E-cigarettes and Tobacco: What Do You Need to Know to Help Your Pharmacy Customers

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CPE Information

- Target Audience: Pharmacists & Technicians
- ACPE#: 0202-0000-15-201-LO4-P/T
- Activity Type: Knowledge-based

Learning Objectives

1. Discuss both behavioral and intensive interventions. (P)
2. State FDA-approved pharmacotherapy (P/T)
3. Describe the role of a pharmacist in tobacco cessation management. (P)
4. Describe the role of a technician in tobacco cessation management. (T)

Self-Assessment Question 1

What can be used for first line therapy for tobacco cessation?

A. Bupropion and Nicotine Lozenge
B. Nicotine Patch and Nicotine Gum
C. Nicotine Patch
D. All of the above

Self-Assessment Question 2

What is a contraindication to using Varenicline?

A. Stable depression
B. Suicidal ideations, active mental illness
C. Kidney dysfunction
D. Active nausea
Tobacco Dependence as a Chronic Disease

Tobacco Dependence

<table>
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<th>Physiological</th>
<th>Behavioral</th>
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<tr>
<td>The addiction to nicotine</td>
<td>The habit of using tobacco</td>
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<td>Treatment</td>
<td>Treatment</td>
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<td>Medications for cessation</td>
<td>Behavior change program</td>
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Treatment should address the physiological and the behavioral aspects of dependence.

Behavioral Interventions

- Intensity increases success
  - Brief interventions can help as well (few minutes)
- Number of follow-ups (the more the better)
- Key behavioral treatment items
  - 5A’s (Ask, Advise, Assess, Assist, Arrange)
    - Ask
    - Advise
    - Prescribe
    - Refer
  - 5R’s (Risk, Relevance, Rewards, Roadblocks, Repetition)
    - Stress
    - Weight management discussions

Nicotine Addiction Cycle

- What patients may say:
  1. Irritated/Angry
  2. Anxious/stressed
  3. Uncomfortable
- What patients may say:
  1. Relaxed
  2. Stress free
  3. Comfortable

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1. Irritated/Angry
2. Anxious/stressed
3. Uncomfortable

Behavioral Interventions

DEADS strategies, simple behavioral strategies:

- Delay: Urge will fade after 5-10 minutes.
- Escape: Another technique for dealing with an urge is to remove oneself from the situation or event which led to the urge.
- Avoid: Avoiding temptations such as situations that are associated with smoking.
- Distract: Another way to control urges is to get busy with an activity
- Substitute: Use healthy snacks or objects such as straw

Medications for Tobacco Cessation

- Tobacco dependence is a chronic disease that often requires repeated intervention and multiple attempts to quit.
- Effective treatments exist that can significantly increase rates of long-term abstinence and are supported by the 2008 United States Public Health Services Update of Clinical Practice Guidelines on the Clinical Treatment of Tobacco Use and Dependence (USPHS CPG)

Assessing Dependence Level

Brief Fagerstrom Test OR Heavy Smokers’ Index (HSI) for Nicotine Dependence

- a. How soon after waking do you smoke your first cigarette?
  1) Less than five minutes (3 points)
  2) 5 to 30 minutes (2 points)
  3) 31 to 60 minutes (1 point)
- b. How many cigarettes do you smoke each day?
  1) More than 30 cigarettes (3 points)
  2) 21 to 30 cigarettes (2 points)
  3) 11 to 20 cigarettes (1 point)

Scoring: 5-6=heavy dependence; 3-4=moderate; 0-2=light.
Medications – FDA Approved

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<th>Nicotine Replacements</th>
<th>Bupropion</th>
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<td>Nicotine Patch</td>
<td>Varenicline</td>
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<td>Nicotine Gum</td>
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<td>Nicotine Lozenge</td>
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<td>Nicotine Oral Inhaler</td>
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<td>Nicotine Nasal Spray</td>
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***E-cigarettes are not approved pharmacotherapy***

General Recommendations for Nicotine Replacement

- Most patients may require tapering over 3-4 months
- More difficult patients may need longer (maybe up to 1 year)
- “Let slips slide” – continue using medications during slips, unless relapse occurs

Nicotine Patch

- Clinical Pearls
  - Advise patients to rotate sites and avoid using same site for 1 week
  - Upper arm, upper back, upper chest
  - Hives, severe allergy likely secondary to adhesive
  - Stop medication (Unlikely)
  - May remove patch at bedtime if vivid dreams or difficulty sleeping
  - Dispose properly to avoid toxicity to children and pets
  - Do not cut patches
  - Can shower or swim with it (can add sports tape/bandage)

Nicotine Gum

- Clinical Pearls
  - Advise patients to chew each piece slowly and park between cheek and gum when peppery or tingling sensation appears. Repeat park and chew until taste or tingle does not return.
  - Rotate to different sites of the mouth.
  - Delivers nicotine through the lining of the mouth while gum is parked between cheek and gum
  - Avoid drinking beverages for 15 minutes before and after using and avoid acidic beverages
  - Can be difficult to use with dentures or poor teeth
  - Use at least 9 pieces a day for monotherapy to start

Nicotine Lozenge

- Clinical Pearls
  - Instruct patients to allow lozenge to dissolve slowly over 20-30 minutes.
  - Rotate to different sites of the mouth. Nicotine release may cause a warm, tingling sensation.
  - Delivers nicotine through the lining of the mouth while the lozenge dissolves.
  - Avoid drinking beverages for 15 minutes before and after using and avoid acidic beverages
  - Use at least 8 doses a day for monotherapy to start

Bupropion (Zyban, Wellbutrin)

