Evaluating the Effectiveness of a Smoking Cessation Support Group

Holly Bachilas

Follow this and additional works at: https://scholarworks.uvm.edu/fmclerk

Part of the Medical Education Commons, and the Primary Care Commons

Recommended Citation
https://scholarworks.uvm.edu/fmclerk/349
EVALUATING THE EFFECTIVENESS OF A SMOKING CESSATION SUPPORT GROUP

Holly Bachilas
Longitudinal Integrated Clerkship
Larner College of Medicine at the University of Vermont
Hudson Headwaters Health Network
Glens Falls, NY
2017-2018
PROBLEM IDENTIFICATION [NATIONAL/STATE]

US

- In 2015 → 15.1% of US adults smoked
- Smoking is the leading cause of preventable disease and death in the United States and accounts for more than 480,000 deaths every year, or 1 of every 5 deaths.
- Healthy People 2020 Goal: 12%

NY

- NY State → 15.9%
- North Country → 22.6%
<table>
<thead>
<tr>
<th>Smoking Status</th>
<th>Number of Patients</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Every Day</td>
<td>12,762</td>
<td>Smoker</td>
</tr>
<tr>
<td>Current Some Days</td>
<td>1,235</td>
<td>Smoker</td>
</tr>
<tr>
<td>Formerly</td>
<td>19,247</td>
<td>Non-Smoker</td>
</tr>
<tr>
<td>Never</td>
<td>31,049</td>
<td>Non-Smoker</td>
</tr>
<tr>
<td>Blank/Unknown</td>
<td>307</td>
<td>Non-Smoker</td>
</tr>
<tr>
<td>Total</td>
<td>64,600</td>
<td></td>
</tr>
</tbody>
</table>

- **Location**
  - Bolton Health Center: 1242, 14%
  - Chester-Horicon Health Center: 2082, 16%
  - Fort Edward-Kingsbury Health Center: 4241, 30%
  - Health Center at Broad Street – Primary Care: 5511, 30%
  - Health Center at Broad Street – Urgent Care: 4694, 34%
  - Indian Lake Health Center: 1107, 17%
  - Moreau Family Health: 3873, 22%
  - Moriah Health Center: 980, 25%
  - North Country Family Health: 4426, 25%
  - North Country Ob/Gyn: 3423, 13%
  - North Creek Health Center: 1671, 20%
  - Queensbury Family Health: 375, 11%
  - Schroon Lake Health Center: 1068, 12%
  - Ticonderoga Health Center: 4248, 25%
  - Warrensburg Health Center – Primary Care: 8159, 22%
  - Warrensburg Health Center – Urgent Care: 553, 22%
  - West Mountain Health Services – Bldg 1: 3682, 12%
  - West Mountain Health Services – Bldg 2: 13018, 17%
PUBLIC HEALTH COST

- Total economic cost of smoking in the US → more than $300 billion/year
  - This includes nearly $170 billion in direct medical care for adults and more than $156 billion in lost productivity due to premature death and exposure to secondhand smoke

- Healthcare costs in NY state → $10.4 billion/year
  - more than a third ($3.3 billion) is paid for by Medicaid
COMMUNITY PERSPECTIVE

Kate Ormsby, HHHN Prevention Coordinator:

“My perspective is that any behavior change is difficult and it has been proven that social support increases the likelihood of making lifestyle changes.”

Anonymous, Program Participant:

“Having people to talk to is a real plus. It is great to be able to ask questions and have tools. I like the camaraderie and ability to talk with others about the difficulty you face as you try to quit.”
SMOKING CESSATION TOOLS — 6-MONTH QUIT RATES

- Nicotine Patch: 16%
- Nicotine Gum: 16%
- Nicotine Nasal Spray: 24%
- Nicotine Inhaler: 17%
- Nicotine Losenge: 19%
- Bupropion: 19%
- Varenicline: 27%

Pharmacotherapy + Behavioral Counseling → 30%

4% "Cold Turkey"

Long term (≥6 months) quit rates. Data adapted from Cochrane Database of Systematic Reviews 24 25 27
INTERVENTION AND METHODOLOGY

- Established a HHHN-led smoking cessation support group using the 7-week Butt Stops Here curriculum developed in NY state. Each session includes topics for group discussion as well as weekly homework.
- Participants were recruited via flyers in HHHN offices/around town and via referral from providers and the NY state quit line.
- Participants received free program workbooks as well as folders containing local smoking-cessation resources.
- Brief paper surveys were completed by the participants both before and after the 7-week session to begin to evaluate the effectiveness of the program.
- Carbon monoxide levels were also measured for each participant at each meeting to track cessation in real-time.
- So far two 7-week sessions have been completed and a third is currently underway.
RESULTS

- 8 total participants (2 participated in both 7-week sessions)
  - 4 male, 4 female
  - Ages 42-72, average = 56
  - 4 had at least an Associate’s degree
  - 7/8 had smoked for > 20 years
  - Average of <1ppd
  - All had attempted to quit > 3 times in the past (success ranging from 2 weeks – 8 years)
  - Between them had tried cold turkey, NRT, bupropion, and varenicline
  - All identified health as one reason they wanted to quit, most also identified cost as a motivator
RESULTS — MOTIVATION AND RESOURCES

Participant-reported level of motivation and resources to quit before and after participation in the Butt Stops Here program (0-10 scale)

- **Motivation to Quit**
  - Before: 8.25
  - After: 5.91

- **Resources to Quit**
  - Before: 5.42
  - After: 8.33
RESULTS – CO LEVELS

Carbon monoxide levels per participant per week

Non-smoker level

Week 1  Week 2  Week 3  Week 4  Week 5  Week 6  Week 7

Participant 1  Participant 2  Participant 3  Participant 4  Participant 5  Participant 6  Participant 7  Participant 8
RESULTS — CESSATION RATES

- Participant 1 — cut back slightly, now smoking a little less than 1/2ppd
- Participant 2 — was able to quit entirely and is still a non-smoker (> 2 months out)
- Participant 3 — was able to quit entirely for 3-4 weeks, but is now back to smoking 1/2ppd
- Participant 4 — was smoking 2ppd, now closer to 1ppd
- Participant 5 — has decreased to about 5 cigarettes per day (was smoking 10)
- Participant 6 — was able to quit for 1-2 weeks, but is now back to smoking 1/2ppd
- Participant 7 — was still smoking at the end of one session, but has been a non-smoker for about 2 weeks
- Participant 8 — came to a few sessions, but was unable to continue

- One participant was able to quit entirely (12.5%)
- Nearly all participants reduced their level of smoking
LIMITATIONS

- Sample size
- Need for longer follow-up
- People who seek out a group program may be more motivated to quit in general
RECOMMENDATIONS

- Work on recruitment
- Consider a program with rolling admission
- Continue to evaluate effectiveness as number of participants increases
- Integrate pharmacologic efforts more
- Emphasize referral to more intensive behavioral counseling/CBT
- Consider having a former smoker run the program


Supporting smoking cessation - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/259724432_fig1_Fig-1-Long-term-6-months-quit-rates-for-widely-available-drugs-for-smoking-cessation
https://www.health.ny.gov/prevention/tobacco_control/
https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
http://www.healthyadk.org/content/sites/healthyadk/Tobacco_Reports/Data_Adult_Cigarette_Smoking_North_Country_FINAL.pdf