Adolescents and Tobacco Cessation

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Goal

• To review current evidence and perspectives on adolescents and tobacco in practice

• To discuss interventions and ways to improve the delivery of systematic advice
Youth and tobacco

- 3 million adolescents smoke
- >2600 children/day start smoking
- 1/3rd will become addicted, smoke through adulthood
- the younger a person starts, the stronger the addiction to nicotine
- 60% of smokers started before age 14
- 90% before age 19
- 23% report current smoking (CDC, 2005)
Past 30 Day Smoking, 1975-2002

Adapted from Johnston, et al., 2001
Initiation and Addiction

• Exposure to tobacco promotion contributes to initiation of tobacco use

• Dose-response relationship
  – Greater exposure results in greater risk

• Nicotine addiction
  – Characterized by tolerance, craving, withdrawal symptoms, & loss of control
  – 1st symptoms of dependence can appear with days or weeks of intermittent tobacco use
Changing Evidence About Nicotine Dependence

- Signs of nicotine dependence often start within two months after onset of smoking

- The median frequency of use at the onset of symptoms was 2 cigarettes, one day per week

- 2/3 of teens report loss of autonomy over tobacco prior to the onset of daily smoking

Unsafe Alternatives

- **Cigars**: 14% past month use
- **Hookahs**: water pipes involving the burning of tobacco mixed with sweetened flavors
- **Bidis**: unfiltered flavored cigarettes
  - higher levels of nicotine
  - Marketed as “herbal”; usually less expensive than cigarettes
- **Kreteks**: Clove cigarettes containing 60 – 70% tobacco
- **Smokeless tobacco**: chewing tobacco, snuff, dip

These are all tobacco products containing nicotine and carry similar risks to regular cigarettes
Tobacco Use in Teens

• Psychosocial influences
  – Parents, siblings, & peers
  – Social acceptability/attitudes towards smoking
  – Media
  – Availability of tobacco products to youths

• Probable biological reasons for period of increase vulnerability in teens
Exposure to Tobacco Use in Movies and Smoking Among 5th-8th grader

Adapted from Sargent, 2003
Issues for prevention

• “Social inoculation” = effective prevention

• Prevention does not work for cessation

• What is adult?
Primary care interventions

• Health care provider counseling interventions are effective for adults
  • Attributable effects 7-14%

• Pediatric and adolescent guidelines recommend screening & counseling

• Several trials have established the efficacy of cessation counseling for adults

• Little data on adolescents
Pediatric interventions

• Most (>90%) clinicians report asking about tobacco
• Many report assessing motivation to quit, and discussing health risks
• Few provide handouts, set quit dates, or plan smoking-related follow-up
• < 25% of adolescents report having received counseling
Adolescents and preventive care

- Most teens have and have used a regular source of health care.
- More than 40% of adolescents have never spoken to their clinician privately.
- 58% of adolescents wanted to discuss tobacco with their clinicians.
  - only 30% ever did.
Adolescents and cessation

• Adolescent smokers
  – Know they are addicted
  – Want to quit - 75% have thought about quitting and 64% have made a quit attempt
  – Do not think there are resources to help

• Clinicians feel unprepared to help

• Self-help materials help smokers quit

• Adolescents use internet in preference to phone resources

• PharmacoRx safe; effectiveness unproven
Clinician and Staff Training

- Interventions
  - Effective counseling techniques
  - NCI 5 “A’s”
  - Stages of change based interventions
  - Use of in office and other adjuncts
  - Eligibility and enrollment in evaluation
Public Health Service
5 A’s

• **Ask** - If patient smokes
• **Advise** - Every patient to quit
• **Assess** - Readiness to quit
• **Assist** - In quitting and finding services
• **Arrange** - For cessation services and follow up
Adolescent oriented office materials

• Self-help handouts
  • Targeted to adolescents and to stages of change/motivation

• Trigger questionnaires

• Internet resources
## Practices Trained in Cessation Deliver Interventions

<table>
<thead>
<tr>
<th></th>
<th>QLater</th>
<th>QNow</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you and your doctor discuss cigarettes/smoking?</td>
<td>88</td>
<td>92</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Did your doctor ask if you smoked?</td>
<td>87</td>
<td>93</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>If smoke, did your doctor ask if you want to quit?</td>
<td>63</td>
<td>76</td>
<td>&lt;.0005</td>
</tr>
<tr>
<td>If smoke, did your doctor hand you anything to help stop?</td>
<td>18</td>
<td>47</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

Ossip-Klein, 2004
Interventions and quitting?