- Mechanism of action
  - Blocks reuptake of DA and NE in reward center, with metabolite hydroxybupropion may also act as nicotine antagonist at alpha-4-beta-2 receptors
- Start one to two weeks prior to Target Quit Date (TQD)
### Bupropion (Zyban, Wellbutrin)

- **Cautions**
  - Bipolar disorder
  - Mental Health concerns (e.g. suicidiality, other medications)
  - Seizures
  - Eating disorders
  - Liver cirrhosis

- **Adverse effects**
  - Insomnia
  - Dry mouth
  - Rash
  - Seizure

### Varenicline (Chantix)

- **Mechanism of action**
  - Blocks nicotine binding to alpha-4-beta-2 nicotinic acetylcholine receptors at the same time partially stimulates the nicotinic receptor to reduce cravings and withdrawal symptoms

- **Cautions**
  - History of depression, anxiety, PTSD, suicidal behavior, seizure risk, reduce alcohol tolerance

- **Start one to two weeks prior to TQD**

### Rationale for Combination Therapy

- **Passive nicotine delivery (patch)**
  - Slow delivery system
  - Constant concentration of nicotine
  - Relieves cravings and withdrawal symptoms

- **Acute nicotine delivery (prn gum or lozenge)**
  - Faster acting delivery system
  - “Rescue” medication
  - Immediate relief of breakthrough cravings and “trigger-to-smoke” context

- **Bupropion and Nicotine Replacement Therapy (NRT)**
  - Similar to above when using short acting NRT

### Combination NRT: Dosing Regimens

- **Nicotine Patch**:
  - Begin with 21 mg or 14 mg based on daily cigarette usage
  - Continue for 12 weeks or longer based on abstinence and use of adjunct NRT

- **Adjunct NRT (i.e. gum or lozenge)**:
  - Start with 6-10 pieces/lozenges/day PRN when acute withdrawal symptoms and urges to use tobacco occur
  - 2mg strength of gum or lozenge is most commonly used in combination therapy regimens
  - Duration of PRN NRT varies by patient; Continue for 12 weeks or longer based on abstinence and continued need for the gum/lozenge.

- **Example Taper Schedule for Nicotine Lozenges**
  - Week 1: Nicotine 21mg patches and 5 lozenges
  - Week 2: Nicotine 21mg patches and 4 lozenges
  - Week 3: Nicotine 21mg patches and 3 lozenges
  - Week 4: Nicotine 21mg patches and 2 lozenges
  - Week 5: Nicotine 21mg patches and 1 lozenges
  - Week 6: Nicotine 14mg patches and 4 lozenges
  - Week 7: Nicotine 14mg patches and 3 lozenges
  - And so forth...

****USE BEHAVIORAL STRATEGIES TO HELP PATIENTS TAPER OFF as needed NRT****
Combination Therapy

- Bupropion Combination Therapy
  - Use standard bupropion dose of 150mg twice daily
  - Combine with
    - Nicotine lozenge or nicotine gum as needed
      - Preferred as it has a behavioral component attached to this (Substitution for coping with breakthrough triggers)
    - Nicotine patch
      - Can be used as well, but doesn’t assist with breakthrough cravings

Smoking and Drug Interactions

- Tobacco smoke (specifically, poly-aromatic hydrocarbons) induces CYP1A2 hepatic enzymes
- CYP1A2 metabolized drugs including those for Alzheimer’s disease, some antipsychotics, and warfarin
- Smoking cessation REVERSES tobacco smoke-induced CYP1A2 hepatic enzyme levels to normal
  - This will increase plasma concentrations in patients whose dose was established while smoking
- Nicotine replacement will not alter the effect

Pharmacist Managed Telephone Tobacco Cessation Clinic (PMTTCC)

- The PMTTCC is a comprehensive tobacco cessation clinic that integrates intensive behavioral therapy with tobacco cessation medications
- Managed by trained tobacco cessation pharmacists with full prescribing privileges with their scopes of practice
- Initial counseling for assessment and plan is around 20-30 minutes
- Follow-up calls occur at 1-2 weeks post Target Quit Date (TQD) and monthly for 6 months and at 9 and 12 months (Can last 5-15 minutes)

PMTTCC – Proactive Model

Role of a Pharmacist

- Conduct all initial calls to gather full assessment
  - Tobacco history
  - Past Quit Attempts
  - Nicotine Dependence
  - Medications used
- Behavioral Counseling
  - Withdrawals
  - Coping Strategies
  - Stress Management
  - Weight gain Concerns
- Medications
  - Prescribing and counsel
Role of Pharmacy Technician

- Main Role is to assist Pharmacist in follow-ups for more stable patients and gathering data
  - Gather tobacco status
  - Slips/Triggers
  - Tobacco Cessation Medication Usage
    - Compliance
    - Adverse events
    - Amount of Nicotine

Role of Pharmacy Technician

- Provide brief counseling
  - Standard always discuss DEADS strategies
- Does not conduct assessments
- Tobacco Cessation Medication Usage
  - Compliance
  - Adverse events
  - Amount of Nicotine
- Does not conduct assessments

Helpful Links

  - Patient Education Sheets (Three prime questions including combination therapy)
  - Provider and Patient Manuals

Key Points

- Behavioral intervention is one key arm to tobacco treatment
- Pharmacotherapy can be effective and safe especially assisting patients with the physiological side of nicotine dependence
- Combination Therapy are safe and effective treatment options
- Pharmacists and technicians can play key roles in tobacco cessation treatment

Answer to Self-Assessment Question 1

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Answer to Self-Assessment Question 2

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Questions

Closing Remarks

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