TOBACCO USE IN UNDERSERVED SETTINGS
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Disclosures
I have nothing to disclose

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Obtained slides/pictures from:
- CDC Tips for former smokers campaign; www.cdc.gov/tobacco/campaign/tips/
- Slides from Rx for change: Rxforchange.ucsf.edu

Objectives
- Review epidemiology of tobacco use
  - Prevalence in low-income populations
  - Factors influencing tobacco use and cessation
  - Health effects of tobacco
    - CDC Tips for Former Smoker’s Campaign
  - Health benefits of tobacco cessation
- Review treatment options
  - Medications
  - Counseling
  - Policy interventions
High prevalence low-income populations

- Significant decline in the past 4 decades.
  - Prevalence of smoking ~ 18%
- 3-5 times higher among underserved and vulnerable populations:
  - Persons living below the federal poverty line
  - Persons with a history of homelessness
  - Persons with a history of incarceration
  - Persons with mental health disorders
  - Persons with substance use disorders
  - Racial/ethnic minorities
  - Gender and sexual minorities

Significant decline in the past 4 decades.

Prevalence of smoking ~ 18%

A PUBLIC HEALTH CHALLENGE OF OUR TIME: DISPARITIES IN TOBACCO-ATTRIBUTABLE DEATHS

- Morbidity & mortality 2 to 4 times higher than general population
- Tobacco-attributable diseases are leading causes of morbidity & mortality
- Underserved have not benefitted from population-wide tobacco control efforts

Factors that influence tobacco use and cessation

- Clean indoor air laws
- Statutory minimum age
- Tobacco taxes
- Regulatory environment
- Smoke-free environments
- Tobacco industry marketing
- New tobacco products
- Tobacco outlet density
- Access to cessation care
- Access to health care
- Social norms
- Care providers smoke
- Media influences
- Mental health/substance use
- Self-efficacy

What are the different forms of tobacco?

Cigarettes:
- Most common form of tobacco in the U.S.
- Usually sold in packs of 20

Cigars:
- Have more nicotine than cigarettes.
- One cigar can have enough nicotine to make a person dependent

Clove cigarettes:
- Mixture of tobacco and cloves
- Have twice the nicotine compared to cigarettes
What are the different forms of tobacco?

**Bidis:**
- Look like marijuana joints; come in candy flavors
- Higher levels of tar, carbon monoxide, and nicotine than cigarettes

**Waterpipe smoking (hookah):**
- Tobacco flavored with fruit pulp, honey
- Often used for longer amounts of time than cigarettes, so more smoke is inhaled

**Pipes:**
- Puffed into the mouth, typically not inhaled
- Least commonly used forms of tobacco

**Smokeless or "spit" tobacco include:**
- Chewing tobacco and snuff (snus)

**More men than women**

**Most commonly used by:**
- Young adults (18-25 years old)
- American Indians & Alaskan Natives
- Residents of the southern U.S. and rural areas

**Electronic nicotine delivery systems – Electronic cigarettes**
- Generally similar in appearance to cigarettes, cigars, pipes, or pens
- Battery-operated devices that create a vapor for inhalation
- Simulates smoking but does not involve combustion of tobacco
- Also known as
  - E-cigarette
  - E-hookah, Hookah pen
  - Vapes, Vape pen, Vape pipe
  - Electronic nicotine delivery system (ENDS)

**Health effects of smoking – CDC Tips for Former Smoker’s Campaign**
- Cancer
- Cardiovascular diseases
- Respiratory disease
- Diabetes
- Fertility/Reproductive problems
- HIV
- Teeth
- Eyes
- Immune function
- All organs are involved……

http://www.cdc.gov/tobacco/campaign/tips/
**Health benefits from smoking cessation**

- Circulation improves, walking becomes easier
- Lung function increases
- Lung cilia regain normal function
- Ability to clear lungs of mucus increases
- Coughing, fatigue, shortness of breath decrease
- Excess risk of CHD decreases to half that of a continuing smoker
- Risk of stroke is reduced to that of people who have never smoked
- Lung cancer death rate drops to half that of a continuing smoker
- Risk of cancer of mouth, throat, esophagus, bladder, kidney, pancreas decrease
- Risk of CHD is similar to that of people who have never smoked

