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

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A MOTIVATIONAL INTERVIEWING APPROACH TOWARD MASK WEARING IN FRANKLIN COUNTY, VERMONT

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PRIMARY CARE

COMMUNITY HEALTH IMPROVEMENT PROJECT

JULY-AUGUST 2020

PROBLEM IDENTIFICATION AND NEED

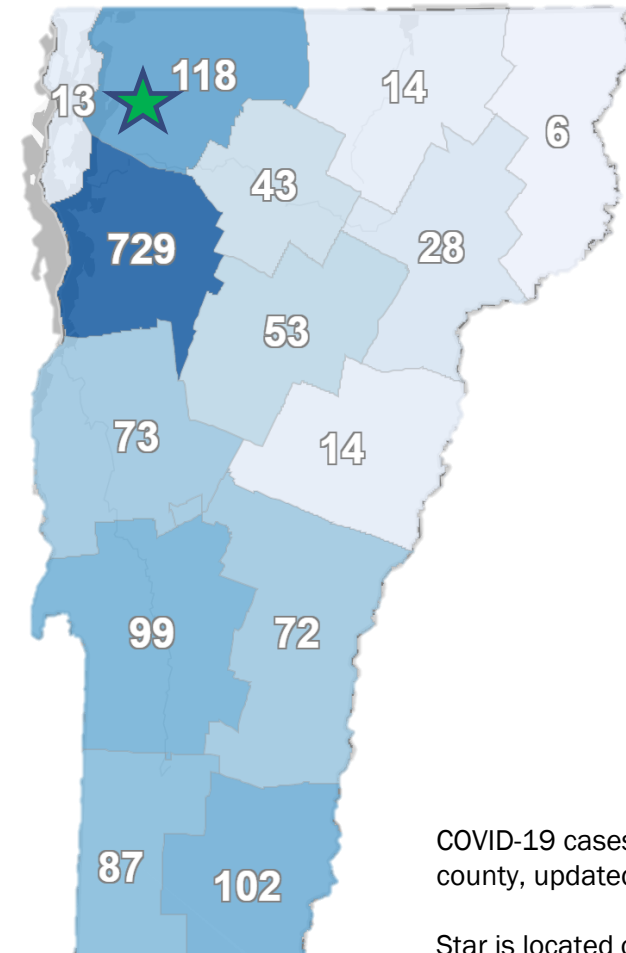
- Over 160,000 people in the United States have died from COVID-19¹
- Face coverings, even cloth ones, have been demonstrated to be effective in limiting the spread of the novel coronavirus²

Face Covering Material	Distance Respiratory Droplets Travel ³
No face covering	8 ft
Bandana	3 ft 7 in
Folded cotton handkerchief	1 ft 3 in
Properly-fitting handmade cloth mask	2.5 inches

- People in rural areas are 4 times less likely to wear masks than those in suburban or urban areas⁴
 - Much of Franklin County, Vermont is rural
- One survey indicated that 15% of Vermonters rarely or never wear masks in indoor, crowded areas⁵
 - 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 deaths⁶
- Franklin County accounts for 118 of those cases and 7 deaths⁶
 - 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 system⁷
 - 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 hours⁸
- In Franklin County, masks are available for free thanks to volunteer organizations like the St. Albans Face Mask Group



COVID-19 cases in Vermont by county, updated August 9, 2020

Star is located on Franklin County

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.”

