more effective than either alone, therefore both should be provided to patients/clients trying to stop smoking where feasible. *(1A)*

**CAN-ADAPTT Pharmacotherapy Guidelines - Updated**

1. **Offer efficacious pharmacotherapy** to every patient who smokes 10 or more cigarettes daily and is willing to make a quit attempt. *(1A)*

2. Healthcare providers should **tailor smoking cessation pharmacotherapy** to the patient’s clinical needs and preferences. *(1C)*

3. **Varenicline** improves smoking cessation rates at 6 and 12 months compared to placebo. *(1A)*

4. **Varenicline** is more efficacious at improving smoking cessation rates at 6 months compared to bupropion. *(1A)*

5. **Varenicline** is more efficacious at improving smoking cessation rates at 6 months compared to NRT. *(1B)*

6. **Bupropion** improves smoking cessation rates at 6 and 12 months compared to placebo. *(1A)*

7. **Nicotine replacement therapy** in any commercially available form (transdermal patch, gum, lozenge, nasal spray, oral inhaler, sublingual tablet) improve smoking cessation rates at 6 and 12 months. *(1A)*

8. 8 weeks of NRT patch therapy is as effective as longer course of therapy for smoking cessation at 6 months. *(1A)*

9. Higher NRT gum dose of 4 mg (vs. 2 mg) is more efficacious for smoking cessation rates at 6 months for high dependency smokers or those who have relapsed with 2 mg. *(1A)*

10. **Combining NRT patch** with other forms of NRT yields higher efficacy for smoking cessation rates at 6 months compared to patch alone, especially where immediate/fast effects are desired. *(2A)*

11. NRT patch high dose (44/42 mg) has a very small or borderline benefit than standard dose (22/21 mg) for smoking cessation rates at 6 months. *(2A)*

12. **Cytsine** may improve smoking cessation rates at 6 and 12 months compared to placebo. *(2C)*

13. **Nortriptyline** may improve smoking cessation rates at 6 and 12 months compared to placebo. *(2C)*

14. There is insufficient evidence to make a recommendation regarding the use of **clonidine** for smoking cessation. *(C)*

### Glossary

- **BID**: twice a day
- **COPD**: chronic obstructive pulmonary disease
- **d**: days
- **lbs**: pounds
- **LI**: limited use
- **NRT**: nicotine replacement therapy
- **MAOI**: monoamine oxidase inhibitor
- **Max**: maximum
- **ODB**: Ontario drug benefit
- **OTC**: over-the-counter / no prescription needed
- **PRN**: as needed
- **qam**: every morning
- **Rx**: requires subscription
- **SR**: slow release
- **Wt**: weight

### References

Information provided is evidence-based but may not be approved for use in certain regions. Refer to your local regulatory authority for approved indications, guidelines, and updated safety information.

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**Additional information:**

**First line pharmacotherapy**

Therapy should be tailored to individual’s needs and preferences.

**Reduce to quit protocol**

**Step 1: (0-6 weeks)**

Set target no. of cigarettes per day to cut down (recommended at least 50%) and a date to achieve it by. Use gum to manage cravings.

**Step 2: (6 weeks - 6 months)**

Continue to cut down cigarettes using gum. Goal should be complete stop by 6 months. Seek advice from HCP if smoking has not stopped within 9 months.

**Step 3: (within 9 months)**

Continue to cut down cigarettes using gum. Goal should be complete stop by 6 months. Seek advice from HCP if smoking has not stopped within 9 months.

**Step 4: (within 12 months)**

Cut down the amount of gum used, then stop gum use completely (within 3 months of stopping smoking).