

Changing the Paradigm: Treating Tobacco Dependence as a Chronic Disease

The ACCP Tobacco Dependence Treatment Toolkit,
3rd Edition

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Disclosures

- Most of what I am presenting today is from the ACCP Tobacco Dependence Treatment Toolkit 3rd Edition
- I am one of the contributors to the toolkit
- I want you to get and use the toolkit.



Disclosures

- Research Support
 - National Institutes of Health
- Other Support
 - Associate Medical Director for Chronic Conditions, Texas Children's Health Plan
 - Editor, Pediatric Asthma, Allergy, & Immunology (Mary Anne Liebert, Inc.)



Why is it important for pediatricians to treat parental tobacco dependence?

- *To reduce the risk of the child becoming tobacco dependent*
- *To prevent and/or treat the child's second hand smoke related illness*



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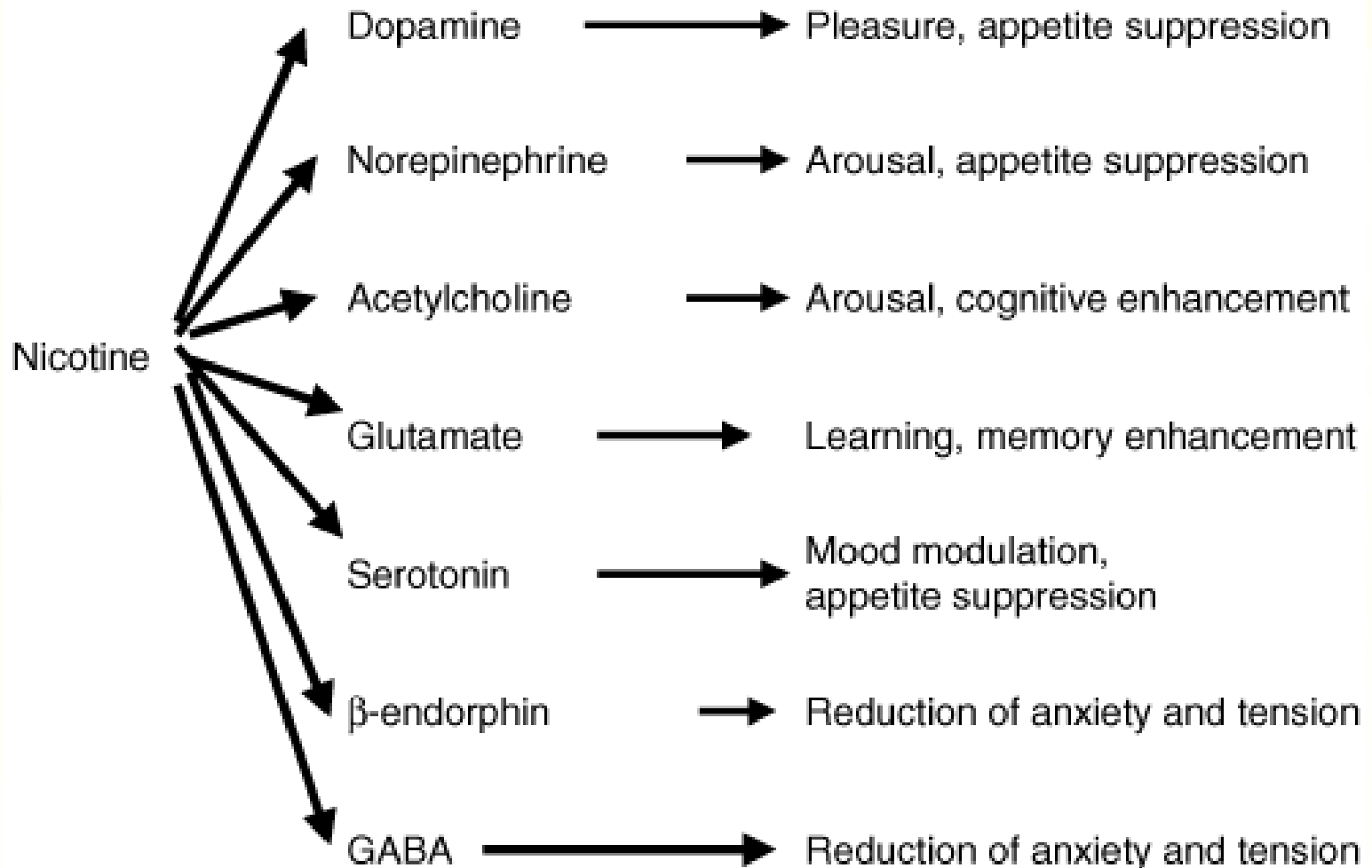
Tobacco dependence is a **COMMON** pediatric disease

