Smoking Cessation
Integrated Care Model and
Mental Health Populations

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Current and Lifetime Smoking and Mental Illness

Table 2. Prevalence Rates and Odds Ratios of Substance Dependence and Abuse by DSM-III and II Psychiatric Disorders

<table>
<thead>
<tr>
<th>Grant et al., 2014</th>
<th>12-Month Prevalence of Current Dependence (95% CI)</th>
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<th>Odds Ratio at 95% (95% CI)</th>
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Treatment for Smoking among Depressed Outpatients

- 322 depressed smokers at 4 outpatient MH clinics randomly assigned to staged care for smoking cessation or referral for smoking cessation
- Staged care involved:
  - Motivational Intervention
  - 6 counseling sessions for those motivated to quit
  - Transdermal nicotine and possible bupropion

Hall et al., 2008
Prochaska et al., 2006

Integrated Care for Mentally Ill Smokers

- Patients with chronic mental illness are one of largest remaining cohorts of smokers within VA and elsewhere
- Nicotine withdrawal may exacerbate mental disorders
- Patients with mental illness have increased mortality in part related to smoking
- Patients with mental illness feel stigmatized and may have difficulty attending appointments
- Changes in medication doses may be needed with smoking cessation
- Integrated care can simultaneously address smoking cessation and other mental health issues delivered by a provider who knows the patient in a familiar environment

Prochaska et al., 2008

7 Day Point Prevalence Abstinence Rates

Hall et al., 2006
Service Delivery for Tobacco Use Disorder
Specialized Smoking Cessation Clinics

Provides services to 88% of VA smokers who receive tobacco cessation treatment

**Advantage**
- comprehensive, intensive tobacco cessation treatment

**Problem**
- High rates of non-compliance
  - failure to show for an initial session = 48% - 87%
  - drop-out rates = 44% - 79%

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**Smoking & Non-smoking Situations in PTSD & non-PTSD Smokers**
Steinher et al., 2008

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**Integrated Care versus the Usual Standard of VA Care for Smoking Cessation in PTSD**
A Randomized Clinical Trial

McFall, M. et al. Improving Smoking Quit Rates for Patients with PTSD. Am J Psychiatry;162:1311-1312

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**Objective**

To compare the effectiveness of brief Integrated Care (IC) versus VA’s Usual Standard of Care (USC) for nicotine dependence in veterans undergoing mental health treatment for PTSD.
Study Design and Eligibility Criteria

- Design:
  - Two-group randomized, controlled effectiveness trial comparing IC (n = 33) versus USC (n = 33)

- Participants:
  - Inclusions: PTSD Program outpatients who smoked > 10 cigarettes per day
  - Exclusions: unstable psychosis or BPD, untreated substance dependence, smokeless tobacco

Integrated Care:
Clinic Implementation and Monitoring Strategy

- Initial training and ongoing supervision in IC, adapted from PHS Clinical Practice Guidelines for Tobacco Cessation
- Manualized procedures
- Charting template
- Case review and team-based problem solving for relapsers, rolled into weekly staff meeting
- Provider feedback of smoking status
- "Clinical champion" to promote the project

Integrated Care:
Overview of Clinical Intervention

- Behavioral Counseling
- Pharmacotherapy
- Self-help readings
- Relapse prevention/recovery and maintenance
  - Six weekly sessions (20 minutes each) plus discretionary follow-up visits.

Clinical Outcomes:
7-Day Point Prevalence for Non-Smoking Status (n=66)

- GEE Analysis Results: Odds Ratio = 5.23, p < .0014
Clinical Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>IC</th>
<th>USC</th>
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</thead>
<tbody>
<tr>
<td>Bupropion SR</td>
<td>61%</td>
<td>48%</td>
</tr>
<tr>
<td>Transdermal Nicotine*</td>
<td>94%</td>
<td>87%</td>
</tr>
<tr>
<td>Nicotine Gum*</td>
<td>80%</td>
<td>42%</td>
</tr>
<tr>
<td>Treatment Sessions*</td>
<td>5.2</td>
<td>2.6</td>
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<tr>
<td>Quit Attempts</td>
<td>4.29</td>
<td>3.25</td>
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<tr>
<td>Satisfaction with</td>
<td></td>
<td></td>
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<tr>
<td>Amount of Treatment*</td>
<td>3.9 (1-5 scale)</td>
<td>3.5</td>
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<tr>
<td>Satisfaction with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Treatment**</td>
<td>3.7 (1-5 scale)</td>
<td>3.4</td>
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</tbody>
</table>

