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Evaluating the Effectiveness of a Smoking Cessation Support Group

Holly Bachilas

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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
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 State → 15.9%**

**North Country → 22.6%**
## Problem Identification [Local]

<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>

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Patients</th>
<th>Smoking Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolton Health Center</td>
<td>1242</td>
<td>14%</td>
</tr>
<tr>
<td>Chester-Horicon Health Center</td>
<td>2082</td>
<td>16%</td>
</tr>
<tr>
<td>Fort Edward-Kingsbury Health Center</td>
<td>4241</td>
<td>30%</td>
</tr>
<tr>
<td>Health Center at Broad Street – Primary Care</td>
<td>5511</td>
<td>30%</td>
</tr>
<tr>
<td>Health Center at Broad Street – Urgent Care</td>
<td>4694</td>
<td>34%</td>
</tr>
<tr>
<td>Indian Lake Health Center</td>
<td>1107</td>
<td>17%</td>
</tr>
<tr>
<td>Moreau Family Health</td>
<td>3873</td>
<td>22%</td>
</tr>
<tr>
<td>Moriah Health Center</td>
<td>980</td>
<td>25%</td>
</tr>
<tr>
<td>North Country Family Health</td>
<td>4426</td>
<td>25%</td>
</tr>
<tr>
<td>North Country Ob/Gyn</td>
<td>3423</td>
<td>13%</td>
</tr>
<tr>
<td>North Creek Health Center</td>
<td>1671</td>
<td>20%</td>
</tr>
<tr>
<td>Queensbury Family Health</td>
<td>375</td>
<td>11%</td>
</tr>
<tr>
<td>Schroon Lake Health Center</td>
<td>1068</td>
<td>12%</td>
</tr>
<tr>
<td>Ticonderoga Health Center</td>
<td>4248</td>
<td>25%</td>
</tr>
<tr>
<td>Warrensburg Health Center – Primary Care</td>
<td>8159</td>
<td>22%</td>
</tr>
<tr>
<td>Warrensburg Health Center – Urgent Care</td>
<td>553</td>
<td>22%</td>
</tr>
<tr>
<td>West Mountain Health Services – Bldg 1</td>
<td>3682</td>
<td>12%</td>
</tr>
<tr>
<td>West Mountain Health Services – Bldg 2</td>
<td>13018</td>
<td>17%</td>
</tr>
</tbody>
</table>
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

4%
“Cold Turkey”

16% Nicotine Patch
16% Nicotine Gum
19% Bupropion

24% Nicotine Nasal Spray
17% Nicotine Inhaler
19% Nicotine Losenge
27% Varenicline

Pharmacotherapy + Behavioral Counseling → 30%

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

- 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_FINA L.pdf