Disclosures

- Grant Support from Pfizer
- Consultant Pfizer
- Grant support from NCI, NIDA, NIMH, NJDMHAS, ABPN
- Consultant and Speaker for American Lung Association, Florida Council for Community Mental Health
US Smoking Prevalence

NCS-R 2001-2003; Diagnoses using CIDI

51 Million Smokers in US Today
At least one third have a mental illness
~ 16 Million Smokers with Mental Illness

Tobacco = #1 Cause of Preventable Death in US

30% OF ALL CANCER DEATHS

50% of deaths in schizophrenia, depression and bipolar disorder attributed to tobacco

Callaghan et al., 2013
Causes of Death

Clients served in public mental health in 8 states: Az, Mo, Ok, Ri, Tx, Ut, Vt, Va

http://www.cdc.gov/pcd/issues/2006/apr/05_0180.htm

Not Smoking is the Single Most Important Risk Factor in Preventing Cardiovascular Disease

Reduction in CVD (%) from Each Risk factor

CV Risk Reduction from Healthy Lifestyle Practices

Hennekens CH. Circulation. 1998;97:1095-1102
Tobacco Dependence is in the DSM-5

**Tobacco Use Disorder**

Most tobacco users are addicted (2 or more)

- withdrawal
- tolerance
- desire or efforts to cut down/ control use
- great time spent in obtaining/using
- reduced occupational, recreational activities
- use despite problems
- larger amounts consumed than intended
- Craving; strong urges to use

*DSM-5*
Tobacco Withdrawal

4 or more
Depressed mood
Insomnia
Irritability, frustration or anger
Anxiety
Difficulty concentrating
Restlessness
Increased appetite or weight gain

Why are Patients Not Quitting?

Neurobiological
Psychological
Social & Environmental
Spiritual & Advocacy
Treatment System & Institutional

Greater dependence
Poor coping; low confidence
Live with smokers
No hope; No peers succeeding
No access to help; Not encouraged to quit
Why are Patients Not Quitting?

Neurobiological
Psychological
Social & Environmental
Spiritual & Advocacy
Treatment System & Institutional

Greater dependence
Poor coping; low confidence
Live with smokers
No hope; No peers succeeding
Limited access to help

Only 1 in 4 Mental Health Treatment Facilities Offers Quit Smoking Services


N-MHSS Report, Nov 2014
Treatment for Tobacco Use Disorder Works

- Brief Assessment
- Counseling + Medications
- Approach like a Co-occurring Disorder

5 A’s for Brief Intervention

Ask
Advise
Assess
  - Willing
  - Unwilling
Assist
Arrange

Fiore et al., 2008
All Tobacco Users Get Treatment

Assessment

Level of Tobacco Use
Motivation to Quit

First age smoked
Years smoked
Current amount
Tobacco types (pipes, cigars, smokeless)
Smokers in household
Consequences of use- health or other
Money spent on Tobacco
Carbon Monoxide Level
Activities surrounding use (social, bar, working)
Assessment of Carbon Monoxide

- CO = product of combustion
- Expired CO in smokers
  - > 10 parts per million (ppm)
- Displaces oxygen on RBCs
- Strain on heart
  - risk factor for CVD
- Can be assessed with a meter

- REVERSIBLE effect
  - Normal levels 2-3 days (0-3ppm)

Advise on Quitting Tobacco

Clear
- “It is important that you quit smoking now, and I can help you.”

Strong
- “ Quitting smoking is the most important thing you can do to protect your health now and in the future.”

Personalized
- “We can help prevent future heart attacks like the one you suffered not too long ago by quitting smoking.”
Assess Willingness to Quit

Are you willing to try to quit at this time?

Stages of Change

Pre-contemplation: not thinking of stopping in next 6 months
Contemplation: thinking of stopping in next 6 months
Preparation: planning to stop in next 1 month
Action: quit date
Maintenance: abstinent >6 months

Prochaska & DiClemente 1992
Motivational Interviewing

MI is a collaborative, goal oriented style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person’s own reasons for change within an atmosphere of acceptance and compassion.