- Tobacco dependence starts in childhood and adolescence (1)
- 20% of high school students report smoking in the past 30 days (2)
- Each day in the US (3)
 - 3,900 children 12 - 17 years smoke their first cigarette
 - 1,000 children become daily cigarette smokers.



1. Kessler D. Nicotine Addiction in Young People. N Engl J Med. 1995 Jul 20;333(3):186-9.
2. Youth Risk Behavior Survey, 2007.
3. Results from the 2008 National Survey on Drug Use and Health.

Nicotine has multiple effects in the brain



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Cessation of Nicotine Use

- Subnormal release of dopamine and other neurotransmitters
- Deficient dopamine responses to novel stimuli
- A state of malaise and inability to experience pleasure
- The nicotine-induced changes in the brain are likely to be long lasting
 - persistent craving
 - risk of relapse persists for years after stopping smoking
 - even a single cigarette can result in a return to compulsive tobacco use



Nicotine withdrawal symptoms:




- Cravings for cigarettes
- Irritability, frustration, anger
- Increased appetite
- Tremors
- Dysphoric or depressed mood
- Insomnia
- Anxiety, Restlessness
- Difficulty concentrating
- Slowed cognitive performance



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Tobacco smoke triggered asthma behaves differently

- Smoke + asthma \Rightarrow  decline in lung function
- Smoke + Respiratory Virus \Rightarrow  Severity
- Smoke \Rightarrow  Oral and Inhaled Corticosteroid Responsiveness



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1. Apostol GG, et al. Am J Respir Crit Care Med. 2002;166(2):166-72.
2. Gaki E, et. al. Respiratory Medicine 2007;101: 826–832.
3. McConnochie KM, Roghmann KJ. Am J Dis Child 1986;140:806-12.

If you can treat asthma you can treat tobacco dependence

- Goal of asthma therapy:
 - Normal lung function
 - Minimal to no asthma symptoms
- Goal of tobacco dependence therapy
 - Normal brain function
 - Minimal to no symptoms of nicotine withdrawal



If you can treat asthma you can treat tobacco dependence

- Controller Medications
 - Nicotine Patch (OTC)
 - Bupropion (Rx)
 - Varenicline (Rx)
- Reliever Medications
 - Nicotine gum, lozenge (OTC)
 - Nicotine inhaler, nasal spray (Rx)
- Severity of disease guides intensity of treatment
- Pre-medicate for at risk situations



Reach agreement on goals of therapy

- Asthma:
 - No cough/wheeze
 - No attacks
 - No exercise limitations
 - Near normal lung function
- Tobacco Dependence
 - No craving
 - No withdrawal symptoms
 - Near normal brain function



If you can treat asthma you can treat tobacco dependence

- On follow-up
 - If disease is well controlled
 - Step down medications
 - If disease is not well controlled
 - Evaluate for triggers, adherence, etc.
 - Consider stepping up medication
 - Medications are adjusted based on control of the underlying disease -- not on a fixed timetable.



Treating Tobacco Dependence: The AARMR Model

- **ASK** about smoking and smoke exposure
- **ASSESS** the disease
- **RECOMMEND** treatment
- **MONITOR** for effectiveness and side effects.
- **REVISE** the treatment plan



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ASK

- Second hand smoke:
 - Does anyone who lives with (name of child) smoke?
 - Does anyone who provides care for (name of child) smoke?
 - Does (name of child) visit places where people smoke?
- Active smoking:
 - How many of your friend's smoke?
 - Have you ever tried (name of tobacco product)?
 - How many times have you tried (name of tobacco product)?
 - How much do you smoke?