**Time Since Quit Date**

- 2 weeks to 3 months: Circulation improves, walking becomes easier
- 1 to 9 months: Lung function increases
- 1 year: Lung cilia regain normal function
- 2 years: Ability to clear lungs of mucus increases
- 10 years: Risk of stroke is reduced to that of people who have never smoked
- 15 years: Risk of CHD is similar to that of people who have never smoked

Adapted from Rx for change, University of California, San Francisco

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**Treatment for tobacco dependence**

- Tobacco Dependence – A 2 part problem
  - **Physiological**
    - The addiction to nicotine
      - Treatment
      - Medications for cessation
  - **Behavioral**
    - The habit of using tobacco
      - Treatment
      - Behavior change program

Treatment should address the physiological and the behavioral aspects of dependence.

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**Mr. P**

Mr. P is a 55 yo man with a previous history of homelessness, substance use, traumatic brain injury, mild cognitive impairment, and depression, who has been 1 ppd smoker for 40 years.

- He lives in a board and care facility for persons with dual diagnoses where smoking is not allowed indoors.
- He is not ready to quit smoking, stating “I will never quit smoking”.
- How would you counsel this patient?

Adapted from Rx for change, University of California, San Francisco
**Nicotine is very addictive**
- Nicotine is the addictive substance in all forms of tobacco.
- Over 30% of people who smoke develop nicotine dependence.
  - Less than 20% of people who use cocaine, heroin, or alcohol develop dependence.
- Nicotine causes pleasurable effects that reinforce tobacco use.
- Nicotine cessation leads to severe withdrawal symptoms and craving that make tobacco cessation challenging.

**Nicotine replacement therapy**
- First-line FDA approved medications for smoking cessation.
- Reduces physical withdrawal from nicotine.
- Eliminates the immediate, reinforcing effects of nicotine that is rapidly absorbed via tobacco smoke.
- Allows patient to focus on behavioral and psychological aspects of tobacco cessation.

**NRT products approximately double quit rates.**

**Nicotine Replacement Therapy**
- Polacrilex gum
  - Nicorette (OTC)
  - Generic nicotine gum (OTC)
- Lozenge
  - Nicorette Lozenge (OTC)
  - Nicorette Mini Lozenge (OTC)
  - Generic nicotine lozenge (OTC)
- Transdermal patch
  - NicoDerm CQ (OTC)
  - Generic nicotine patches (OTC, Rx)
- Nasal spray
  - Nicotrol NS (Rx)
- Inhaler
  - Nicotrol (Rx)

**First-line FDA approved pharmaceutical therapy**
- Bupropion and Varenicline.
- Psychotropic medications
  - BUPROPION/ZYBAN
    - Reduce withdrawal
    - Reduce cravings
- Nicotine receptor partial agonist
  - VARENICLINE/CHANTIX
    - Reduce withdrawal
    - Blocks dopaminergic reward pathway

[Adapted from Rx for change, University of California, San Francisco; Rxforchange.ucsf.edu]
Combination first-line pharmaceutical therapy (not FDA-approved, but evidence-based)

- Bupropion + NRT
- Transdermal patch + short-acting NRT (gum/spray)

Second-line pharmaceutical therapy

- Nortriptyline
- Clonidine

The efficacy of combination medications for smoking cessation

<table>
<thead>
<tr>
<th>Pharmacotherapy</th>
<th>Estimated Abstinence rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>13.8</td>
</tr>
<tr>
<td>First-line agents</td>
<td></td>
</tr>
<tr>
<td>Nicotine gum</td>
<td>19.0 (16.5-21.9)</td>
</tr>
<tr>
<td>Nicotine inhaler</td>
<td>24.8 (19.1-31.6)</td>
</tr>
<tr>
<td>Nicotine lozenge</td>
<td>24.2</td>
</tr>
<tr>
<td>Nicotine patch</td>
<td>23.4 (21.3-25.8)</td>
</tr>
<tr>
<td>Nicotine nasal spray</td>
<td>26.7 (21.5-32.7)</td>
</tr>
<tr>
<td>Varenicline</td>
<td>33.2 (28.9-37.8)</td>
</tr>
<tr>
<td>Bupropion SR</td>
<td>24.2 (22.2-26.4)</td>
</tr>
<tr>
<td>Combination therapy</td>
<td></td>
</tr>
<tr>
<td>Patch + gum or inhaler</td>
<td>36.5 (28.6-45.3)</td>
</tr>
<tr>
<td>Nicotine patch + bupropion</td>
<td>28.9 (23.5-35.1)</td>
</tr>
</tbody>
</table>