Miller & Rollnick, 2012

Match Treatment Strategies to Stages of Change

PRECONTEMPLATION → MOTIVATING
OR CONTEMPLATION

PREPARATION → ACTION
QUITTING
CESSATION
Language is Important

Tobacco Dependence Treatment vs.
“Smoking Cessation”
“Quitting”
“Stop Smoking”

Complete Wellness: Mental and Physical Health

Wellness & Recovery includes Addressing Tobacco

Mental Health & Recovery Plan
Healthy Food Choices
Daily Physical Activity
Balancing Relaxation & Stress
Addressing Addictive Behaviors
Regular Checkups
Supporting Clients who have Low Motivation

Focus on building relationship
Model positive health behaviors
Explore all areas of wellness
What are the person’s life goals?
Help identify skills that they believe are necessary- creates motivation

Principles of Co-occurring Disorders Treatment

Integrated mental health and addiction services
Comprehensive services
Treatment matched to motivational level
Long-term treatment perspective
Continuous Assessment of substance use
Motivational interventions
Psychopharmacology
Case management
Housing
LAHL developed to help low motivated smokers

Mental health settings

Group format

Education on range of topics

• Healthy eating
• Increasing activity
• Awareness of tobacco addiction
Learning About Healthy Living

This treatment is designed as two groups.

Group I - Learning About Healthy Living

Group II - Quitting Smoking

It is designed so that consumers can progress from Group I to Group II, when appropriate or desired.

Learning About Healthy Living

It assumes that not every one using this treatment will be immediately ready to quit smoking, The overall goal of Group I

- To gain knowledge and insight about tobacco use.
- To become more interested in trying to quit using tobacco
- Moving consumers towards a tobacco-free lifestyle

Pre-Cessation Curriculum
Facilitator’s Guide

Accompanies each Chapter
Objectives
Suggested Approach
Additional Resources/ References
Group 1- 20 Sessions
Group II- 6 Sessions

Therapist Style of Delivering Treatment

Client Check-in – tobacco/ other activities
  • Self-reported cigarettes per day last week & do expired carbon monoxide (if possible)

Be supportive, empathic Coach / Facilitator
  • Involve everyone in process
  • Ask them about their opinions / thoughts on the topics
  • Be educational and motivational

Provide repetition and assess comprehension
Section 4: Group I

Introduction: Welcome to the Healthy Living Group
(Consumer’s Handouts Section 5: Introduction)

Objectives for Introduction:

- Welcome consumers to the Learning About Healthy Living Group
- Educate the consumers about the overall content of the Learning About Healthy Living Group
- Allow group members to begin to get to know the Facilitator and each other

After reading this section, individuals will be able to:

- Think about what health issues will be important to them to consider during the course of the group.
- Describe guidelines that will make the group setting a safe place to learn about the "Learning About Healthy Living" program.

Suggested Approach:

- It will be important for the Facilitator to be warm and welcoming to group members upon arrival to create a non-threatening environment.
- Allow participants to introduce themselves to the group.
- Discuss rules for expected behavior during group sessions. (See also Section 2)
- Although a good portion of this manual’s focus is on helping consumers look at their tobacco usage, this could be very threatening initially to the consumer who smokes. It will be important during the Healthy Living approach to emphasize tobacco but the manual also includes topics on healthy eating, increasing physical activity and dealing with stress. Throughout the group sessions, it may be helpful to discuss "unhealthy" ways that people may deal with other problems including stress and mental illness symptoms (i.e. yelling, violence, alcohol, tobacco, food, etc.). In this way, this approach accurately discusses the relevant risks from smoking and also presents a hopeful and healthy alternative.
Group I: Learning About Healthy Living

20 Weeks
Educational and Motivational
Accepts all smokers with SMI
Smoking within the context of Healthy Living (Exercise, stress, & diet)
50 min group
12-15 seriously mentally ill consumers
Training and Implementation in NJ