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Assess

- Level of Tobacco Dependence
 - Faegerström Test for Nicotine Dependence
 - Modified Faegerström Tolerance Questionnaire (adolescents)
 - Hooked on Nicotine Checklist (autonomy over smoking)
- Co-morbid conditions
 - Psychiatric conditions
 - Medical conditions
- Previous experience with smoking cessation



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Classification of Tobacco Dependence Severity

	Cigarette Use	Nicotine Withdrawal Symptoms.	Fagerström Test of Nicotine Dependence
Step 4 Very Severe	>40/day Time to first cigarette 0-5 min	Constant	8-10
Step 3 Severe	20-40/day Time to 1 st cigarette: 6-30 min.	Constant	6-7
Step 2 Moderate	6-19/day Time to 1 st cigarette 31-60 min.	Frequent	4-5
Step 1 Mild	1-5/day Time to 1 st cigarette >60 min.	Intermittent	2-3
Step 0 Non-daily/Social	Social settings only	None	0-1
If chronic medical or psychiatric disease, escalate severity by 1-2 steps			



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Recommend

- Base treatment intensity on
 - Severity of underlying disease.
 - Prior experience with tobacco dependence treatment
 - Combination therapy is more effective than single agent therapy.



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Stepwise Approach to Treatment

<p>Controller: None</p> <p>Reliever: As needed reliever use may be considered.</p>	<p>Controller: Nicotine patch <i>or</i> Bupropion SR <i>or</i> Varenicline</p> <p><i>OR</i></p> <p>Reliever as needed</p>	<p>Controller: Nicotine patch <i>or</i> Bupropion SR</p> <p>Plus reliever as needed</p> <p><i>OR</i></p> <p>Varenicline alone.</p>	<p>Controller: Varenicline +Bupropion SR</p> <p><i>OR</i></p> <p>Nicotine patch+ Bupropion</p> <p><i>AND</i></p> <p>Reliever as needed</p>	<p>Controllers: Varenicline and/or Bupropion- SR</p> <p><i>AND/OR</i></p> <p>High Dose Nicotine Patch</p> <p><i>AND</i></p> <p>Multiple reliever medications</p>	<p>When withdrawal is controlled</p> <ul style="list-style-type: none"> • Step Down medications, • Monitor, to ensure withdrawal symptoms are controlled
<p>Step 0 Non- daily/Social</p>	<p>Step 1 Mild</p>	<p>Step 2 Moderate</p>	<p>Step 3 Severe</p>	<p>Step 4 Very Severe</p>	<p>Step Down/ Maintenance</p>



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Freedom from Tobacco Action Plan

Tobacco use is more than a habit. It's an addiction.

In the green and good to go!

I have no real cravings for tobacco. I'm pretty calm. I feel like my brain can focus normally.

I use medicine to control nicotine cravings every day.

- Nicotine patch: _____ mg patch _____ # patches, apply once daily.
- Bupropion IR, SR, XL (Wellbutrin® or Zyban®): _____ mg/day once daily for first ____ days, then _____
- Varenicline (Chantix ®)
 - Use Starter Pack as directed
 - Use continuing month pack, ____ mg tab, _____ times per day
- Use prior to problem times: _____

Yellow, but not so mellow.

I'm craving tobacco. I may be feeling irritable, anxious, and restless.
It is hard for me to get my brain to focus.

Continue your Green zone EVERY DAY Medicine

Need a rescue? Take a quick-relief nicotine medicine:

- Gum Lozenge Nasal Spray Inhaler

Take _____ (dose) every _____ minutes as needed.

Seeing red.

I am feeling strong cravings for tobacco. I really need a cigarette now. It may be very hard to get my brain to focus.

In the RED ZONE, take a quick-relief nicotine medicine.

Take _____ (dose) every _____ minutes as needed. Gum Lozenge Nasal Spray Inhaler

Continue your Green zone EVERY DAY Medicine.

If you are in the red zone, contact your physician or tobacco dependence treatment specialist. You may need stronger medicine.