Adapted from Rx for change, University of California, San Francisco; Rxforchange.ucsf.edu

Medications for individuals with mental illness

<table>
<thead>
<tr>
<th>Persons with:</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>• Bupropion</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>• Bupropion (need to be on stable antipsychotic regimen)</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>• Bupropion (consider using a lower dose at 150mg and monitor)</td>
</tr>
<tr>
<td>Chronic pain</td>
<td>• Nortriptyline</td>
</tr>
<tr>
<td>Anxiety/insomnia</td>
<td>• Nortriptyline</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>• Clonidine</td>
</tr>
</tbody>
</table>

E-cigarettes – to use or not to use?

- Most common reasons for using e-cigarettes:
  - Youth: flavors, experimentation
  - Adults: cessation aid, circumvent indoor smoking rules, flavors/taste
- Evidence is limited but what is known:
  - E-cigs have not been shown to increase successful quitting
  - E-cigs may serve as a gateway to cigarette smoking among youth
  - E-cigs may encourage polyuse of tobacco products

George 2002; Bicks 2002; Bliss 2003; Bacon 2003; Baker 2003; Grana 2014; King et al., 2015; Dutra et al., 2015; Popova et al., 2013
E-cigarettes – to use or not to use?

- What to tell patients:
  - E-cigarettes are not approved by the FDA for smoking cessation
  - They are unregulated
  - Safety is a concern
  - Encourage smoking cessation but suggest use of FDA approved medications for cessation

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Tobacco cessation requires behavior change

- Fewer than 5% of people who quit without assistance are successful in quitting for more than a year.
- Few patients adequately PREPARE and PLAN for their quit attempt.
- Patients think they can just “make themselves quit”

Behavioral counseling is a key component of treatment for tobacco use and dependence.

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Effects of clinician interventions

With help from a clinician, the odds of quitting approximately doubles.

1.0 1.1 1.7 2.2

Estimated abstinence rate at 5+ months

1.0

1.8 (1.5, 2.2)

2.5 (1.9, 3.4)

2.4 (2.1, 3.4)

n = 37 studies

Compared to smokers who receive assistance from two or more clinician types are 2.4–2.5 times as likely to quit successfully for 5 or more months.

n = 37 studies

Compared to smokers who receive assistance from no clinicians, smokers who receive assistance from two or more clinician types are 2.4–2.5 times as likely to quit successfully for 5 or more months.

Compared to patients who receive no assistance from a clinician, patients who receive assistance are 1.7–2.2 times as likely to quit successfully for 5 or more months.

Number of clinician interventions also help

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The 5 A’s

**ASK**

**ADVISE**

**ASSESS**

**ASSIST**

**ARRANGE**

5A’s – ctd.

- What should you ask?
  - Do you ever smoke cigarettes or use any form of tobacco?
  - How many cigarettes do you smoke every day?
  - How soon after you wake up do you smoke your first cigarette?
  - Where do you smoke?

5A’s – ctd.

- Build motivation to change behaviors by eliciting (5Rs):
  - Relevance – Why is quitting important?
  - Risks – What are harms of tobacco?
  - Rewards – What are the benefits of tobacco?
  - Roadblocks – What are the barriers to quitting?
  - Repetition – Repeat the message at each encounter
- Arrange for follow-up after a quit attempt
- Most people try multiple times before they can quit smoking successfully:
  - Best predictor of successful quitting is the length of the last quit attempt

**ASK**

about tobacco USE

**ADVISE**

tobacco users to QUIT

**REFER**

to other resources

**ASSIST**

Client receives assistance from other resources, with follow-up counseling arranged

**ARRANGE**

Brief Counseling: Ask, Advise, Refer

*Adapted from Rx for change, University of California, San Francisco; Rxforchange.ucsf.edu*
Brief Counseling: Ask, Advise, Refer (cont’d)

- Brief interventions have been shown to be effective.
- In the absence of time or expertise:
  - Ask, advise, and refer local group programs or the toll-free quitline 1-800-QUIT-NOW / 1-800-NO-BUTTS/1-855-DEJELO-

This brief intervention can be achieved in less than 1 minute.

