Training Healthcare Providers To Deliver Brief Tobacco Interventions Strategies and Impact

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What are the Goals of Training?

- Provide clear rationale to healthcare professionals – key role they play and advantages in addressing tobacco use
  - Brief time investment
  - Excellent reach
  - Interaction with a trusted, known provider
  - Ease in providing / adjusting / monitoring medications
- Increase Provider knowledge about tobacco products, use, health effects
- Highlight importance, and improve quality of counseling efforts
- Teach strategies to motivate patients
- Proper and optimal use of available medications
- Explain need for follow-up and strategies to accomplish
- Clinic coordination
- Available resources
- Status and strategies for billing for services
Unless current smokers quit, smoking deaths will rise dramatically over the next 50 years

Peto & Lopez, 2001
Treating Tobacco Use and Dependence

2008 UPDATE

U.S. Public Health Service
Clinical Practice Guideline

www.ahrq.gov/path/tobacco.htm
Overview of ACT Center 3.5-hour Brief Treatment (5A’s) Workshop
### USA Adult Tobacco Use 2010

<table>
<thead>
<tr>
<th>Tobacco</th>
<th>Prevalence</th>
<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td>Cigarette</td>
<td>19.3%</td>
<td>21.5</td>
<td>17.3</td>
</tr>
<tr>
<td>Cigar</td>
<td>5.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe</td>
<td>1.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smokeless</td>
<td>3.3%</td>
<td>6.5</td>
<td>0.4</td>
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**Conclusions**

Previous declines in smoking prevalence in the United States have stalled during the past several years; the burden of cigarette smoking continues to be high, especially in persons living below the federal poverty level and with low educational attainment. Sustained, adequately funded, comprehensive tobacco control programs could reduce adult smoking.
# Tobacco’s Impact on Health

<table>
<thead>
<tr>
<th>Category</th>
<th>Conditions</th>
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<tbody>
<tr>
<td>Cardiovascular</td>
<td>Rheumatoid</td>
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<tr>
<td></td>
<td>Arthritis</td>
</tr>
<tr>
<td></td>
<td>Osteoporosis</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Longer hospital stay &amp; recovery</td>
</tr>
<tr>
<td>Oral</td>
<td>Pregnancy</td>
</tr>
<tr>
<td>Cancer</td>
<td>Fertility</td>
</tr>
<tr>
<td>Senses</td>
<td>Delivery problems, Stillbirth, Spontaneous abortion</td>
</tr>
<tr>
<td>Skin</td>
<td>Low birth weight, Premature</td>
</tr>
<tr>
<td></td>
<td>SIDS</td>
</tr>
<tr>
<td></td>
<td>Cognitive &amp; Behavioral impairment</td>
</tr>
<tr>
<td>Bone</td>
<td>Cancers</td>
</tr>
<tr>
<td></td>
<td>Increased likelihood of tobacco use</td>
</tr>
<tr>
<td></td>
<td>Visual Impairment</td>
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<tr>
<td></td>
<td>Auditory Impairment</td>
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<tr>
<td></td>
<td>Wrinkling</td>
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<tr>
<td></td>
<td>Psoriasis</td>
</tr>
<tr>
<td></td>
<td>Fracture</td>
</tr>
<tr>
<td></td>
<td>Degeneration</td>
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</table>
Actual Causes of Death in the USA in 2000

- Smoking: 38%
- Diet / Inactivity: 35%
- Sex Behav: 2%
- Alcohol: 7%
- Microbial: 6%
- Illicit Drugs: 1%
- Firearms: 2%
- Tox Agents: 5%
- Motor Veh: 4%

Mokdad et al 2004 (JAMA)
Tobacco Health-Related Topics

- Constituents delivered
  - Nicotine
  - Tar
  - Carbon Monoxide
  - Selected toxic agents

- Environmental Tobacco Smoke

- Smoked vs. Smokeless
  - Health
  - Addiction

- Benefits of Cessation
  - Prevention of Disease
  - Disease Management
  - Quality of Life
  - Financial
Nicotine Dependence

- Biological factors
- Relationship with outcome
- Evidence of increasing levels among treatment seekers

Indicators
- Daily amount
- Morning smoking
- Nighttime
Primary Symptoms of Nicotine Withdrawal

- **Insomnia**
  - Evident 1\(^{\text{st}}\) day of quitting
  - Primarily sleep fragmentation
  - Some report decrease in sleep latency
  - Peaks within 1 – 3 days
  - Lasts 3 – 4 weeks

- **Irritability / Frustration / Anger**
  - Can last > 1 month
  - 80% of quitters endorse this
  - Anxiety
  - Often evident prior to quit attempt
  - Peaks within days
  - Lasts 3 – 4 weeks

