Leveraging Social Support to Engage Smokers in Treatment

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Funding: NIDA, ClearWay Minnesota
The reason...
Do loved ones of a smoker experience distress similar to those close to a substance user?

Thomas et al., 2006, Addictive Behaviors
Can we change another person’s behavior?
What is known about the role of social support and smoking cessation?

• Supportive behaviors and statements from spouses/partners are consistently associated with successful smoking cessation.
• Written materials available for loved ones of a smoker but none had been evaluated.
• Studies that tried to change social support for smokers in treatment had mixed findings.
• Thus, how do we optimize social support in smoking cessation especially for smokers not ready to quit?
Potential role of nonsmokers

- About 5% of the 500,000 annual quitline callers (25,000) are nonsmokers calling on behalf of a loved one who smokes (NAQC, 2014)
- Surveys of large samples of nonsmokers indicate over 80% willing to help a smoker quit (Patten, 2004)
- Studies effectively utilized nonsmokers to reduce household second hand smoke exposure (Chan et al., 2008)
- CDC Tips from Former Smokers campaign effective for increasing nonsmokers’ behaviors of talking with smokers about the dangers of smoking and recommending they quit (McAfee et al., 2013)
MOTIVATING SUBSTANCE ABUSERS TO ENTER TREATMENT
Working with Family Members

JANE ELLEN SMITH
ROBERT J. MEYERS
WANTED: NON-SMOKERS

Do you know someone who smokes?
Are you tired of nagging them to quit?
Do you feel like you’ve tried everything, but nothing seems to help?

If you care about a smoker
but don’t know how to help them quit,
there might be something else...

For Information
Call: 1-800-957-2950
Email: supportpersonstudy@mayo.edu
The first step

Because You Care . . .

Information for Those Wanting to Help Someone Stop Smoking

Funding:
NIDA
R21 DA18365

Nicotine Research Center
5-session, group-based intervention

- Behavior change counseling techniques with MI delivery
  - Clarify their role
  - Educate about nicotine dependence
  - Educate about stage of change
  - Educate about effective medications/treatments
  - Teach basic MI communications skills about how to help smoker quit
  - Provide information on supportive behaviors and statements
## Support Strategies

<table>
<thead>
<tr>
<th>Effective</th>
<th>Not Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praise</td>
<td>Nag</td>
</tr>
<tr>
<td>Show concern</td>
<td>Police</td>
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<tr>
<td>Help alleviate stress</td>
<td>Make threats or ultimatums</td>
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<tr>
<td>Do a fun smoke-free activity</td>
<td>Withhold affection</td>
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<tr>
<td>together</td>
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<tr>
<td>Give information on quitting</td>
<td>Hide cigarettes, ashtrays</td>
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<tr>
<td>Acknowledge that quitting can be</td>
<td>Preach about not smoking</td>
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<tr>
<td>hard</td>
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<tr>
<td>Encourage</td>
<td>Blame smoker for health problems</td>
</tr>
</tbody>
</table>

*Cohen & Lichtenstein, 1986, JCCP*
Support Strategies

• Cohen’s theory of social support
  • **Instrumental**: assist smoker with taking over some of his/her responsibilities, engage in smoke-free activity with smoker
  • **Informational**: provide smoker with information about quitting or medications that can help
  • **Emotional**: acknowledge that quitting is hard, praise smoker for his/her efforts

• Evidence-based support strategies by stage of change
• Direct and indirect strategies
Support Provided Measure (SPM)

During the past 2 weeks have you...

- Asked your smoker if they were willing to discuss their smoking?
- Nagged or preached to your smoker about their smoking?
- Discussed with your smoker if they were ready to quit or planning to stay smoke-free?
- Provided your smoker with information on smoking or quitting smoking?
- Criticized or blamed your smoker for the consequences of smoking?
- Suggested your smoker use a product such as nicotine patches or a program such as a helpline to quit smoking or stay smoke-free?
- Engage in a smoke-free activity with your smoker?

$\alpha=0.73-0.83$ across studies

Thomas et al., 2006, J Behav Med

Funding:
NIDA
R03 DA 19050
Results

- 60 support persons
  - 90% female, 90% Caucasian, 85% of smokers precontemplation or contemplation stage of change
- Randomized pilot RCT
- Intervention was feasible
- Significant increases in SPM with intervention compared to control group (written materials only)
- No significant treatment differences on smoker quit rates at 6 months

*Patten et al., 2009; Nicotine & Tobacco Research*
The 2nd step: rationale

- Increasing the REACH of smoking cessation treatments to smokers on a population level
  - Most smokers are not interested in quitting in the near future
  - Evidence-based cessation treatments are greatly underutilized
    - Only 1-2% of smokers use quitlines
- Could social support networks be tapped to promote smoker treatment utilization?
534 nonsmokers recruited statewide
  - 92% female, 95% Caucasian, 88% employed, 49% married, 50% lived with smoker, 85% of smokers low-medium levels of readiness to quit

- **Design**: RCT comparing 3 call counseling intervention + written materials vs. a control condition (written materials only)

- **SP Assessments**: by mail or phone at end of treatment and at 6 months

- **Endpoint**: % of smokers enrolled in the quitline by 6 months

Patten et al., AJPM, 2011
**Funding**: ClearWay Minnesota
Types of relationships (N=534), %