CSP No. 519: Study Objectives

- Test whether integrating smoking cessation treatment into mental health care for PTSD (IC) improves prolonged abstinence from smoking, compared to the VA’s usual standard of care for smoking (USC)
- Determine whether IC is more cost-effective than USC
- Identify treatment process variables that mediate differences in smoking abstinence rates observed between IC and USC
- Determine whether cessation from smoking is associated with worsening symptoms of PTSD and/or depression

CSP #519

Primary Hypothesis

- Integrated Care (IC) will be more effective than Usual Standard of Care (USC) on multiple measures of smoking-related clinical outcomes.
  - Primary Outcomes: 1 year prolonged abstinence (PA) from 6-18 months post-randomization
  - Secondary Outcomes:
    - 7- and 30-day point prevalence abstinence
    - Abstinence survival time from first 24 hour quit attempt
    - Percent reduction in cigarette consumption for continued smokers

Secondary Hypotheses

- Subjects receiving IC will have lower total direct and indirect health care costs than will subjects receiving USC, over the course of their study participation
- The incremental cost-effectiveness ratio for IC relative to USC will be less than $75,000 per QALY
CSP #519
Secondary Hypotheses (Cont’d.)

- Differences between IC and USC on treatment process variables will mediate differential prolonged smoking abstinence rates hypothesized to occur for the two study conditions
  - 6 sessions received
  - Amount of medication received
  - Changes in self-efficacy and expectancies

- Symptoms of PTSD and depression will not worsen as a result of smoking cessation or participation in IC treatment

CSP #519
Overview of Study Design

- Randomized, controlled clinical trial with a parallel comparison of:
  - IC (experimental condition) vs.
  - USC (control condition)

- 1400 subjects planned, 940 actually randomized

- Originally 8 sites, now 10 sites

CSP #519
IC Treatment

- Training
  - S’s and medical providers get intensive training at kickoff meeting
  - S’s and medical providers return to sites and receive intensive training with PTSD staff

- Organizing treatment at sites
  - 4-5 PTSD clinicians responsible for ongoing PTSD treatment also provide smoking cessation for their regular patients

- PTSD care and smoking cessation tx seamless
  - Unique mental health issues pertinent to each patient’s quit attempts receive personalized attention

CSP #519
IC Treatment (Cont’d.)

- Guideline based, manual driven, individual smoking cessation tx with 3 elements:
  - Core Interventions
    - Behavioral Counseling (5 sessions totaling ~150 minutes)
    - Pharmacotherapy
    - Self-help readings
  - Relapse Prevention and Management
    - Booster sessions monthly
  - Administrative intervention
    - Review of smoking status of subjects in weekly staff meeting

VISN 20 MIRECC Smoking Cessation
CSP #519
IC Treatment Adherence

- Audio taping of 1st Tx episode (5 sessions) by each clinician with review by Mayo Clinic experts
- Monthly supervision conference calls with Mayo Clinic experts
- Initial 451 IC subjects received mean = 4.2 (SD = 1.8) of 5 possible core sessions

CSP #519
USC Treatment

- Referral to the facility Specialized Smoking Cessation Clinic
  - No attempt to control procedures in Smoking Cessation Clinics
  - Procedures will likely vary across sites
  - SC’s will interview Smoking Cessation Clinic Directors annually so that procedures can be characterized

Guidelines for Using the Treatment Manual

Cooperative Studies Program #519
Integrated Smoking Cessation Treatment for Veterans with PTSD

TREATMENT MANUAL Behavioral Counseling

VISN 20 MIRECC Smoking Cessation
Session Plan

- Five weekly core treatment sessions (skills acquisition)
- Three weekly follow-up sessions (relapse prevention management)
- Monthly follow-up ("booster") sessions (relapse prevention & Management)
- Additional "re-treatment" contacts, as needed

Who Should Deliver IC?