9 community day treatment sites in NJ (2006)
Clinicians had no prior tobacco training
1 day (6 hour training)
  • 2 hours didactic: smoking and mental illness
  • 4 hours implementation: including how to use the facilitator’s guide, consumer handouts and appendices of additional resource materials. How to assess tobacco use and develop a tobacco treatment plan.
  • Detailed instructions and a hands-on practice session for using a carbon monoxide monitor were included.
  • 9 pilot sites received support and supervision for the first three months. This consisted of 1-2 brief site visits and 2/month telephone calls with the project staff to discuss implementation issues

LAHL Feasibility Study

Weekly post-group feedback form
Number of attendees at group and rate aspects of the weekly topic in the manual
Facilitators rated the level of consumer participation and interest, as well as their own ability to run LAHL groups
92 groups
Average 9 consumers attended/group
Table 1. (N=92 groups at 9 sites; Number (Percentage))

<table>
<thead>
<tr>
<th>Facilitators’ Rating of Consumers who Participated in Group</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Satisfactory</th>
<th>Below Average</th>
<th>Missing</th>
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</thead>
<tbody>
<tr>
<td>Interest in Group</td>
<td>42(45)</td>
<td>41(44)</td>
<td>7(8)</td>
<td>1(1)</td>
<td>2(2)</td>
</tr>
<tr>
<td>Ability to Understand Group</td>
<td>43(46)</td>
<td>38(41)</td>
<td>10(11)</td>
<td>0(0)</td>
<td>2(2)</td>
</tr>
<tr>
<td>Level of Participation in Group</td>
<td>53(57)</td>
<td>25(27)</td>
<td>9(10)</td>
<td>1(1)</td>
<td>5(5)</td>
</tr>
<tr>
<td>Ability to do Written Exercise</td>
<td>31(33)</td>
<td>33(36)</td>
<td>19(20)</td>
<td>0(0)</td>
<td>10(11)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facilitators’ Rating of Themselves as Facilitator</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Their Ability to Facilitate Group</td>
<td>39(42)</td>
<td>39(42)</td>
<td>12(13)</td>
<td>0(0)</td>
<td>3(3)</td>
</tr>
<tr>
<td>Their Ability to Teach Content of Group</td>
<td>36(39)</td>
<td>40(43)</td>
<td>14(15)</td>
<td>0(0)</td>
<td>3(3)</td>
</tr>
<tr>
<td>Their Ability to Answer Questions in Group</td>
<td>33(36)</td>
<td>44(47)</td>
<td>13(14)</td>
<td>1(1)</td>
<td>2(2)</td>
</tr>
</tbody>
</table>

Consumer Focus Groups

26 participants
Initial feelings of resistance and fear, which dissipated once they attended the first few sessions.
Endorsed hope that the treatment would help them.
They found the handouts helpful and easy to read and described learning important and useful information about health and treatment medications.
Four had quit smoking since starting LAHL and several more had reduced their number of cigarettes smoked per day.
Some stated that they wanted to try to quit smoking in the next 6 months and a few had also tried to improve their eating or exercise habits.
Topics they endorsed as particularly helpful were those on the chemicals found in cigarette smoke, effects of carbon monoxide and nicotine replacement medications.
One consumer remarked that there were benefits from attending LAHL group even if not interested in immediately quitting smoking.

Consumers questioned why smoking had not been addressed sooner.
LAHL in Psychosocial Rehab Clubhouses (NC)

Staff and member surveys
Of the 271 participants (9 programs) 58% completed surveys
Tested well: feasible and well-received
Group facilitators non-clinicians
Staff had been concerned about the viability of the program at its start, but were later surprised,
The curriculum had provided a sense of camaraderie among members and generated energy for other healthy changes in the clubhouse


Psychosocial Treatments

First line treatments
Timed before or very soon after the quit date
Best when combined with medications
Different techniques work
Dose-response relationship
  ↑ minutes and ↑ success
Provider discipline not important

Fiore et al., 2008
Intensive Treatments

Skills training
Relapse prevention
Problem solving
Coping skills
Stress management

✔ Change cognitions about smoking
✔ Reinforce nonsmoking
✔ Avoid high risk situations

