NURSING TOBACCO INTERVENTIONS – PART II

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NURSING TOBACCO INTERVENTIONS – PART II

Goal: The learner will be able to provide basic behavioral and pharmacological tobacco interventions for patients who are ready to quit tobacco use or who have recently quit and follow-up appropriately after providing SBIRT services for tobacco. Additionally, the learner will practice and integrate SBIRT clinical skills learned in these modules.

After completing this activity participants will be able to:
- Provide basic behavioral interventions for patients who are ready to quit tobacco use
- Provide basic pharmacological tobacco interventions for patients who are ready to quit tobacco use
- Provide follow up and relapse prevention for patients who have quit smoking
- Apply screening, counseling, and prescribing skills with a simulated patient who uses tobacco

Professional Practice Gaps
Tobacco use is still fairly common; in the United States. Approximately 28.4% of persons aged 12 or older used a tobacco product in the last month in a 2008 survey (NSDUH, 2009). Tobacco is estimated to be responsible for 443,000 premature deaths annually (CDCP, 2008) and cause significant morbidity (Surgeon General, 2004). The effectiveness of tobacco interventions by health care providers was evaluated in a review of the literature by the review panel for the U.S. Public Health Service Clinical Practice Guideline, Treating Tobacco Use and Dependence: 2008 Update (Fiore, et al., 2008). They found that medication and counseling are more effective for promoting tobacco cessation than no treatment and that intervention effectiveness increases with increased intervention intensity. The Clinical Practice Guideline (Fiore, et al., 2008), also provided evidence-based guidelines for clinicians on how to provide brief and more extensive interventions in tobacco use. Despite the documented need for tobacco cessation and effectiveness of clinical interventions and availability of practice guidelines, many health providers still are not providing evidence-based tobacco interventions. A number of studies have found that screening for tobacco use and recommending cessation occurs as frequently as 75% of the time in primary care, other appropriate tobacco interventions are made by in primary care less frequently (Schnoll R et al, 2004; Braun et al, 2004; Jaen et al, 2001; Ellerbeck et al, 2001). Training health care professionals in evidence-based, brief tobacco interventions in order to assure that all health providers know and are confident to provide tobacco interventions will help address this practice gap.
BRIEF INTERVENTIONS FOR PATIENTS READY TO QUIT

Preparing to Quit Tobacco

Several quick steps during an office visit or hospital stay can help the patient in their quit attempt. Help patients develop a plan for quitting and facilitate anticipation of problems and problem solving. Help them to:

1. **Set a date to quit**: Note – For some people, starting immediately is effective; for others, getting everything in place first feels important.
2. **Seek support**: Tell the people in their lives that they are quitting. This includes asking for support and asking those who use tobacco to join them in a quit attempt or not use it around them.
3. **Anticipate challenges** including withdrawal symptoms and address them. For example, lifestyle changes can reduce stress and improve quality of life (e.g., exercise or walking), and reduce exposure to smoking cues. Review what was learned from previous quit attempts. How to address withdrawal is specifically addressed later in this module.
4. **Remove tobacco and triggers to using it** from their environment. For example, throw out cigarette lighters.
5. **Abstain completely**: Recommend complete abstinence from tobacco and avoiding alcohol. Any smoking, even a single puff, increases the likelihood of a full relapse, although a slip does not mean failure.
6. **Be knowledgeable**: Provide basic information about smoking/using tobacco and successful quitting. For example, provide the following information:
   - Withdrawal symptoms usually peak 1 to 2 weeks after quitting but may persist for months (Symptoms include negative mood, urges to smoke, and difficulty concentrating)
   - Describe the addictive nature of smoking.
7. **Prescribe medication**: Recommend tobacco cessation medication to support the quit attempt (covered on a following page). Most patients will have their chances of success in quitting tobacco improved by the addition of a tobacco cessation medication (Fiore et al, 2008). Exceptions are specific groups for which there is not enough evidence of effectiveness, such as teens or pregnant women.
8. **Provide quit-line number**: Advise the patient of the local quit line number or provide the national number: 1 800 QUIT NOW for additional support.

(Fiore 2008)
Next we will show how to apply these steps with Ms. Ashley Mason, who we met earlier. She has returned after 2 months with another upper respiratory infection and is now ready to quit.

WITHDRAWAL

WITHDRAWAL SYMPTOMS AND ASSOCIATED FEATURES

Withdrawal symptoms typically begin within hours of quitting and peak within 2 to 3 days. The worst symptoms usually fade by 2 to 3 weeks, but some symptoms may persist (ACS 2009). Individual experience may vary. The following symptoms are experienced after abrupt cessation of nicotine following a period of prolonged use (weeks):

- Dysphoric or depressed mood
- Insomnia
- Irritability, frustration, or anger
- Anxiety
- Restlessness or impatience
- Decreased heart rate
- Increased appetite or weight gain
- Difficulty concentrating

For a diagnosis of nicotine withdrawal, four or more of the above symptoms must be present and must cause clinically significant distress or impairment of social, occupational, or other important area of functioning.

Associated features might include the following:

- Cravings for cigarettes
- Desire for sweets
- Impaired performance on tasks requiring vigilance

(Audrian-McGovern & Benowitz 2011; Kozink et al. 2010)

More on the Effect of Smoking Cessation on Moods

Subjective feelings associated with smoking abstinence after 4 hours include depression, stress, irritability, restlessness (Parrott et al. 1993). Psychological symptoms decrease linearly with increasing number of days in abstinence (Schiffman & Jarvick 1976). Symptoms increase thereafter throughout the day but improve the next morning and increase again. There may be some increase in anxiety immediately following smoking cessation, however, anxiety tends to become lower than pre-cessation levels within one week of quitting (West & Hajeck 1997). Symptoms of anxiety and depression with smoking cessation are more severe in people with histories of major depression or anxiety disorders (Breslau, Kilbey, & Andreski 1992).
FYI
Alcoholics are very likely to smoke while drinking. People who feel that their alcohol and tobacco use are strongly linked may be candidates for an attempt at simultaneous recovery (Sobell, Sobell, & Agrawal 2002), although simultaneous dual recoveries are difficult and often lead to failure (Stotts, Schmitz, & Grobowski 2003).

**STATE QUIT-LINE LIST**
Nurse Brown provides Ashley with the local quit-line number to help provide her with support in her quit attempt until their next appointment.

The following list includes links to many state quit-line numbers and other local tobacco cessation resources. Information on Medicaid and reimbursement for state employees is included near the end of this module.