- Cessation among adolescent smokers is half of the adult rate (approx. 4%/yr)
- Smokers aged 16 – 24 yrs rely more on unassisted methods rather than on effective methods recommended by PHS guidelines
- 2 year success with adolescents referred to an intensive expert counseling ‘system’ after brief primary care advice (OR=2.43) (Hollis et al.)
Best Practices in Tobacco Control

- Increase price of tobacco
- Smoking bans and restrictions
- Availability of treatment for addiction
  - Reduce patient costs for treatment
  - Provider reminder systems
  - Telephone/web counseling and support
- Mass media campaigns
Policy - School curriculum

• At least 5 session /year over 2 years

• Should include
  – Social influences
  – Short term health effects
  – Refusal skills

• NOT self-esteem or delay based

• Be aware of dilution and confusion strategies by tobacco interests

• School policies should reinforce goals
Policy - Community activism

- Age of sale enforcement
- Advertising limitations
- Smokefree Movies
- Public smoke exposure reduction
- Awareness of impact of preemptive efforts
- Reducing social acceptability of smoking
Issues for Practice

• Prenatal Smoking

• Secondhand Smoke/Early Childhood
  – SHS and parent interventions; home and car rules; CEASE materials

• School Age Intervention
  – SHS, short term consequences, social innoculation and refusal skills

• Adolescent Intervention
Pharmacotherapy

- NRT Indications
  - Able to stop smoking, plus
  - Motivated to stop smoking, plus
  - Nicotine addiction
- Patch for baseline
- Gum, inhaler or nasal spray for cravings
- Not labeled for sale to <18 year olds
- Zyban (Wellbutrin)
- Chantix (varenicline)
### Efficacy of Pharmacotherapy

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Quit rates</th>
<th>Placebo quit rates</th>
<th>Odds ratio (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine patch</td>
<td>17.7%</td>
<td>10.0%</td>
<td>1.9</td>
</tr>
<tr>
<td>Nicotine gum</td>
<td>23.7%</td>
<td>17.1%</td>
<td>1.5</td>
</tr>
<tr>
<td>N. Lozenge: 2mg</td>
<td>24.2%</td>
<td>14.0%</td>
<td>2.0*</td>
</tr>
<tr>
<td>4mg</td>
<td>23.6%</td>
<td>10.2%</td>
<td>2.8</td>
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<tr>
<td>Nicotine spray</td>
<td>30.5%</td>
<td>13.9%</td>
<td>2.7</td>
</tr>
<tr>
<td>Nicotine inhaler</td>
<td>22.8%</td>
<td>10.5%</td>
<td>2.5</td>
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<tr>
<td>Bupropion SR</td>
<td>30.5%</td>
<td>17.3%</td>
<td>2.1</td>
</tr>
<tr>
<td>Varenicline</td>
<td>35.2%</td>
<td>17.9%</td>
<td>2.6*</td>
</tr>
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</table>
Issues for Health Plans

• Choose tobacco control as a QA issue
  – www.AAP.org/RichmondCenter - for web resources
  – Best Practices/Tobacco Champions train-the-trainers
  – State and local initiatives and resources

• Secondhand Smoke
  – Proactive quit-lines allowing pediatric referral
  – Practice resources (ie, CEASE)
  – Support policy advocacy

• Adolescent Interventions
  – Access to phone and web quitting resources
  – Cover pharmacotherapy
  – Improve preventive care delivery for teens
  – Support policy advocacy
Implications

• Minimal intervention - Ask, Advise, Refer

• A 3-5% effectiveness rate would result in 45,000-75,000 new ex-smokers each year
SURGEON GENERAL'S WARNING: Cigarette Smoke Contains Carbon Monoxide.

Come to where the flavor is.
I miss my lung, Bob.