- **Difficulty Concentrating**
  - Evident 1\(^{\text{st}}\) day of quitting
  - Peaks within 1 – 3 days
  - Lasts 3 – 4 weeks
  - Generally mild

- **Dysphoric / Depressed Mood**
  - Can last > 1 month

- **Restlessness**
  - Lasts < 1 month
  - Perceived as highly aversive

- **Increased Appetite / Weight Gain**
  - Appetite change lasts 10 weeks

- **Decreased Heart Rate**
  - Average decrease is 10 bpm
Medications

- Therapeutic Effect / Mechanism of Action
- Warnings and Contraindications
- Medication Interactions
  - Special population issues
- Proper Usage
- Off-Label Usage
- Emphasize careful training of patients
- Other Considerations
NRT Products
Non-Nicotine Medications
Depression, Suicidal Risk, Other

- Suicide base rates
  - US: male 17.7, female 4.5, overall 11.1
  - UK: male 10.4, female 3.2, overall 6.8

- Gunnell et al., 2009
  - Compared NRT, Bupropion, and Varenicline
  - No differences in suicidal thinking
  - No increased risk for start of antidepressant therapy
  - No differences in fatal or non-fatal self-harm
Suggestions for Maximizing Pharmacotherapy

Emerging Off-Label Conventions

- High Dosage Options
- Pre-Quit Administration (NRT)
- Extended Duration
- Combination Pharmacotherapy
- Review Effectiveness and Safety data
Managing Minor Medication Side Effects

- Insomnia
- Dry Mouth
- Unusual / Vivid Dreams
- Irritability
- Nausea
- Dizziness
- Jaw Muscle Ache; Hiccups
- Mouth Ulcers
- Heart Racing
- Skin Burning / Itching
- Vomiting

For each medication

Specific recommendations for management
### Motivational Enhancement

<table>
<thead>
<tr>
<th><strong>DO</strong></th>
<th><strong>DO NOT</strong></th>
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</thead>
<tbody>
<tr>
<td>Emphasize Partnership</td>
<td>Lecture</td>
</tr>
<tr>
<td>Provide Accurate Information</td>
<td>Use Scare Tactics</td>
</tr>
<tr>
<td>Ask Open-Ended Questions</td>
<td>“Just the facts”</td>
</tr>
<tr>
<td>Focus on Specific Behaviors &amp; Goals</td>
<td>Rely on Distant Health Outcomes</td>
</tr>
<tr>
<td>Involve Supportive Friends &amp; Family</td>
<td>Assume Patients can ‘Go It Alone’</td>
</tr>
<tr>
<td>Reward all Efforts and Progress</td>
<td>Simply Focus on ‘End Game’</td>
</tr>
<tr>
<td>Summarize Points</td>
<td>Assume all is Understood</td>
</tr>
</tbody>
</table>
Motivational Interviewing

Core Components

- Express Empathy
  - Feeling accepted facilitates behavioral change

- Develop Discrepancies
  - Client makes the argument for change

- Roll with Resistance
  - Provides an opportunity to respond differently

- Support Self-Efficacy
  - Greater likelihood of success with Belief in the possibility of change, and Confidence to succeed
The 5A’s Treatment Approach

- Ask
- Advise
- Assess
- Assist
- Arrange

Designed for the busy office environment
Flexible
Easily implemented
Clinical Treatment Model

- Primary Prevention
  - Never User
    - ASK
      - Current User
        - Ex-User
          - Relapse Prevention
    - Not Ready
      - Motivational Intervention
        - Ready
          - ASSIST
            - Relapse
              - Abstinent
                - ARRANGE
                - Adapted from PHS Guideline (2008)
ASSIST with the Quit Attempt
Tailor Your Approach to Motivational Status

Not Ready to Quit
- Explore attitudes about tobacco
- Reduce resistance to possibility of quit
- Review personalized risks and benefits
- Medications?

Possibly Ready to Quit
- Educate: withdrawal, medications
- Increase confidence in ability to succeed
- Attempt small behavior change (reduce rate)
- Medications?

Ready to Quit
- Develop plan
- Execute
2 Common Barriers...