**List of Tobacco Cessation Programs and Quit-lines by State**
- **Alabama** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Alaska** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Arizona** Quitline: 1-800-55-66-222
- **Arkansas** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **California** Quitline: 1-800-NO-BUTTS
- **Colorado** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Connecticut** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Delaware** Quitline: 1-866-409-1858
- **Florida** Quitline: 1-877-U-CAN-NOW (1.877.822.6669)
- **Georgia** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Hawaii** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Idaho** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Illinois** Quitline: 1-866-QUIT-YES
- **Indiana** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Iowa** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Kansas** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Kentucky** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Louisiana** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Maine** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Maryland** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Michigan** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Massachusetts** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Minnesota** Quitline: 1-888-354-PLAN
- **Mississippi** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Missouri** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Montana** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **Nebraska** Quitline: 1-800-784-8669
- **Nevada** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **New Hampshire** Quitline: 1-800-QUIT-NOW (1-800-784-8669)
- **New Jersey** Quitline: 1-866-NJSTOPS
New Mexico Quitline: 1-800-QUIT-NOW (1-800-784-8669)
New York Quitline: 1-866-NY-QUITS (1-866-697-8487)
North Carolina Quitline: 1-800-QUIT-NOW (1-800-784-8669)
North Dakota Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Ohio Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Oklahoma Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Oregon Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Pennsylvania Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Puerto Rico Quitline: 1-877-335-2567
Rhode Island Quitline: 1-800-QUIT-NOW (1-800-784-8669)
South Carolina Quitline: 1-800-QUIT-NOW (1-800-784-8669)
South Dakota Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Tennessee Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Texas Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Utah Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Vermont Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Virginia Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Washington Quitline: 1-800-QUIT-NOW (1-800-784-8669)
West Virginia Quitline: 1-877-966-8784
Wisconsin Quitline: 1-800-QUIT-NOW (1-800-784-8669)
Wyoming Quitline: 1-800-QUIT-NOW (1-800-784-8669)
District of Columbia Quitline: 1-800-QUIT-NOW (1-800-784-8669)

BRIEF COUNSELING INTERVENTIONS WHEN MS. MASON IS READY TO QUIT

Ms. Mason is now ready to quit

Ms. Mason returns two months later with another upper respiratory infection. She thought about what was covered in the brief intervention two months ago and says she is now ready to quit smoking.

Preparing to Quit Tobacco
Once the patient decides to quit, they need brief interventions to support their quit attempt.

Sample brief intervention dialogue of counseling for tobacco cessation
(Using 8 steps of brief interventions for patients who are ready to quit)

Nurse Brown: "I recommend quitting completely. [Step 5. Recommend complete abstinence.] There is no level of smoking that is healthy. Can we talk about some ideas that might make quitting easier for you?"
Ms. Mason: Alright.

Nurse Brown: How can you prepare the people in your lives and your home so that you are supported and not tempted to start smoking again? [Step 2. Have them tell the people in their lives that they are quitting.]

Ms. Mason: I've got to get my boyfriend on board in supporting me."

Nurse Brown: You can expect your withdrawal symptoms, such as negative mood, urge to smoke, and difficulty concentrating, to peak around week 1 to 2, but some symptoms might last for months. That's why it's important to stay on medication. Smoking is an addiction and it takes time for your brain to recover. [Step 6. Provide information about what to expect.]

Ms. Mason: Well, I know that if I don't throw out everything I use to smoke, like my lighter, my cigarettes, and my ashtrays; I will want a cigarette if I see them. I'll avoid the smokers at the bar.

Nurse Brown: What difficulties might lead you to smoke and what can be done to prevent that? [Step 3. Anticipate challenges, including withdrawal symptoms and address them.]

Ms. Mason: Well, I know that if I don't throw out everything I use to smoke, like my lighter, my cigarettes, and my ashtrays; I will want a cigarette if I see them. I'll avoid the smokers at the bar.

Nurse Brown: Don't forget to get rid of all cigarettes! (smiles) [Step 4. Remove tobacco and triggers to using it from their environment.]

Ms. Mason: Right! (laughs)

Nurse Brown: These are some great ideas for preparing your home and relationships! Actually, avoiding alcohol will help improve your likelihood of succeeding. [Step 5. Recommend avoiding alcohol.] Have you learned anything else from your previous attempts to quit that you can use now? [Step 3. Review what was learned in previous quit attempts.]

Ms. Mason: I need something to help stop the craving; it's so hard at times! Maybe chewing gum.

Nurse Brown: I understand and can sympathize that dealing with the craving can be difficult. Chewing gum may be a good distraction. We should also talk about adding a medication to help with withdrawal symptoms [Step 7. Recommend tobacco cessation medication]. With all this in mind, how would you feel about setting a specific date to quit in the near future?" [Step 1. Set a quit date.]

Ms. Mason: Good. I'll do it this weekend, starting Saturday morning.

Nurse Brown: 1 800 QUITNOW is a number that will connect you with your local quitline for additional support. Call them if you have questions or need additional support. [Step 8 Advise patients of local quit line number] Have we covered all the challenges that you should anticipate? [Step 3. Anticipate challenges.]

Ms. Mason: I think I'll be okay. Thanks!

Nurse Brown: And remember that a little slip does not mean failure. You can start again. [Step 6. Provide information.]

Ms. Mason: Okay. I'll keep that in mind.
Nurse Brown: Okay. Now let's talk about what you can do about withdrawal symptoms when you quit.

Any smoking, even a single puff, increases the likelihood of a full relapse, although a slip does not mean failure.

**MS. MASON – ASSIST WITH WITHDRAWAL**

**Teach Coping Skills: The 4 D’s**

Help patients prepare to cope. Four self-help steps can be taught for coping with withdrawal (the 4 D’s) (ACS 2009):

1. Deep Breaths
2. Drink Water
3. Do Something Else
4. Delay

**Cognitive restructuring**

Taking a different frame of mind, such as looking for positive things or looking on the bright side, can help manage moods.

---

**Sample brief intervention dialogue of phone counseling after tobacco cessation**

(Using 6 steps of brief interventions for patients who are ready to quit)

**Nurse Brown:** Did you have withdrawal symptoms last time you quit smoking?

**Ms. Mason:** I did have some cravings, even on the nicotine patch. I found that I'd often go to pick up a cigarette.

Nurse Brown: The cravings are part of withdrawal symptoms. There are 4 things you can take to help with cravings. They each start with the letter "D" so that should help you remember them. Deep breathing, Drink water, or Do something else, when you feel those cravings or automatically reach for a cigarette. It these don't work, at least try to Delay before picking up a cigarette. Sometimes the urge will pass. So deep breathing, drink water, do something else, and delay are the steps to try. They are on this printout. [Nurse Brown hands Ms. Mason a patient handout: "The 4 D’s: Steps for Coping with Withdrawal" found in the Related Resources" at the end of the module.]

**Ms. Mason:** Thanks! I'll give those a try.

**Nurse Brown:** And if you find your moods get low, try thinking of several things in your life for which you are grateful or try to find the "silver lining" in a difficult situation.

**Ms. Mason:** I'll give that a try, too.

**Nurse Brown:** A medication will help with those withdrawal symptoms. Let's talk about which medication to use to support you in your quit attempt.....
Consider Pharmacotherapy

Pharmacotherapy can help reduce symptoms of withdrawal from tobacco. It is covered in detail in the next section.

BRIEF INTERVENTION VIDEO EXAMPLE IN HOSPITAL
Hospital Patient Who Is "Ready to Quit" Tobacco

Video: The video “Brief Tobacco Intervention: Ready 2 Quit” (Alberta Health Services, 2012), which illustrates a nurse following up on a positive screening question with additional assessment and providing a brief intervention for a patient in the hospital, can be found here: https://www.youtube.com/watch?v=Z4B74E_8ncc

Video Description
The nurse follows up after discovering from his record that he uses tobacco, and learns that he is ready to quit smoking cigarettes. Steps that she takes include:

• Asking permission to talk about it and focusing on the topic
• Asking what type of tobacco he uses

The patient volunteers information that the nurse would otherwise ask:

• Amount that he smokes
• History of past quit attempts
• His readiness to quit
• Acknowledges that it might be easier for him to quit while in the hospital, where he cannot smoke anyhow

The nurse next:

• Affirms that it is important for him to quit, and reminds him of the impact/potential impact on his health
• Responds to his question about how to handle craving with a discussion of nicotine replacement (and provides it immediately)
• Provides patient education
• Makes a referral for follow-up counseling
MEDICATION TO SUPPORT QUITTING

Does Ms. Mason need medication to support her quit attempt?
Because she smokes a pack and a half a day and is interested in quitting and is not pregnant, Ms. Mason is likely to benefit from adding smoking cessation medication to the counseling described on the previous page.