Primary Mental Health Provider

- Primary point of contact for patient who coordinates his/her overall mental health care
- Ongoing, continuous contact and familiar relationship
- Ability to monitor, detect, and respond to relapses over the "long haul"

Modality for Delivering IC

Individual Treatment Modality

- Incorporated into regularly scheduled individual therapy sessions
- Separate individual visits for patients primarily seen in group
- Face-to-face visits for 5 core skills acquisition sessions
- Follow-up visits optimally provided in face-to-face format, but phone delivery acceptable if absolutely necessary (discouraged for relapsed patients)

Structure and Organization of the Treatment Manual

VISN 20 MIRECC Smoking Cessation
Session 1
- Assess Tobacco Use, Abstinence Attempts, and Reasons for Quitting Smoking
- Advise Quitting
- Motivational Interventions (Only for Patients Unwilling to Quit)
- Empathic Support and Encouragement in Quitting Smoking
- Orient to Plan for Behavioral Counseling
- Recommend Smoking Cessation Medications
- Guidelines for Setting a Quit Date
- Goal Assignments for Session 2
- Schedule Session 2
- Coordinate Care with Prescriber

Session 2
- Identify Quit Date
- Identify Smoking Triggers
- Strategies for Reduced Smoking
- Rudimentary Skills for Coping with Smoking Triggers
- Controlled breathing
- Identify Existing Patient-Generated Coping Skills
- Goal Assignments for Session 3
- Schedule Session 3

Session 3
- Review Assignment to Practice Coping with Smoking Triggers
- Review Status of Reduced Smoking
- Teach Principles of Coping with Smoking Triggers
- Develop an Action Plan for Coping with Smoking triggers
- Assess Follow-Through With Smoking Cessation Medications
- Goal Assignments for Session 4
- Schedule Session 4

Session 4
- Review Assignment to Practice Coping with Smoking Triggers
- Review Status of Reduced Smoking
- Behavior Changes to Prepare for Quit Date
- Review Use of Controlled Breathing
- Identify Sources of Social Support and How Others Will Help The Patient Stop Smoking
- Assess Availability and Use of Smoking Cessation Medications
- Goal Assignments for Session 5
- Schedule Session 5
Session 5
- Review Assignment to Practice Coping with Smoking Triggers
- Review Status of Reduced Smoking
- Review Preparation for Quit Date Assignment
- Review Assignment to Use Social Supports
- Actions to Take on Quit Date
- Introduction to Relapse Prevention
- Review Plan for Smoking Cessation Medications
- Goal Assignments for Follow-up Session
- Schedule Follow-up Appointment

Follow-up Visits
- Assess Smoking Status & Quit Date Experiences

PROCEDURES FOR ABSTINENT PATIENTS
- Congratulate Patient/Support Continued Abstinence
- Discuss Positive Experiences Associated with Quitting
- Assess & Resolve Problems Encountered in Quitting

PROCEDURES FOR PATIENTS WHO CONTINUE TO SMOKE
- Renew Commitment to Abstinence & Reinstate Appropriate Treatment
- Goal Assignments for Following Session
- Schedule Next Follow-Up Visit

Importance of smoking cessation treatment (pre-treatment participation): How important did you feel it was to provide smoking cessation treatment as part of routine mental health care? (N=65)

Importance of smoking cessation treatment (post-treatment participation): How important do you feel it is to treat tobacco use as part of routine mental health care? (N=64)
Schizophrenia Smoking Cessation Group Therapy Program

(Tony George, M.D. and Colleagues)

- **Group Members**
  - Schizophrenia
  - No recent medication changes
  - No recent (other than tobacco) substance use issues
  - Ready to quit smoking within 1 month

- **Group Format**
  - 12 weekly, 60 minute sessions
  - 4-6 members
  - 2 leaders
  - Begins with check in on smoking status
  - Ends with relaxation and deep breathing exercise

Schizophrenia Smoking Cessation Group Therapy Program

(Tony George, M.D. and Colleagues)

- **Sessions 1-2**
  - Motivating a quit attempt
  - Begin bupropion

- **Session 3**
  - Quit together in group
  - Begin transdermal nicotine

- **Sessions 4-9**
  - Relapse prevention

- **Sessions 10-11**
  - Celebration

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Bupropion Plus Nicotine Patch for Smoking Cessation in Schizophrenia

![Graph showing smoking cessation outcomes](image)

N=58
- BUP+NTP
- C/PDC+NTP

End of Trial Abstinence
Continue Abstinence
6 Month Follow-up

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Integrated Smoking Cessation for Mental Health

- Integrated care models have been developed and manualized
- Preliminary evidence suggests integrated care
  - Has good patient acceptance
  - Is more efficacious than referral to smoking cessation clinic
- Consider working with mental health clinicians at your facilities to develop integrated care programs

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VISN 20 MIRECC Smoking Cessation
Acknowledgements

- Collaborators
  - Miles McFall, Ph.D
  - Carol Nalle, MSW

- Support
  - VA Cooperative Studies Program
  - Alcohol and Drug Abuse Institute, University of Washington