- Spouse/partner: 30%
- Parent: 18%
- Girlfriend/Boyfriend: 15%
- Child: 11%
- Sibling: 9%
- Friend: 9%
- Coworker: 4%
- Other: 5%
Written materials

• NCI Clearing the Air brochure
• Readiness to quit ladder (intervention group only)
• 4 page handout on supportive behaviors, nicotine dependence, information on local resources, the quitline, and card with toll-free number
Intervention

- Delivered by research counselors
- **Goal**: provide SP’s with information and skills needed to encourage their smoker to call the quitline
- Cohen’s theory of social support
- 3 phone sessions
  - Clarify their role
  - Educate about nicotine dependence
  - Educate about readiness to quit
  - Provide information on supportive behaviors and statements
  - Teach how to reinforce (shape) progress made by smoker
  - Provide information on quitline

*Brockman et al., 2012*  
Addiction Research & Theory
Quitline Utilization through 6 months follow-up by Study Group

% of smokers who enrolled

Adjusted OR=2.04, 95% CI: 1.19-3.49, P=0.010
3rd Step: Effectiveness Study

**Primary Aim**: Conduct an RCT in the context of ongoing services of a quitline, comparing two levels of counseling interventions for support persons (1 or 3 calls) versus a control condition on smoker quitline enrollment at 7 month follow-up.

**Secondary Aim (Exploratory)**: Conduct a survey of the smokers to estimate quit attempts and cessation.

*Patten et al., 2014, SRNT conference*

*Funding*
*ClearWay Minnesota*
Effectiveness Study

- **704 nonsmokers** recruited statewide
  - 85% female, 95% Caucasian, 75% employed, 60% married, 35% spouse/partner of smoker, 48% lived with smoker, 72% of smokers low-medium readiness to quit
- **Design**: 3 arm RCT comparing 1 and 3 call counseling interventions + written materials vs. control condition (written materials only)
- **Interventions delivered by quitline coaches**
- **1 call** streamlined version of 3 call intervention
Effectiveness Study

- **Support Person Assessments:** by mail or phone at end of treatment and at 7 months
- **Primary endpoint:** proportion of smokers enrolled in the quitline by 7 months
- **Smoker** survey at 7 months
1301 screened

132 (10%) not eligible (support person was a smoker, no smoker residing in MN)
465 (36%) not interested/did not return consent/baseline form

704 (54%) randomized

233 allocated to 1 call counseling intervention group
196 (84%) completed call
37 (16%) completed none

185 (79%) completed 4 week follow-up
163 (70%) completed 7 month follow-up

236 allocated to 3 call counseling intervention group
190 (81%) completed all 3 calls
5 (2%) completed only 2 calls
15 (6%) completed only 1 call
26 (11%) completed none

176 (75%) completed 4 week follow-up
163 (69%) completed 7 month follow-up

235 allocated to control group

N/A

190 (81%) completed 4 week follow-up
165 (70%) completed 7 month follow-up

132 (10%) not eligible (support person was a smoker, no smoker residing in MN)
465 (36%) not interested/did not return consent/baseline form

163  (70%) completed 7 month follow-up
Quitline Utilization through 7 months follow-up by Study Group

% of smokers who enrolled

- Control
- 1 call
- 3 call

OR=2.51; 95% CI: 1.33-4.74; p=0.005 1 call vs. control

OR=2.55; 95% CI: 1.35-4.82; p=0.004 3 call vs control
Other findings

- **When do they call?**
  - Control: 57 days
  - 1 call: 52 days
  - 3 call: 71 days

- **Who calls?**
  - Older age of support person, $p=0.009$
  - Smokers higher in readiness to quit, $p=0.001$
    - 7% low
    - 12% medium
    - 16% high
  - No significant interaction effect detected

- **SPM**
  - Significant increases in SPM scores in intervention groups vs. control group, $p=0.004$
  - Treatment effect was not mediated by support provided
Smoker survey

• At enrollment, only about half of support persons (51%; 356/704) gave permission for us to contact their smoker

• Smoker survey response rate was low (38%; 137/356). Thus, only 19.5% of the smokers (137/704) were represented which was insufficient for analysis

• Survey completers (137) compared to non-completers (567) were a select sample:
  • more likely to have enrolled in the quitline
  • and to reside with their support person
Conclusions

• This real world quitline study found that counseling interventions targeting nonsmoking support persons increase the rate that smokers enroll in a quitline
• Provides evidence for quitlines: efficacy + effectiveness trials
• Just 1 call yielded results essential equal to 3 calls
  • Mean duration: 26 minutes
  • Cost effective: $38
Future Directions

- Expand the target population of quitlines, e.g., “Help a loved one quit” campaign
- Expand quitline services to offer an efficient and cost effective counseling intervention for non-smokers
- Expand this approach to promote smoker utilization of other evidence-based treatments
- Expand the reach of support person counseling to vulnerable populations and utilizing technology
- Study mechanisms of treatment efficacy
Study Team

- Mayo Clinic
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- ClearWay Minnesota
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- National Jewish Health
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  - Quitline staff
The reason....