Patients trying to quit are likely to benefit from medication to ease withdrawal symptoms, because tobacco is an addictive substance (Fiore et al. 2008). Medication approved by the FDA to help with tobacco cessation should be recommended to all smokers trying to quit, except the following groups for whom effectiveness is not sufficiently documented: pregnant women, smokeless tobacco users, light smokers, and adolescents.

First-line Medications for Tobacco Cessation

1. Nicotine replacement medications
   - Nicotine patch
   - Nicotine gum
   - Nicotine lozenge
   - Nicotine inhaler
   - Nicotine nasal spray

2. Non-nicotine replacement medications
   - Bupropion SR
   - Varenicline

Information on precautions, contraindications, and side effects; dosage; availability over-the-counter; prescribing instructions; and cost are available in the Treating Tobacco Use and Dependence (Fiore et al. 2008, pp 47-54), available in the Resources at the end of this module.

It is important to pay careful attention to the associated specific contraindications, warnings, precautions, other concerns, and side effects on package inserts and FDA updates for these medications. For example, varenicline has been linked to a possible increased risk of suicide. The following two medication regimens are considered more effective than the nicotine patch alone (Fiore et al. 2008):

- 2 mg/day varenicline
- Long-term nicotine patch use + ad libitum nicotine replacement therapy (nicotine gum or lozenge)

Note that some states provide free medications to callers of their quit-lines.
VARENICLINE (CHANTIX®)
First-Line Pharmacotherapies: Varenicline (Chantix®)

| DESCRIPTION | A non-nicotine medication in the form of a tablet approved by the FDA in 2006 for smoking cessation. Available as Chantix® and only by prescription. Varenicline blocks nicotine from attaching to receptors in the brain (selective alpha4beta2 nicotinic acetylcholine receptor partial agonist). Varenicline reduces craving and withdrawal, and, for those who continue to smoke, smoking satisfaction (Gonzales et al. 2006). |
| EFFECTIVENESS | 1 mg dose approximately doubles and 2 mg dose approximately triples long term abstinence. Varenicline has been shown to be the most effective monotherapy for smoking cessation (Fiore et al. 2008; Tran et al. 2012). |
| PRESCRIBING INSTRUCTIONS | • Start varenicline 1 week prior to the quit date. This is not applicable if the quit date has already passed, or if the patient quit spontaneously.  
• Begin with 0.5 mg every morning for 3 days and then increase to 0.5 mg twice daily for day 4 to day 7, then 1 mg twice daily (morning and evening) for a total of 12 weeks. Approved for a 12 week course and for maintenance for an additional 12 weeks if smoking cessation has been achieved has been shown to improve success rates (Tonstad et al. 2006).  
• Taken after eating with a full glass of water |

(Center Watch, 2000-2014)
### Precautions/Contraindications

**Suicidal thoughts and behavior, aggressive and erratic behavior, drowsiness:** The FDA recommends monitoring patients on varenicline for behavior or mood changes because of an association with suicidal ideation, attempted and completed suicide, changes in behavior, agitation, and depressed mood in some patients (FDA 2009b). See the FDA-required "boxed warnings" on all Chantix/varenicline labels as well as the accompanying medication guide.

- Patients on the medication who experience these symptoms should contact their doctors.
- Ask about psychiatric illnesses prior to prescribing varenicline and the risks should be considered.
- Consider a mental health evaluation prior to treatment with Chantix.

**Driving and operating machinery.** Patients also should use caution when driving or operating machinery until they know how varenicline might affect them.

**Diabetes, asthma, blood thinners:** Dose of insulin, asthma medications, and blood thinners may need to be lowered once the patient quits smoking (CenterWatch 2000-2014).

**Pregnant women, breastfeeding:** Encourage quitting without pharmacological interventions, if possible. Varenicline has not been shown to be effective in this group, nor has it been evaluated in breastfeeding patients.

**Patients with renal impairment:** Reduce dosage as most of the active compound is excreted renally (Obach et al. 2006) and monitor closely. Use with caution with creatinine clearance less than 30mL/min or with dialysis.

**Cardiovascular:** "A small, increased risk of certain cardiovascular adverse events in patients who have cardiovascular disease" (FDA 2011).

**Impairment:** Impairment of the ability to drive or operate heavy machinery may occur (Fiore 2008). Advise caution until they know how the drug affects them.

### Side Effects

Possible suicidal thoughts and behavior, aggressive and erratic behavior, drowsiness, depressed mood, agitation, changes in behavior (see warnings above). Possible trouble sleeping, abnormal/vivid/strange dreams.

Nausea (28.1%) is the most common side effect (Gonzales et al. 2006).

Headache, vomiting, flatulence, insomnia, abnormal dreams, and dysgeusia (altered taste) have also been reported (USFDA 2006).

Potential serious side effects include: Swelling of the face, tongue, lips, gums, throat, arms, or legs, difficulty swallowing or breathing, rash, swollen, red, peeling or blistering skin, blisters in the mouth; a doctor should be contacted immediately (PubMed 2009).

(Updated ASHP, 2014)
# BUPROPION (ZYBAN®)

## First-Line Pharmacotherapies: Bupropion Hydrochloride

| DESCRIPTION | A non-nicotine medication in the form of a tablet. Available as Zyban® and only by prescription. May be used in conjunction with nicotine replacement therapies. Bupropion is also used as an antidepressant (Wellbutrin) and is an ingredient in the weight-loss medication, Contrave, and so should not be prescribed along with them. Bupropion's mechanism of action appears to involve noradrenergic and/or dopaminergic mechanisms. Bupropion is more effective than placebo in helping smokers fight off cravings, a major contributor to relapse. |
| EFFECTIVENESS | Long-term abstinence rates are approximately doubled with bupropion compared to placebo (Fiore 2008). |
| PRESCRIBING INSTRUCTIONS | • Start bupropion 1 to 2 weeks prior to the quit date. This is not applicable if the quit date has already passed, or if the patient quits spontaneously.  
• Begin with 150 mg every morning for 3 days, then increase to 150 mg twice daily for 7 to 12 weeks.  
• If insomnia is a problem, the patient can take the PM dose earlier (at least 8 hours after the AM dose).  
• Alcohol intake should be eliminated or minimized.  
• Can be used as a maintenance therapy for as long as 6 months. |
### Precautions/Contraindications

**Mood:** The FDA now requires descriptions in medication guides and "boxed warnings" on all Zyban and bupropion labels due to symptoms of serious mental illness, such as changes in behavior, hostility, agitation, depressed mood, suicidal thoughts and behavior, and attempted suicide (FDA 2009b).

**Seizures:** Seizure risk is increased in patients already at risk for seizures. Risk is dose-dependent and may be minimized by not exceeding 300 mg per day or 150 mg for a single dose. Risk is higher also with secondary to disease (diabetes requiring the use of hypoglycemics or insulin, central nervous system tumor, or epilepsy) or in conjunction with medications that lower seizure threshold (antipsychotics, antidepressants, theophylline, systemic steroids) and with alcohol.