- **Stress**
  - Engage in distracting activities
  - Physical activity
  - Schedule time for hobbies
  - Relax...explore preferences
  - Enjoyable social activities

- **Weight Gain**
  - Typical 10 – 12 lb gain
  - Associated health risks minimal
  - Concern about gain is a better predictor of poor outcome than actual gain
  - NRT and Bupropion delay, but do not prevent weight gain
  - Clinical considerations:
    - Cessation first; option to target weight later
    - Modest increase in physical activity level
    - Modest changes in diet
Relapse is Part of the Process

- Briefly review reasons for lapse
  - Attempt to quit completely?
  - High risk situations encountered
  - Strategies attempted
- Evaluate prior medication usage
  - Adequate dosage?
  - Sufficient duration?
  - Proper technique?
  - Withdrawal symptoms?
  - Medication side effects?
- Normalize patient’s experience
- Establish new plan
- Set new quit date
Intervening on ETS Exposure

- Reduce direct harmful effects on others
- Reduce 1 source of relapse risk
- May influence others’ interest in quitting
- Intervene using approach consistent with 5A’s model
Referral Options for Additional Tobacco Treatment

When to Consider
- Clearly unsuccessful with brief approach
- Several previous failures
- Complex medication management
- Complex life circumstances
- Co-morbidities present
- Highly nicotine dependent

Options

Approaches
- As an adjunct to your efforts
- As the sole treatment

Options
- Intensive Specialty Clinic  www.act2quit.org
- Quitline  1 800 QUIT NOW
Clinic Coordination

Assign Duties and Roles
- Tobacco Coordinator
- Front Desk
- Nurses, Hygienists, Assistants
- Lab Personnel
- Allied Health Staff
- Primary Provider

Resources
- Replenish
- Websites
- Certificates
- Waiting Rooms / Patient Areas

Documentation and Tracking
- Charting
- Scheduling
- Reminders
- HIPAA

The Message
- Staff Familiarity
- Tailored to Patient Progress

Implementation Plan
<table>
<thead>
<tr>
<th>Intervention</th>
<th>Time Required</th>
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<tbody>
<tr>
<td>Never User</td>
<td>½ min</td>
</tr>
<tr>
<td>Ex-User</td>
<td>½ min</td>
</tr>
<tr>
<td>Not Ready User: Motivate</td>
<td>1 min</td>
</tr>
<tr>
<td>Ready User: 5A’s</td>
<td>2-3 min</td>
</tr>
<tr>
<td>Ready User: 5A’s + 1st Script</td>
<td>4-6 min</td>
</tr>
</tbody>
</table>
Realistic Time Requirements

- Scheduled Patients: 40
- Tobacco Users (~25% scheduled): 10
  - Not Interested: 3
- Interested in Quitting (70% users): 7
  - Not Ready Today: 5
  - Ready Today: 2

\[3 \text{ Not Interested} \times 1 \text{ min} = 3 \text{ min}\]
\[5 \text{ Not Ready} \times 1 \text{ min} = 5 \text{ min}\]
\[2 \text{ Ready} \times 6 \text{ min} = 12 \text{ min}\]

\[\text{Total} = 20 \text{ minutes}\]
Evaluation of Training Efforts
Study 1 (Under review)

- 488 healthcare providers (primarily non-physician)
- Hospitals in MS, LA, AR, AL, IL, WV
- Procedure
  - Standard workshop
  - 3.5 hours CE, Refreshments
  - Surveys: Pre, Post (immediate), 6-mo Follow-Up
  - Demographics, practice history and settings, prior training, etc.
  - Frequency of Practice Behaviors
  - Self-Efficacy
  - Attitudes re: Tobacco Treatment
## Baseline