Mr. P

- Build awareness – Tobacco log, connect with health symptoms
- Encourage small steps – reducing consumption, practice quit attempts
- Enlist support of case manager/caretaker
- Provide a rx. for smoking cessation – wellbutrin+NRT
- He eventually cut down to 10 cpd
- Congratulated on efforts but did not stop there.

Case Presentation of Mr. N

55 yo man with a history of episodic cocaine use:
- Smokes 10 cpd
- Thinking about smoking cessation but not ready to commit to setting a quit date.
- Smokes in his apartment
- How would you counsel this patient?

Policy interventions -- Smoke-free policies

- Smoke-free policies very effective population-based strategy
- Smoke-free homes – voluntary no smoking at home is a powerful intervention
- Smoke-free homes are associated with:
  - Reduced secondhand smoke exposure
  - Decreased consumption
  - Increased cessation
  - Reduced relapse to smoking

Policy interventions – Smoke-free Homes

- Prevalence of smoke-free homes is low among low-income populations.
- Department of Housing and Urban Health recently proposed a rule for all public housing authority-managed housing to:
  - Implement indoor smoke-free policies
  - Restrict smoking outdoors to more than 25 feet from buildings

Smoke-free policies in 3100 PHA-housing will impact 1.2 million low-income housing units in the United States.

Policy Interventions: Media Campaigns

Policy interventions – implications for clinical practice

- Ask smokers whether they smoke indoors.
- Ask all non-smokers whether they are exposed to secondhand smoke.
- What can you tell patients?
  - Secondhand smoke is linked causally with cancer, CV disease, respiratory disease.
  - Implement a smoke-free home.
- Personalize message: target teens; pregnant women; parents

Substance use and smoking cessation

- 2-3 times more smoking with alcohol/illicit substance use
- Heavy smoking:
  - Increases use of cocaine and heroin
  - Makes alcohol use more pleasurable
- 50% those in substance use treatment die from tobacco-related diseases
- Quitting smoking may increase long-term abstinence from all substances by 25%
- Quitting smoking doesn’t interfere with recovery from other substances

Hurt et al., 1996; Prochaska et al., 2006
Case Presentation of Mr. N – What we did

55 yo man with a history of cocaine dependence who smokes 10 cpd in his apartment

- Congratulated him on his interest in smoking cessation
- Advised him to implement a smoke-free home
- Felt that smoke-free home helped him cut down
- Getting ready to make a quit attempt
- Working on stopping episodic cocaine use

Many unanswered questions

- Specific interventions for homeless adults?
- How to capitalize on the forced quit that occurs in jail/prison once released?
- Interventions for mentally ill or substance use?
- Will smoke-free policies in public housing increase rate of evictions?

Take home messages

- Ask smokers whether they smoke indoors
- Advise people to not smoke or use e-cigs indoors
- Ask about tobacco use and advise to quit
- Ensure that patients have resources for cessation
  - Refer to resources
  - Provide these resources
- Follow-up on tobacco use at every encounter
- Ask about exposure to secondhand smoke

Smoking cessation resources

- http://rxforchange.ucsf.edu/ -- Resources for smoking cessation
- http://www.bhwellness.org/resources/toolkits/ -- Resources for smoking cessation
- http://www.cdc.gov/tobacco/campaign/tips/resources/ -- CDC Tips from former smokers campaign
- http://www.nobutts.org/ -- California Smokers’ Helpline
- http://smokingcessationleadership.ucsf.edu -- Smoking cessation leadership center
- http://www.no-smoke.org -- Americans for nonsmoker’s rights
- http://www.changelabsolutions.org -- Changelab solutions