Benefits of Group

Cost and time effective
Additional support
Accepted treatment in settings

Modeling
  • Seeing success
  • Using NRT
  • Effective coping
Maximizing Social Support

Intra-treatment support
  • GROUP members
  • Clinician

Extra-treatment
  • Friends
  • Family
  • Self-help
  • Internet

Both ↑ success in making a quit attempt

Meta-analysis (2008)
Effectiveness of meds or counseling alone vs combination

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number</th>
<th>Est Odds Ratio (95%CI)</th>
<th>Estimated Quit Rate</th>
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<tbody>
<tr>
<td>Medication alone</td>
<td>8</td>
<td>1.0</td>
<td>22</td>
</tr>
<tr>
<td>Meds plus Counseling</td>
<td>39</td>
<td>1.4 (1.2-1.6)</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number</th>
<th>Est Odds Ratio (95%CI)</th>
<th>Estimated Quit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling alone</td>
<td>11</td>
<td>1.0</td>
<td>15</td>
</tr>
<tr>
<td>Meds plus Counseling</td>
<td>13</td>
<td>1.5 (1.3-2.1)</td>
<td>22</td>
</tr>
</tbody>
</table>

2008 PHS Guideline Update
First-line Treatments (FDA Approved)

- **Nicotine Replacement**
- **Bupropion**
  - Zyban/ Wellbutrin
- **Varenicline**
  - Chantix

Counseling + Medications = Best treatment plan

FDA Labeling Updates

- **No** significant safety concerns associated with using more than one NRT
- **No** significant safety concerns associated with using NRT at the same time as a cigarette.
- Use longer than 12 weeks is safe

APRIL2013 www.fda.gov/ForConsumers/ConsumerUpdates/ucm345087.htm
**Bupropion SR**

Effective at 150 to 300mg daily  
Nonsedating, activating antidepressant with effects on NE and DA systems  
Start 10-14 days prior to quit date  
Side effects- headache, insomnia  
Contraindicated in h/o seizures or bulimia  
Noncompetitive nicotinic receptor antagonist  
Similar efficacy to NRT  
Effect independent of depression  
Less weight gain with 300mg than placebo  

*Slemmer 2000*

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**Varenicline: a selective a4B2 nicotinic receptor partial agonist**

![Diagram of brain showing mesolimbic system and dopamine release from n. accumbens and VTA](image)

- **n. accumbens**  
  Nucleus accumbens  
  - Mesolimbic system

- **VTA**  
  Ventral tegmental area

- **Dopamine**

---
Varenicline

Partial Agonist
Partially stimulates receptor
Some DA release at NAcc
Prevents withdrawal

“Antagonist”
Blocks nicotine binding a4B2

No drug-drug interactions
Excreted by kidney (urine)

Effectiveness of First Line Medications
Results from meta-analyses comparing to placebo (6 month F/U)

<table>
<thead>
<tr>
<th>Medication</th>
<th>No. Studies</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nic. Patch (6-14 wks)</td>
<td>32</td>
<td>1.9</td>
<td>1.7-2.2</td>
</tr>
<tr>
<td>Nic. Gum (6-14 wks)</td>
<td>15</td>
<td>1.5</td>
<td>1.2-1.7</td>
</tr>
<tr>
<td>Nic. Inhaler</td>
<td>6</td>
<td>2.1</td>
<td>1.5-2.9</td>
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<tr>
<td>Nic. Spray</td>
<td>4</td>
<td>2.3</td>
<td>1.7-3.0</td>
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<tr>
<td>Bupropion</td>
<td>26</td>
<td>2.0</td>
<td>1.8-2.2</td>
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<tr>
<td>Varenicline (2mg/day)</td>
<td>5</td>
<td>3.1</td>
<td>2.5-3.8</td>
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</table>

PHS Clinical Practice Guideline 2008 Update
Conclusions

Treatments increase the success rates and should be used in all smokers
Counseling plus medications gives smokers the best chances at quitting
Motivation for those not ready to quit
Treat it like a co-occurring disorder
LAHL a group approach

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http://ccoe.rbhs.rutgers.edu/catalog/courses/pdf/17MR05.pdf