**Cardiovascular diseases:** Use with caution in patients with a recent history of myocardial infarction or worsening angina. May cause hypertension infrequently.

**Pregnant women:** Women who are pregnant or lactating should be encouraged to try to quit without pharmacological interventions. This medication has not been shown to be effective in this group, nor has it been evaluated in breast feeding patients.

**Patients with hepatic or renal impairment:** Such patients should be closely monitored, and treatment should be initiated at a reduced dosage (e.g., no more than 150 mg every other day with severe hepatic cirrhosis; not well studied in patients with renal impairment).

**Other:** Patients who have eating disorders, have taken monoamine oxidase inhibitors within the past 2 weeks, are allergic to bupropion, or are using another form of bupropion should not take the drug.

### Side Effects

- Insomnia (29% for 150 mg per day, 25% for 300 mg per day, 21% for placebo). To treat, avoid bedtime dose and/or decrease dose.
- Dry mouth (10% vs 4% for placebo).


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### Nicotine Patch

**First-Line Pharmacotherapies: Nicotine Patch**

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th>It is available over the counter in 24-hour and 16-hour doses. Generic patches often cost less. Also available by prescription (which may be important for insurance reimbursement).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td>Almost twice as effective as placebo when used 6-14 weeks at a dose of 14-25 mg (Fiore et al. 2008).</td>
</tr>
</tbody>
</table>
| **Prescribing Instructions** | - Patches should be applied immediately upon waking on the patient's quit date.  
  - A new patch is placed each morning onto relatively hair-free skin, |
<table>
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<th>anywhere between the neck and waist.</th>
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<tbody>
<tr>
<td>• Patches are applied once per day. The 16-hour patch can be used if sleep disturbance is a problem.</td>
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<tr>
<td>• Recommended duration of 8 weeks or less is as effective as longer treatment periods.</td>
</tr>
<tr>
<td>• Initial recommended dose may vary with strength of dependency. Consider patient experience with the patch, amount smoked, degree of dependence in selecting the dose and regimen.</td>
</tr>
<tr>
<td>• A typical regimen: After the initial treatment period of 21 mg/24 hours for 4 weeks, decrease dose by 7 mg every 2 weeks for a total of 8 weeks.</td>
</tr>
</tbody>
</table>

**PRECAUTIONS/Contraindications**

**Cardiovascular diseases:** Nicotine replacement treatments have not been proven to be an independent risk factor in myocardial events. However, prescribe with caution in patients who have a history of coronary heart disease or vasospastic diseases. The patch generally is not prescribed for patients who are less than 2 weeks post-myocardial infarction, who have serious arrhythmias, or who have worsening angina.

**Pregnant women:** The provider should be consulted. Ideally, pregnant women would not use nicotine replacement therapy due to side effects and should instead by offered intensive counseling to help them quit, but the provider should weigh risks vs. benefits.

Use with caution (i.e., weigh risks vs benefits) in patients with hyperthyroidism, insulin-dependent diabetes, active peptic ulcers, or malignant hypertension.

**SIDE EFFECTS**

- A minimum number of mild, minor adverse effects are seen, but background rates of same effects are not clear.
- Reported side effects include the following:
  - a mild, local skin reaction in up to 50% of patients
  - insomnia, vivid dreams
  - Nausea, vomiting, headache, dizziness, cold sweat, pallor, and weakness are all symptoms of an overdose.

(USDHHS 2000; Shiffman et al. 2002; Fiore et al. 2008, ASHP, 2014; GlaxoSmithKline 2012)

**NICOTINE GUM**

**Nicotine Gum**

<table>
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<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Nicotine in a gum (polacrilex) base. Available over the counter in 2-mg and 4-mg dosages.</td>
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<thead>
<tr>
<th>EFFECTIVENESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term abstinence rates are increased approximately 50% over placebo (Fiore et al. 2008).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRESCRIBING Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prescribe dosage by number of cigarettes smoked per day: 4-mg gum for 25 or more cigarettes per day and 2-mg gum for less than 25 cigarettes per day.</td>
</tr>
</tbody>
</table>
Use should not exceed 24 pieces per day.

**Chewing instructions:** The gum should be chewed slowly until a peppery or minty taste develops and then parked between cheek and gum to aid absorption through mucosa. Chewing and parking should be repeated slowly and intermittently for 30 minutes or until the taste dissipates.

For maximum benefit, gum should be chewed on a fixed schedule – for example, at least 1 piece every 1 to 2 hours – for the first 6 weeks, up to 3 months, no more than 24 per pieces per day.

Complete smoking cessation is recommended before using.

Coffee, juices, soft drinks, and other acidic beverages should be avoided 15 minutes before and during chewing because they interfere with nicotine absorption.

Use for as long as 12 weeks.

Gradual reduction in gum use is recommended over the last 7 to 12 weeks.

Holding a flavored gum or lozenge in the mouth may help those trying to quit smokeless tobacco, although the gum and lozenge have not received FDA approval for this purpose.

**Precautions/Contraindications**

**Cardiovascular diseases:** Nicotine replacement treatments have not been proven to be an independent risk factor in myocardial events. However, prescribe with caution in patients who have a history of coronary heart disease or vasospastic diseases. The gum generally is not prescribed for patients who are less than 2 weeks post-myocardial infarction, who have serious arrhythmias, or who have worsening angina.

**Pregnant women:** Pregnant women should not use nicotine gum and should be offered intensive counseling to help them quit.

**Chewing problems:** People who have difficulty chewing gum due to dental appliances, temporomandibular joint problems, or other dental problems may have difficulty using nicotine gum.

Use with caution (i.e., weigh risks vs benefits) in patients with active peptic ulcers, hyperthyroidism, insulin-dependent diabetes, or malignant hypertension.

**Side Effects**

Of people using nicotine gum, 25% had at least one of the following symptoms versus 17% of those on placebo. In order of frequency, the symptoms were as follows:

- Burning taste
- Hiccups
- Gastrointestinal symptoms, nausea
- Temporomandibular tenderness
- Tachycardia

(All of the above can be lessened by proper chewing techniques.)

- Nausea, vomiting, headache, dizziness, cold sweat, pallor, and weakness are all symptoms of an overdose.
NICOTINE LOZENGE

First-Line Pharmacotherapies: Nicotine Lozenge

<table>
<thead>
<tr>
<th>Description</th>
<th>Over-the-counter nicotine replacement in lozenge form available in 2-mg and 4-mg doses. Marketed under the name Commit®.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFFECTIVENESS</td>
<td>The continuous abstinence rates at 6 months compared to placebo are approximately double (24.2 vs. 14.4 for 2 mg dose and 23.6 vs. 10.2 for 4 mg (Fiore et al. 2008)</td>
</tr>
</tbody>
</table>

| PRESCRIBING INSTRUCTIONS | • Eating or drinking should be avoided 15 minutes before or during the time the lozenge is in the mouth. In particular, acidic foods and drinks should be avoided because they interfere with nicotine absorption.  
• The lozenge should be dissolved slowly in the mouth rather than chewing or swallowing it, taking around 20 to 30 minutes, occasionally switching sides of the mouth. Avoid swallowing the undissolved lozenge.  
• Dosage should be selected depending on when the patient has the first cigarette of the day: 4 mg for those who have their first cigarette within 30 minutes of waking and 2 mg for those who have their first cigarette later than 30 minutes after waking.  
• No more than 1 lozenge should be taken at a time, and no more than 5 lozenges should be taken in a 6-hour period.  
• Follow a 12-week quitting schedule. The first 6 weeks, take 1 lozenge every 1 to 2 hours; no fewer than 9 per day but no more than 20 per day. During weeks 7-9, step down to 1 lozenge every 2-4 hours. During weeks 10-12, step down to using one every 4-8 hours. Stop using after 12 weeks.  