<table>
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<tr>
<th>Characteristic</th>
<th>Total (N = 488)</th>
<th>Follow-Up Survey Not Completed (N = 236)</th>
<th>Follow-Up Survey Completed (N = 252)</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63 (13.0%)</td>
<td>29 (46.0%)</td>
<td>34 (54.0%)</td>
<td>0.681</td>
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<tr>
<td>Female</td>
<td>420 (87.0%)</td>
<td>205 (48.8%)</td>
<td>215 (51.2%)</td>
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<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>345 (72.3%)</td>
<td>156 (45.2%)</td>
<td>189 (54.8%)</td>
<td>0.033</td>
</tr>
<tr>
<td>Black</td>
<td>91 (19.1%)</td>
<td>55 (60.4%)</td>
<td>36 (39.6%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>41 (08.6%)</td>
<td>21 (51.2%)</td>
<td>20 (48.8%)</td>
<td></td>
</tr>
<tr>
<td><strong>Prior tobacco training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>100 (21.0%)</td>
<td>40 (40.0%)</td>
<td>60 (60.0%)</td>
<td>0.054</td>
</tr>
<tr>
<td>No</td>
<td>376 (79.0%)</td>
<td>191 (50.8%)</td>
<td>185 (49.2%)</td>
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<td><strong>Aware of PHS Guideline</strong></td>
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<tr>
<td>Yes</td>
<td>125 (26.4%)</td>
<td>60 (48.0%)</td>
<td>65 (52.0%)</td>
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<tr>
<td>No</td>
<td>349 (73.6%)</td>
<td>171 (49.0%)</td>
<td>178 (51.0%)</td>
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<td><strong>Tobacco use status</strong></td>
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<tr>
<td>Never</td>
<td>301 (63.2%)</td>
<td>138 (45.9%)</td>
<td>163 (54.1%)</td>
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<tr>
<td>Past, Experimental</td>
<td>82 (17.2%)</td>
<td>47 (57.3%)</td>
<td>35 (42.7%)</td>
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<td>Past, Regular</td>
<td>67 (14.1%)</td>
<td>34 (50.8%)</td>
<td>33 (49.2%)</td>
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<tr>
<td>Current User</td>
<td>26 (05.5%)</td>
<td>12 (46.2%)</td>
<td>14 (53.8%)</td>
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<tr>
<td><strong>% patients treated</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>0-25%</td>
<td>280 (62.5%)</td>
<td>126 (45.0%)</td>
<td>154 (55.0%)</td>
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<tr>
<td>26-50%</td>
<td>60 (13.4%)</td>
<td>32 (53.3%)</td>
<td>28 (46.7%)</td>
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<tr>
<td>51-75%</td>
<td>51 (11.4%)</td>
<td>25 (49.0%)</td>
<td>26 (51.0%)</td>
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<tr>
<td>76-100%</td>
<td>57 (12.7%)</td>
<td>36 (63.2%)</td>
<td>21 (36.8%)</td>
<td>0.076</td>
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<tr>
<td><strong>% patients encouraged</strong></td>
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<td></td>
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<tr>
<td>0-25%</td>
<td>104 (24.1%)</td>
<td>50 (48.1%)</td>
<td>54 (51.9%)</td>
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<tr>
<td>26-50%</td>
<td>30 (06.9%)</td>
<td>10 (33.3%)</td>
<td>20 (66.7%)</td>
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<tr>
<td>51-75%</td>
<td>51 (11.8%)</td>
<td>30 (58.8%)</td>
<td>21 (41.2%)</td>
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<tr>
<td>76-100%</td>
<td>247 (57.2%)</td>
<td>126 (51.0%)</td>
<td>121 (49.0%)</td>
<td>0.154</td>
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<tr>
<td><strong>Years of practice</strong></td>
<td>17.86 (11.4)</td>
<td>17.55 (11.34)</td>
<td>18.14 (11.50)</td>
<td>0.599</td>
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Practice Behaviors and Self Efficacy

Adjusted means at Pre, Post, and FU for each 5As factor

Confidence

Practice Behavior

Average Scores

Ask Advise Assess Assist Arrange

Ask Advise Assess Assist Arrange
Adjusted means at Pre, Post, and FU for Attitude Ratings

Average Score

Pre | Post | FU

Importance to treat

Barriers to Implementation

Pre | Post | FU
# Study 2 MH / SUD Providers

**N = 78**

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<td>African American</td>
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<td>White</td>
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<td>All Others</td>
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<td><strong>Hispanic Ethnicity</strong></td>
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<td><strong>Profession</strong></td>
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<tr>
<td>Workshop / Seminar</td>
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Self-Efficacy (MH / SUD Providers)
Practice Behaviors (MH / SUD Providers)
### Study 3 PREG Providers

**N = 82**

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<td>On-line / Self-Study</td>
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<td>Other</td>
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<td>None</td>
<td>57.6</td>
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Practice Behaviors (PREG Providers)
Summary

- Many providers appear unprepared to provide tobacco treatment services
  - Ask and Advise functions are implemented fairly routinely among those attending workshop
  - Assess, and particularly Assist and Arrange are less likely to be implemented

- Training improves implementation of treatment services
  - Both frequency of Practice Behaviors and Self-Efficacy are improved
  - Evidence suggests sustained increase through 6-month follow-up
  - Arrange least likely to be sustained, possibly due to barriers outside provider control
Recommendations

- Training should be encouraged / implemented / required widely
- Post workshop assistance helpful
  - Having a higher level trained expert on site is one option
- Clinic activities and outcomes should be monitored
- Adequate reimbursement will likely improve rates of clinical activity
- Encourage billing
- Specifically coordinating clinics with higher intensity programs most likely to meet patient needs
  - Working with clinic provider to write scripts / address medical considerations promotes collaboration and likely facilitates treatment
  - QLs have advantage of reach and easy accessibility
  - In-Person programs likely to provide better treatment to patients with more complex presentations