Monitor

- Adherence to treatment
- Effectiveness of treatment
 - Control of nicotine withdrawal
 - Lapses in tobacco use
- Side effects of treatment



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Revise

- What changes to the tobacco dependence treatment plan are needed.
 - Step Up?
 - Step Down?
 - Stay the same?



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- ***Duration of therapy is base on control of the underlying disease -- not a fixed schedule.***

Reduction toward cessation

- Use nicotine patch to reduce smoking and prepare for cessation
- Use of NRT to gain greater control of smoking behavior



Nicotine Replacement Safety

- NOT one smoker has died from therapeutic nicotine since its approval in 1984
- In that time over 8 million smokers have died from the effects of tobacco.
- NRT is underutilized by physicians and by the patients who could benefit from them.



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Relievers

- Nicotine Gum (OTC) (2 mg and 4 mg)
 - Chew slowly until a slight tingling or a peppery taste
 - Then place between the cheek and the gum until the peppery taste or tingling is gone.
 - Proper technique is important.
 - Swallowed nicotine can cause nausea and hiccups.



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Relievers

- Nicotine Lozenge (OTC) (2 mg and 4 mg)
 - Place between cheek and gum and allow to dissolve
 - Allowed to dissolve slowly over a 20-30 minute period
 - Do NOT swallow lozenge.
 - Do not place under tongue
 - excess saliva will lead to swallowed nicotine and GI side effects.



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Relievers

- Nicotine oral inhaler (Rx)
 - Nicotine is absorbed across oral mucosae
 - Side effects (cough, sore throat) increased by deep inhalation

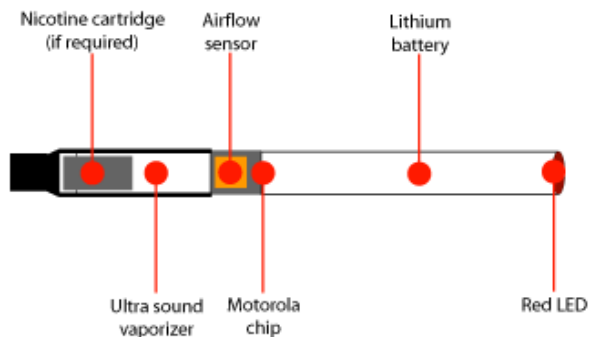
Relievers

- Nicotine Nasal Spray (Rx)
 - Nicotine reaches the bloodstream faster
 - It has an impact more similar to the cigarette than other forms of nicotine replacement.
 - May cause mild burning of nasal mucosa



E-cigarette: NOT RECOMMENDED

- FDA analysis found **carcinogenic and toxic** substances in the vapor of these devices
- Vapor **contains anti-freeze**
- An “introductory” product to get kids hooked.
- Use of flavorings (chocolate, strawberry and mint) is designed to appeal to young people



Controllers

- Nicotine Patch (OTC)
 - Step 1 (21 mg)
 - Step 2 (14 mg)
 - Step 3 (7 mg)
- May cause vivid/bizarre dreams, insomnia
remove before bedtime.
- May cause skin irritation
- Adjust dose to effect



Controllers

- Bupropion SR (Rx)
- Contraindicated if seizure disorder
- More effective when used in combination with NRT.



Controllers

- Varenicline (Rx)
 - Nicotine receptor partial agonist/antagonist
 - Note black box warning on suicide risk
 - Need to differentiate inadequately treated nicotine withdrawal



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Case example

- Adult, female
- She smokes 15 cigarettes/day
- First cigarette of the day ~31 minutes after awakening
- Began smoking at age 14
- Fagerström Test for Nicotine Dependence (FTND) score of 5/10 points



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Not ready to quit yet

- Discuss “5Rs”.
 - *relevance, risks, rewards, **roadblocks**, repetition*
- Individualize to age appropriate and personally relevant.



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- “I had given up hope of ever quitting until our discussion (of effective pharmacotherapy of tobacco dependence)”

- *Parent of a child with asthma and recurrent pneumonia*



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Smoking in Adolescents

- Driven by
 - relationships
 - activities
 - positive and negative emotions
 - social ramifications
 - images/role models
- Can rapidly progress to frequent smoking/addiction.