Holding a flavored agent in the mouth may help those trying to quit smokeless tobacco, although the lozenge has not received FDA approval for this purpose. |

| PRECAUTIONS/Contraindications | Cardiovascular diseases: Nicotine replacement treatments have not proven to be an independent risk factor in myocardial events. However, prescribe with caution in patients who have a history of coronary heart disease or vasospastic diseases, weighing risks versus benefits. The lozenge generally is not prescribed for patients who are less than 2 weeks post-myocardial infarction, who have serious arrhythmias, or who have worsening angina.  
Pregnant women: The provider should be consulted. Ideally, pregnant women would not use nicotine replacement therapy due to side effects and should instead by offered intensive counseling to help them quit, but the provider should weigh risks vs. benefits.  
Use with caution: The lozenge should not be chewed or swallowed because the nicotine content will not be properly absorbed. |
Use with caution (i.e., weigh risks vs benefits) in patients with heart problems, hypertension, stomach ulcers, hyperthyroidism, or diabetes or in patients taking prescription drugs for asthma or depression. Do not use the lozenge if a patient is currently using tobacco or if they are on any other form of nicotine replacement therapy.

The adverse events are generally mild and transient and are similar to other oral nicotine replacement products.

- Mouth pain
- Hiccups
- Coughing
- Heartburn
- Sore throat
- Headache
- Indigestion
- Nausea
- Insomnia
- Irregular heartbeat
- Nausea, vomiting, headache, dizziness, cold sweat, pallor, and weakness are all symptoms of an overdose.

(Shiffman et al. 2002; GlaxoSmithKline 2012; ASHP 2014, Fiore et al., 2008)

### NICOTINE INHALER

**Nicotine Inhaler**

**DESCRIPTION**

Prescription medication consisting of a mouthpiece and a cartridge (10-mg). Deep inhalations deliver nicotine that is absorbed through mucosa.

**EFFECTIVENESS**

Long-term abstinence rates were approximately doubled when compared to placebo.

**PRESCRIBING Instructions**

- Initial dosage varies with the individual, 1-2 doses per hour increasing as needed. Minimum recommended dosage is 8 doses per day; maximum is 40. (approximately 100 doses per bottle)
- If stored under 40 degrees F, effectiveness of the inhaler is severely limited.
- Recommended duration of use is 3 to 6 months. Gradual reduction in use is recommended over the last 3 months of use.
- Coffee, juices, soft drinks, and other acidic beverages should be avoided 15 minutes before and during inhalation because they interfere with nicotine absorption.
For maximum benefit, patients should puff on the cartridge frequently.

**Precautions/Contraindications**

- **Cardiovascular diseases**: Nicotine replacement treatments have not been proven to be an independent risk factor in myocardial events. However, prescribe with caution in patients who have a history of coronary heart disease or vasospastic diseases. The inhaler generally is not prescribed for patients who are less than 2 weeks post-myocardial infarction, who have serious arrhythmias, or who have worsening angina.

- **Pregnant women**: The doctor should be consulted. Ideally, pregnant women would not use nicotine replacement therapy due to side effects and should instead be offered intensive counseling to help them quit, but the doctor should weigh risks vs. benefits.

- **Other**: Use with caution (i.e., weigh risks vs. benefits) in patients with bronchospastic disease, active peptic ulcers, hyperthyroidism, insulin-dependent diabetes, or malignant hypertension.

**Side Effects**

- Nasal airway reactions (94% first 2 days; 81% at 3 weeks).
- Dyspepsia (18% vs 9% for placebo).
- Nausea, vomiting, headache, dizziness, cold sweat, pallor, and weakness are all symptoms of an overdose.
- Dependency – 15-20% use longer than recommended; 5% use at a higher dose than recommended.

(USDHHS 2000; Fiore et al. 2008; ASHP, 2014)

**Nicotine Nasal Spray**

*First-Line Pharmacotherapies: Nicotine Nasal Spray*

**Description**

Available only by prescription. One spray in each nostril is one dose. Each spray delivers 0.5 mg of nicotine for a total of 1.0 mg of nicotine per dose.

**Effectiveness**

Studies have shown that people who used the nicotine spray had more than double the likelihood of long-term quitting than those on placebo (Fiore et al. 2008).

**Prescribing Instructions**

- A minimum of 8 doses is recommended per day. Initial dosing should be 1 to 2 doses per hour, increasing dose as needed. Maximum is 40 doses per day.
- Head should be tilted back slightly when administering spray.
- To reduce irritating effects, nasal spray should not be sniffed, swallowed, or inhaled through the nose when administering doses.
- Complete smoking cessation is recommended while using.
- Therapy should continue for 3 to 6 months.
Cardiovascular diseases: Nicotine replacement treatments have not been proven to be an independent risk factor in myocardial events. However, prescribe with caution in patients who have a history of coronary heart disease or vasospastic diseases. The nasal spray generally is not prescribed for patients who are less than 2 weeks post-myocardial infarction, who have serious arrhythmias, or who have worsening angina.

Pregnant women: The doctor should be consulted. Pregnant women are encouraged to quit without medication. Ideally, pregnant women would not use nicotine replacement therapy due to side effects and should instead be offered intensive counseling to help them quit, but the doctor should weigh risks vs. benefits.

Use with caution (i.e., weigh risks vs benefits) in patients with bronchospastic disease. It is not recommended for use in patients with severe reactive airway disease.

Use with caution (i.e., weigh risks vs benefits) in patients with hyperthyroidism, insulin-dependent diabetes, active peptic ulcers, or malignant hypertension. Dependency may arise from use, causing patients to increase their dose or use the spray longer than is recommended.

SIDE EFFECTS

- Headache (18% vs 15% placebo)
- Local irritation consisting of nasal irritation, runny nose, throat irritation, watering eyes, sneezing, or coughing common in first 2 days, mild after 3 weeks)
- Nausea, vomiting, dizziness, cold sweat, pallor, and weakness are all symptoms of an overdose.

(USDHHS 2000; Fiore et al. 2008; ASHP, 2014)

COMBINATION THERAPY

Combination Pharmacotherapy Overview
Certain combinations of smoking cessation remedies are more effective than monotherapy (Fiore et al. 2008), although combination therapy has not been approved by the FDA. One example of an effective combination is combining the nicotine patch with a shorter-acting nicotine drug (e.g., lozenge, gum, nasal spray, or inhaler) or bupropion. The patch maintains a continuous level of nicotine and the shorter acting drug is available for immediate cravings.

Combinations for dual diagnosis. For patients with a dual diagnosis, such as a medical, psychiatric, or substance use disorder, consider what pharmacotherapy is useful for the specific comorbidity, dual purpose medications, and contraindications. Monitor these patient according to their need and the type of pharmacotherapy.

