2020

A Motivational Interviewing Approach Toward Mask Wearing in Franklin County, Vermont

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PROBLEM IDENTIFICATION AND NEED

- Over 160,000 people in the United states have died from COVID-19\(^1\)
- Face coverings, even cloth ones, have been demonstrated to be effective in limiting the spread of the novel coronavirus\(^2\)

<table>
<thead>
<tr>
<th>Face Covering Material</th>
<th>Distance Respiratory Droplets Travel(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No face covering</td>
<td>8 ft</td>
</tr>
<tr>
<td>Bandana</td>
<td>3 ft 7 in</td>
</tr>
<tr>
<td>Folded cotton handkerchief</td>
<td>1 ft 3 in</td>
</tr>
<tr>
<td>Properly-fitting handmade cloth mask</td>
<td>2.5 inches</td>
</tr>
</tbody>
</table>

- People in rural areas are 4 times less likely to wear masks than those in suburban or urban areas\(^4\)
  - Much of Franklin County, Vermont is rural
- One survey indicated that 15% of Vermonters rarely or never wear masks in indoor, crowded areas\(^5\)
  - Survey did not account for geographic distribution – unknown how this relates to different regions of Vermont
  - Also did not consider other high-risk settings (e.g. outdoors in a crowded space)
- This project aimed to explore barriers to mask wearing in Franklin County, VT and intervene to encourage mask wearing
PUBLIC HEALTH COST

- In Vermont, there have been 1,459 cases of COVID-19 and 58 deaths\(^6\)
- Franklin County accounts for 118 of those cases and 7 deaths\(^6\)
  - Franklin County has the second-highest caseload in Vermont after Chittenden
- Nationally, the average case of COVID-19 – including hospitalized and non-hospitalized – costs $3,045 for the healthcare system\(^7\)
  - This increases to $14,366 looking at only hospitalized patients
- These expenses have become harder to support given the widespread job losses and economic hardships posed by the pandemic
  - As of April 11, 2020, the projected unemployment rate in Vermont was 22.9%
  - 45% of Vermonters with jobs experienced some type of disruption due to COVID-19, including job loss, furlough, and reduction in pay or hours\(^8\)
- In Franklin County, masks are available for free thanks to volunteer organizations like the St. Albans Face Mask Group
COMMUNITY PERSPECTIVE

Pam Cross, RN, founder of the St. Albans Face Mask Group:

“We have not let cost be a barrier [to mask wearing]... I don’t think it’s an access issue... Mask wearing is similar to any other behavior... there’s usually a reason people don’t do it.” It is a matter of “understanding where people come from and what’s their motivation.”

“What would motivate people to protect their neighbor?”

Attendees at the St. Albans Primary Care diabetes group visit, August 2020:

Motivations

• “My husband is immunocompromised. I wear a mask to protect him.”

• “The state mandate has pushed the issue a little stronger.”

• “People who are family-oriented tend to wear a mask. They are more likely to protect the home.”

Barriers

• “[People who don’t wear masks] think it’s all a big farce.”

• “My glasses fog up.

• “Speaking isn’t as easy.”

• “[It is] more about rebellion.”
METHODS

A motivational interviewing approach was taken toward mask wearing behaviors

- Before visit, all in-person patients were asked, “How often do you wear a mask when you go out in public?”
  - Options were “Always”, “Sometimes”, and “Never”
- If Always:
  - Patient was thanked for wearing mask and encouraged to continue behavior
- If Sometimes or Never:
  - Patient was shown a 30-second video while being roomed\(^9\)
    - ABC News video demonstrating research from Florida Atlantic University\(^3\)
  - Patient was asked about motivations and barriers to wearing a mask
  - At the end, patient was asked whether they were more, less, or equally likely to wear a mask going forward
- **NOTE:** Vermont mandated mask use in public beginning on August 1, 2020\(^{10}\)

Images from the video shown to patients demonstrating respiratory droplet travel without a mask (above) and with a cloth mask (below)\(^9\)
METHODS - PDSA (PLAN, DO, STUDY, ACT)

- Many iterations were rapidly made to the study design:

Initially, survey question only asked to in-person patients using existing COVID-19 screening questions

Questions were asked to all patients, including video visits

Only in-person visits were asked due to difficulty of showing the video clip via telehealth

At first, providers showed patients the educational video during the visit

Roomers began showing the video due to limited time during visit
RESULTS - DEMOGRAPHICS

- 50 patients participated in the survey
- 16 men, 34 women
  - Males and females were equally likely to always wear a mask (94%)
- Ages ranged from 9-88, with median age 54.5
RESULTS

- 94% of respondents said that they always wear a mask in public.
  - 6% said that they sometimes wear a mask in public.

- After the intervention, 2/3 respondents who said “sometimes” maintained the same stance on mask wearing
  - One respondent who said she “sometimes” wears masks became more likely to wear a mask in the future

- Reasons cited as barriers to mask wearing:
  - Discomfort, claustrophobia, belief that COVID-19 is “a hoax”

- 10% cited the mandate as a motivator for wearing a mask.
  - Before mandate, 84.6% always wore a mask (n=13)
    - All people who “sometimes” wore masks prior to mandate were equally likely to wear them after the intervention
  - After mandate, 97.3% always wore a mask (n=37)
    - All people who “sometimes” wore masks after the mandate were more likely to wear them after the intervention

Self-Reported Frequency of Mask Use

Before Mandate | After Mandate
---|---
Always | 35
Sometimes | 5
Never | 0

Likelihood of Wearing Mask After Motivational Interviewing

Before Mandate | After Mandate
---|---
More Likely | 1
Equally Likely | 2
Less Likely | 0
EFFECTIVENESS AND LIMITATIONS

Effectiveness

- Focused on motivating rather than shaming people into changing behavior
- Incorporated mask wearing as part of a standard safety assessment in the physician’s office, thus aiming to normalize the behavior
- All patients queried about mask use answered the survey

Limitations

- Starting August 1 (second day of the study), the Vermont legislature began mandating the use of a face covering outside of the home if a person is within 6 feet of others (with some medical exceptions). Only one day of data was collected prior to the mandate. This did not create much of a baseline for comparison.
- Only one week of data was collected in total
- Patients were required to wear masks in the office, which might skew their responses to questions about frequency of mask wearing.
- There was not much data from the <30 years or > 80 years age groups.
AREAS FOR FUTURE IMPROVEMENT

- Continue to monitor Vermonters’ mask wearing beliefs as people adapt to the mandate and its enforcement
  - People are currently unsure how or if the mandate will be enforced, which could impact compliance
- Collect data from a larger sample
  - Ideally collect more data from younger respondents
  - According to the VT Department of Health survey, people aged 18-24 were less likely to wear masks than other age groups
- Explore the political motivations behind some of the reported barriers to mask wearing, especially moving toward the 2020 presidential election
  - Some reported barriers in the survey were politically-charged
REFERENCES


Unless otherwise noted, images were provided by the Vermont Department of Health’s Masks On Vermont campaign.