Most of what is known about tobacco dependence treatment is from studies of adults

- Behavioral interventions have limited benefit
- Pharmacologic therapies are effective
- Combination therapies increase effectiveness
- Medication can be titrated to control nicotine withdrawal



Approach to adolescent smokers:

Assess whether the adolescent smokes or has tried smoking.

If yes

- Assess readiness to quit.
- Assess other substance abuse.

If no

- Encourage to make a commitment to being a non-smoker

Adolescent is ready to quit

- Assess

- Level of tobacco dependence
 - Modified Faegerstrom Tolerance Questionnaire
 - Hooked on Nicotine Checklist
- Social and psychological factors
 - Role of smoking in their life
- Patterns of smoking
- Triggers of tobacco smoking
- Coping skills



Adolescent is ready to quit

- Assess
 - Level of tobacco dependence
 - Social and psychological factors (role of smoking in their life).
 - patterns of smoking,
 - triggers of tobacco smoking
 - coping skills.
- Recommend
 - Appropriate pharmacotherapy
 - Coping strategies
 - Develop Written Action Plan.
 - Set quit date.



Adolescent is ready to quit

- Assess
 - Level of tobacco dependence
 - Social and psychological factors (role of smoking in their life).
 - patterns of smoking,
 - triggers of tobacco smoking
 - coping skills.
- Recommend
 - Appropriate pharmacotherapy
 - Coping strategies
 - Develop written tobacco cessation action plan.
 - Set quit date.
- Monitor
 - **Frequent follow-up is needed.**



Adolescent is ready to quit

- Assess
 - Level of tobacco dependence
 - Social and psychological factors (role of smoking in their life).
 - patterns of smoking,
 - triggers of tobacco smoking
 - coping skills.
- Recommend
 - Appropriate pharmacotherapy
 - Coping strategies
 - Develop written tobacco cessation action plan.
 - Set quit date.
- Monitor
 - Frequent follow-up is often needed.

● Revise

- How is the plan working, what changes are needed?



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Adolescent is not ready to quit

- Discuss “5Rs”.
 - *relevance, risks, rewards, roadblocks, repetition*
- Individualize to **personally relevant**.
 - Bad breath, yellowed fingers, smelly clothes.
- The benefits of quitting
 - Better performance in sports
 - Money saved
- Contact information for tobacco cessation resources and quitlines
 - 1 800 QUIT NOW = 1 800 NO BUTTS in CA



Policies to decrease adolescent smoking

- Ban advertising for tobacco products*
- Reduce pro-tobacco depictions in media*
- Ban tobacco product sales from vending machines
- Increase tax on tobacco products*
- Develop anti-tobacco advertising*
- Enforce laws prohibiting youth from purchasing tobacco products*
- Ban smoking in indoor public places and outdoor public events*
- Ban introductory products (flavored tobacco, etc.)



Other Goodies in Toolkit

- Discussion of Coding and Billing, so physicians can obtain fair compensation
- Sample insurance appeal letter



Other Goodies in ACCP Toolkit

- Assessment tools
- Management tools
- Charting and reporting tools
- Slide sets discussing toolkit principles



Other Goodies in ACCP Toolkit

- Discussion of advocacy principles for smoke free communities
- Discussion of policy recommendations for smoke free kids.



Conclusions:

- Tobacco dependence is not just a bad habit
 - It is a severe addiction
- The most effective tobacco dependence treatments involve
 - Use of medications
 - Goal is to control nicotine withdrawal and allow the patient to feel normal



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Conclusions:

- Intensity of initial pharmacotherapy is based disease severity
- Adjustment of pharmacotherapy is based on disease control
- Green/yellow/red zone plans can be used



Conclusions

- In contrast to asthma
 - The person who needs treatment may not be not your patient
- To control the child's asthma, treatment of the caregivers tobacco dependence is essential



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Conclusions

- Pediatricians should be knowledgeable about treatment of tobacco dependence and should consider offering effective treatment to tobacco dependent parents
- If you are not prescribing treatment yourself, at least show them the way and refer to appropriate treatment resources.



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American College of Chest Physicians Tobacco Dependence Treatment Toolkit

<http://tobaccodependence.chestnet.org>



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Available Soon

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