Basis for Combination
A combination of pharmacotherapy should be based on:

1. Failure of monotherapy
2. Overwhelming and spontaneous cravings
3. High level of dependence  
4. History of failed attempts  
5. Experiencing nicotine withdrawal  

(Bader 2009)

**Specific Combinations**  
Specific combinations of pharmacotherapies can be divided into:  
1. two or more forms of NRT (patch + gum, lozenge, or inhaler) —OR—  
2. bupropion and a form of NRT (bupropion + patch or gum)  

(Bader 2009)

### SELECT MEDICATION BY PATIENT NEEDS

#### Which Medication for Which Patient?  
Smoking cessation medications have not been fully compared to each other in clinical trials. Therefore, patient needs contribute to medication selection (see table below):

<table>
<thead>
<tr>
<th>Drug</th>
<th>Patient Needs/Characteristics</th>
</tr>
</thead>
</table>
| **Bupropion**     | • Postponed weight gain  
                    • Simultaneous help with depression  
                    • Alternative to gum, when chewing is a problem  
                    • Alternative to patch, e.g., skin problems, frequent swimming  
                    • Patient's suicide risk should be low  
                    • Low maintenance (wants to take only 1 tablet twice daily)  
                    • Prescription drug needed for third-party reimbursement |
| **Varenicline**   | • Alternative to gum, when chewing is a problem  
                    • Alternative to patch, e.g., skin problems, frequent swimming  
                    • Patient's suicide risk should be low  
                    • Low maintenance (wants to take only 1 tablet twice daily)  
                    • Prescription drug needed for third-party reimbursement |
| **Nicotine Gum**  | • Oral stimulation  
                    • Tension release of gum chewing  
                    • Minimal exposure to nicotine, when a treatment is wanted only during worst cravings  
                    • An adjunct to another drug, e.g., bupropion  
                    • Alternative to patch, e.g., skin problems, frequent swimming  
                    • Control of nicotine intake  
                    • Ability to adjust dosage according to need  
                    • A flavored agent to hold in the mouth as an alternative to smokeless tobacco (although not FDA approved for this purpose) |
| **Nicotine Inhales** | • A relatively fast burst of nicotine during a craving  
                          • Hand-to-mouth motion reminiscent of smoking |
| Nicotine Nasal Spray | • Alternative to gum, when chewing is a problem  
• Minimal exposure to nicotine, when a treatment is wanted only during worst cravings  
• An adjunct to another drug, e.g., bupropion  
• Prescription drug for third-party reimbursement  
• Alternative to patch, e.g., skin problems, frequent swimming  
• Control of nicotine intake  
• Ability to adjust dosage according to need  

| Nicotine Patch | • A fast burst of nicotine during a craving  
• Alternative to gum, when chewing is a problem  
• Ability to minimize exposure to nicotine and use only during worst cravings  
• An adjunct to another drug, e.g., bupropion  
• Prescription drug for third-party reimbursement  
• Alternative to patch, e.g., skin problems, frequent swimming  
• Control of nicotine intake  
• Ability to adjust dosage according to need  

| Nicotine Lozenge | • Inconspicuous treatment  
• Ability to forget about treatment during the day  
• An even dose of nicotine throughout the day  
• Postponed weight gain  
• Prescription drug for third-party reimbursement  
• Alternative to gum, when chewing is a problem  
• Alternative to gum, lozenge, inhaler when patient sips a lot of acidic beverages which interfere with absorption through the mouth  
• Low-maintenance treatment (only have to apply in morning)  

| | • Oral stimulation  
• Alternative to gum, when chewing is a problem  
• Minimize exposure to nicotine and use only during worst cravings  
• An adjunct to another drug, e.g., bupropion  
• Alternative to patch, e.g., skin problems, frequent swimming  
• Ability to control nicotine intake  
• Ability to adjust dosage according to need  
• A flavored agent to hold in the mouth as an alternative to smokeless tobacco (although not FDA approved for this purpose)  

MS. MASON – SELECT A MEDICATION

Select a medication for Ms. Mason:

Ms. Mason does not want to bother with having to think about or "fuss" with her tobacco cessation medication. She also does not want anyone to know she is on a medication for smoking cessation. Her insurance requires that a prescription be written. She has no contraindications to any of the medication choices for smoking cessation.

Question: Which of the following medications is best suited for Ms. Mason?

Choose one

1. Nicotine patch
   - Incorrect. Although a prescription can be written for a nicotine patch, a tablet that Ms. Mason could swallow would address her concern of not having to bother with her medication or have anyone know she is on it (people could notice the patch, for example, while dressing at a gym).

2. Varenicline
   - Correct. A prescription can be written for varenicline, and it comes in the form of a tablet that Ms. Mason could easily swallow. It would address her concern of not having to bother with her medication or have anyone know she is on it.

3. Nicotine gum
   - Incorrect. Ms. Mason requires a prescription so that her insurance will cover her medication. Also, a tablet can be easily swallowed and would address her concern of not having to bother with her medication or have anyone know she is on it. (People might notice if she starts chewing gum frequently.)

4. Nicotine inhaler
   - Incorrect. While nicotine inhalers do require a prescription as Ms. Mason needs so that her insurance will cover her medication, they do not address her concern of not having to bother with her medication or have anyone know she is on it. (Nicotine inhaler use is pretty obvious.)

FOLLOW-UP AFTER BRIEF INTERVENTIONS

Importance of Followup
Follow-up after a patient quits or reduces tobacco use is an important component of interventions and can improve success rates (Fiore et al. 2008). Follow-up for the patient who was not motivated to quit is also important, because interventions can have an additive effect over time. Follow-up calls can be performed by medical assistants or other staff.
Immediate Follow-up
1. For the patient quitting or reducing use of tobacco on a particular date, a phone call immediately before that date as a reminder is ideal.
2. A call within several days after a patient quits/reduces use to check in on how it is going can help keep motivation on track.
3. Scheduling a clinic check-in within the first 2 weeks provides the opportunity for a more detailed update on withdrawal symptoms, effectiveness of medication, side effects, etc.
4. In a hospital setting, make a referral for followup in primary care at discharge.

Long Term Follow-up
Scheduling long term followup after a brief intervention, for example, at 6 months, provides the opportunity for the following steps:
1. Ask about current tobacco use or quit status when appropriate
2. Provide motivation, encouragement, and/or congratulations when appropriate for the situation
3. Review the efficacy and side effects of any medications that were prescribed and are still being used. Discontinue their use if indicated.
4. Discuss relapse or continued use despite the brief intervention using a non-judgmental attitude. Consider whether the patient needs additional brief interventions, brief treatment (more intensive brief interventions) or a referral for more extensive treatment or any comorbid mental health conditions.

FOLLOW-UP TO PREVENT RELAPSE
For the Patient Who Reports a Past Substance Use Problem

A brief intervention to prevent relapse for someone who quit using a substance in the past few years includes the following:
1. Congratulate them on any success
2. Offer strong encouragement to remain abstinent (or reduction of substance use, if appropriate)
3. Using open-ended questions, ask them to describe the following:
   - Benefits of quitting
   - Their success (How long? Resisted "temptations?)
   - Any problems or concerns?
   - Remind them of the benefits of support, such as attendance at 12-step meetings. For tobacco cessation, patients may also benefit from quitline counseling and should know about their local number or the national number 1-800-QUIT-NOW.
   - Medication check. Ask if medication for quitting is still being used. Effectiveness? Side effects? Adjust as needed. Refills needed? Any withdrawal if it is not being used?
• Ask about negative mood or depression and address as needed.

(Fiore et al. 2008)

Alcohol and Smoking Relapse
Alcohol is frequently involved in relapse to smoking, even for non-alcoholics, and so should be avoided when quitting smoking. People who feel that their alcohol and tobacco use are strongly linked may be candidates for an attempt at simultaneous recovery, although simultaneous dual recoveries are difficult and often lead to failure.

MEET YOUR PATIENT: MR. CLARENCE WILLIAMS

Instructions: Please review all the information available on this case and then proceed to answer any questions.

Name: Clarence Williams
Age: 70 years old
Chief Complaint: Gall bladder surgery
History of Present Illness: Mr. Williams is in the hospital recovering from emergency gall bladder surgery
Allergies: None

Vital Signs

<table>
<thead>
<tr>
<th>Height: 5'11&quot;</th>
<th>Weight: 170 lbs</th>
<th>Pulse: 76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure: 120/80</td>
<td>Respiration Rate: 14</td>
<td>Temperature: 100.4° F</td>
</tr>
</tbody>
</table>

Past Medical History
Medical Illnesses: Long history of cholecystitis, elevated cholesterol treated since 2002; hypertension responded to weight loss; frequent bronchitis and upper respiratory tract infections
Psychiatric Illnesses: None
Injuries/Hospitalizations: Appendectomy age 23, fractured right tibia in motor vehicle accident age 40, influenza and pneumonia age 60
Surgeries: None

Family/Social History
Relatives: Wife age 59
Occupation: Janitor
Marital/Family Status: Married; 5 grown children and 11 grandchildren live in the area.
Substance Use: Drinks two to three alcoholic beverages a day only on weekends; smokes 1 and a half packs per day with a 60 pack-year history of smoking
**Current Medications**
**Prescription Medications:** Atorvastatin for elevated cholesterol

**OTC Medications:** Naproxen or ibuprofen prn plus extra strength acetaminophen daily for osteoarthritis and work-related muscle aches.

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**LAB RESULTS**

Brownsville Regional Hospital  
123 Brownsville Street  
Brownsville, MI  
Phone: 555-555-5555

**Patient:** Williams, Clarence  
**Med Rec #:** 555-55-555-1  
**Age:** 70 years old

Measurements above or below the normal range are highlighted.

<table>
<thead>
<tr>
<th>Value</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>7300 (/µL³) 4500-11000 (/µL³)</td>
</tr>
<tr>
<td>Neutrophils</td>
<td>57 (%) 47-77 (%)</td>
</tr>
<tr>
<td>Band Neutrophils</td>
<td>1.4 (%) 0-3 (%)</td>
</tr>
<tr>
<td>Lymphocytes</td>
<td>24 (%) 16-43 (%)</td>
</tr>
<tr>
<td>Monocytes</td>
<td>3 (%) 0.5-10 (%)</td>
</tr>
<tr>
<td>Eosinophils</td>
<td>4.5 (%) 0.3-7 (%)</td>
</tr>
<tr>
<td>Basophils</td>
<td>0.7 (%) 0.3-2 (%)</td>
</tr>
<tr>
<td>RBC</td>
<td>5.1 (x10⁶ /µL) 4.6-6.2 (x10⁶ /µL)</td>
</tr>
<tr>
<td>HCT</td>
<td>42 (%) 37-47 (%)</td>
</tr>
<tr>
<td>Hgb</td>
<td>12.5 (g/dL) 12-15 (g/dL)</td>
</tr>
<tr>
<td>MCV</td>
<td>82 (fl) 80-100 (fl)</td>
</tr>
<tr>
<td>MCH</td>
<td>33 (pg) 28-32 (pg)</td>
</tr>
<tr>
<td>MCHC</td>
<td>34 (g/dL) 32-36 (g/dL)</td>
</tr>
<tr>
<td>RDW</td>
<td>11.9 (%) 11.7-14.2 (%)</td>
</tr>
<tr>
<td>Platelets</td>
<td>370000 (/mm³) 375000 (/mm³)</td>
</tr>
</tbody>
</table>

Blood cells appear normal.
<table>
<thead>
<tr>
<th><strong>Sodium</strong></th>
<th>140 (mmol/L)</th>
<th>135-145 (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potassium</strong></td>
<td>4.2 (mmol/L)</td>
<td>3.5-5.0 (mmol/L)</td>
</tr>
<tr>
<td><strong>Chloride</strong></td>
<td>104 (mmol/L)</td>
<td>98-108 (mmol/L)</td>
</tr>
<tr>
<td><strong>Carbon Dioxide</strong></td>
<td>26 (mmol/L)</td>
<td>21-30 (mmol/L)</td>
</tr>
<tr>
<td><strong>Urea Nitrogen</strong></td>
<td>15 (mg/dL)</td>
<td>7-20 (mg/dL)</td>
</tr>
<tr>
<td><strong>Creatinine</strong></td>
<td>0.9 (mg/dL)</td>
<td>0.4-1.0 (mg/dL)</td>
</tr>
<tr>
<td><strong>Calcium</strong></td>
<td>10.2 (mg/dL)</td>
<td>8.7-10.2 (mg/dL)</td>
</tr>
<tr>
<td><strong>Glucose</strong></td>
<td>81 (mg/dL)</td>
<td>70-140 (mg/dL)</td>
</tr>
</tbody>
</table>

**Comprehensive Metabolic Panel**

<table>
<thead>
<tr>
<th><strong>ALT (SGPT)</strong></th>
<th>38 (U/L)</th>
<th>0-48 (IU/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AST (SGOT)</strong></td>
<td>34 (U/L)</td>
<td>0-42 (U/L)</td>
</tr>
<tr>
<td><strong>Alkaline Phosphatase</strong></td>
<td>78.4 (U/L)</td>
<td>20-125 (U/L)</td>
</tr>
<tr>
<td><strong>BUN</strong></td>
<td>8 (mg/dL)</td>
<td>7-20 (mg/dL)</td>
</tr>
<tr>
<td><strong>Creatinine</strong></td>
<td>1.1 (mg/dL)</td>
<td>0.7-1.4 (mg/dL)</td>
</tr>
<tr>
<td><strong>Albumin</strong></td>
<td>4.5 (g/dL)</td>
<td>3.2-5.0 (g/dL)</td>
</tr>
<tr>
<td><strong>Cholesterol</strong></td>
<td>260 (mg/dL)</td>
<td>120-240 (mg/dL)</td>
</tr>
<tr>
<td><strong>LDL</strong></td>
<td>128 (mg/dL)</td>
<td>62-130 (mg/dL)</td>
</tr>
<tr>
<td><strong>HDL</strong></td>
<td>30 (mg/dL)</td>
<td>35-135 (mg/dL)</td>
</tr>
<tr>
<td><strong>Triglycerides</strong></td>
<td>190 (mg/dL)</td>
<td>0-200 (mg/dL)</td>
</tr>
</tbody>
</table>

**Thyroid Profile**

<table>
<thead>
<tr>
<th><strong>TSH</strong></th>
<th>3 (miU/L)</th>
<th>0.5-6 (miU/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T4</strong></td>
<td>10 (ug/dL)</td>
<td>4-12 (ug/dL)</td>
</tr>
</tbody>
</table>

**Toxicology**

<table>
<thead>
<tr>
<th><strong>Blood Alcohol Content</strong></th>
<th>0 (mmol/L)</th>
<th>&gt;11 (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urine Tox Screen</strong></td>
<td>Clear for all drugs tested (marijuana metabolites, cocaine metabolites, opiate metabolites, phencyclidine, amphetamines)</td>
<td></td>
</tr>
</tbody>
</table>
QUIZ: MR. WILLIAMS – ASSESSING TOBACCO USE
At intake, Mr. Williams admitted to smoking 1.5 packs per day and the interviewer noted that Mr. Williams has smoked for 60 pack-years. He has not been able to smoke since coming into the hospital for his cholecystectomy. This presents a great opportunity for him to quit smoking by continuing to remain abstinent, as long as he receives plenty of support. After recovery, while Mr. Williams was still in the hospital, the nurse began by discussing the screening question response regarding smoking:

Provider: I saw on your intake form that you said you smoked, a pack and a half a day. Is that right?
Mr. Williams: Yes ma’am.
Provider: How long have you been smoking?
Mr. Williams: 60 years.

Question: What does it mean that Mr. Williams has smoked 60 pack-years?

1. He has smoked at least a pack a day for 60 years.
   • Incorrect. "Pack years" refers to the number of packs per day smoked times the number of years of smoking and gives an idea of the amount of tobacco exposure.

2. His life expectancy was 60 years based on the number of packs of cigarettes he has smoked.
   • Incorrect. "Pack years" refers to the number of packs per day smoked times the number of years of smoking and gives an idea of the amount of tobacco exposure.

3. The number of packs per day that he smoked times the number of years that he smoked equals 60
   • Correct. The number of packs per day that he smoked times the number of years that he smoked equals 60

4. He has averaged 60 packs per year.
   • Incorrect. "Pack years" refers to the number of packs per day smoked times the number of years of smoking and gives an idea of the amount of tobacco exposure.

WHAT TO INCLUDE IN BRIEF INTERVENTIONS: THE 4 R MNEMONIC
Reminder: Thinking in terms of 4 Rs can help you remember some brief interventions:

• Relevance: How is quitting relevant in the patient's life?
• Risks: What are the risks of continuing to use the substance?
• Rewards: What are the rewards of quitting?
• Roadblocks: What roadblocks will get in the way of quitting?

A quick resource for clinicians on how to help smokers quit is AHRQ's Helping Smokers Quit, a guide for clinicians.
MR. WILLIAMS – PLAN A BRIEF INTERVENTION

Question: Describe a brief intervention objective you would like to cover in talking to Mr. Williams today about his smoking. Describe a brief intervention objective you would like to cover in talking to Mr. Williams today about his smoking.

Response (Suggested answer):
Potential intervention objectives to discuss with Mr. Williams could include an assessment of his readiness to change, how quitting would be relevant to his life, or the rewards of quitting.

POLL: SELECT A MEDICATION FOR MR. WILLIAMS

Question: Which tobacco cessation medication would you prescribe for Mr. Williams?

Responses:
1. Nicotine patch
   • 8% (42 votes)
2. Nicotine gum
   • 4% (20 votes)
3. Nicotine lozenge
   • 1% (3 votes)
4. Nicotine inhaler
   • 0% (2 votes)
5. Nicotine nasal spray
   • 0% (0 votes)
6. Bupropion SR
   • 4% (18 votes)
7. Varenicline
   • 7% (36 votes)
8. Combination of 2 of the above
   • 76% (389 votes)

FOLLOW-UP FOR MR. WILLIAMS

Possible Prescriptions
In the poll on the previous page, all choices were from following list of first-line tobacco treatment medications.

First-line Medications for Tobacco Cessation
1. Nicotine replacement medications
   • Nicotine patch
   • Nicotine gum
   • Nicotine lozenge
   • Nicotine inhaler
   • Nicotine nasal spray
2. Non-nicotine replacement medications
   • Bupropion SR
   • Varenicline

(Fiore et al. 2008)

Follow-up
Upon discharge from the hospital, steps should include:

• Arranging for or recommending follow up with his primary care provider for support in his tobacco cessation attempt.
• The clinician who sees him at his post-surgical evaluations asking how the tobacco cessation attempt is going.
• Writing up the plan for followup in his discharge summary.
• Providing him a prescription for enough medication to last until he is likely to be seen in primary care.
• Providing him with the local quitline number or at least the national number, 1 800 QUIT NOW, which will connect him to the local number.

Part II Module Summary
Here is a summary of the skills you learned in this module:

Brief Counseling Interventions for Patients Who Are Ready to Quit
• Set a quit date after which there will be complete abstinence
• Recommend seeking support by telling people about it
• Anticipate and address potential challenges including removing triggers for tobacco use
• Provide basic information about withdrawal symptoms, the addictive nature of tobacco, etc.
• Provide local quit line number or national number, 1 800 Quit Now

Brief Pharmacological Interventions for Patients Who Are Ready to Quit
• Most patients will do best in their quit attempt with a combination of both counseling and pharmacotherapy.
• Two oral tablets are commonly prescribed to support quit attempts: bupropion and varenicline.
  • They need to be prescribed ahead of the quit attempt to allow time for them to build up in the body.
  • Caution should be used with anyone with a history of depression or other factor predisposing the person to suicide, especially when prescribing varenicline.
• Several forms of nicotine replacement are available that have been shown to be effective in improving quitting success rates: nicotine patch, gum, lozenge, nasal spray, inhaler.
• Combinations of certain medications are effective but caution should be used to keep nicotine within safe levels.
• Use of pharmacotherapy usually needs to extend for at least three months after quitting as it takes time for the brain to change from its addicted state.
RESOURCES AVAILABLE THROUGH THIS MODULE:

**Bupropion Hydrochloride SR (Zyban®)**
See FDA insert for more information

**Handout: Patient Needs Influence Drug Selection**
This table lists patient needs/characteristics that need to be considered when determining which smoking cessation medication is optimal.

**Helping Smokers Quit - A Guide for Clinicians**
A website that explains the 5 A's for tobacco cessation.

**Nicotine Gum**
See FDA package insert for more complete information

**Nicotine Inhaler**
See FDA package insert for more complete information

**Nicotine Lozenge**
See FDA package insert for more complete information.

**Nicotine Nasal Spray**
See FDA package insert for more complete information

**Nicotine Patch**
See FDA package insert for more complete information

**Public Health Advisory: Important Information on Chantix (varenicline)**
This public health advisory, issued by the FDA in 2008, warns about the possibility of severe changes in mood and behavior in patients taking Chantix.

**Relapse Prevention**
Working to prevent relapse.

**Treating Tobacco Use and Dependence: 2008 Update**
Treating Tobacco Use and Dependence: 2008 Update, sponsored by the Public Health Service, includes new, effective clinical treatments for tobacco dependence that have become available since the 2000 Guideline was published. This update will make an important contribution to the quality of care in the United States and to the health of the American people. (From Their Website)

**Varenicline (Chantix®)**
For more complete information, please refer to the FDA package insert.

Always use the [online WYSIWYG HTML Editor](https://www.sbirt.clinicalencounters.com) to compose the content for your website easily. This is a website that is worth using.

REFERENCES USED IN THIS MODULE:

**Practice Gap References**
Module References