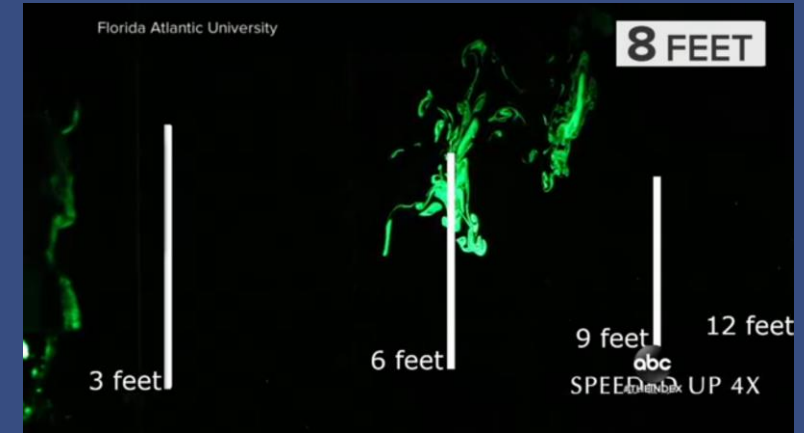
Barriers

- “[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

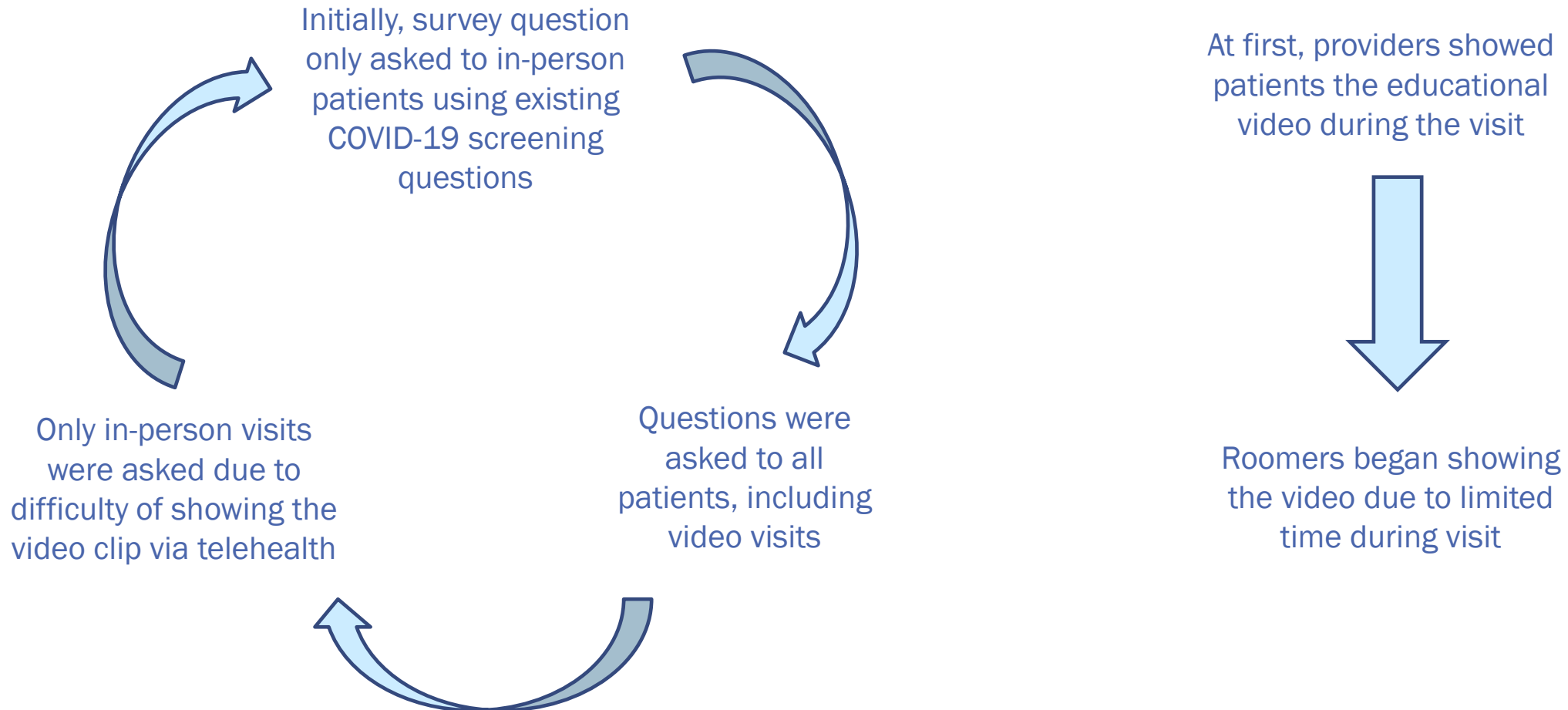
- Before visit, all in-person patients were asked, “How often do you wear a mask when you go out in public?”
 - Options were “Always”, “Sometimes”, and “Never”
- If Always:
 - Patient was thanked for wearing mask and encouraged to continue behavior
- If Sometimes or Never:
 - Patient was shown a 30-second video while being roomed⁹
 - ABC News video demonstrating research from Florida Atlantic University³
 - 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, 2020¹⁰



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)

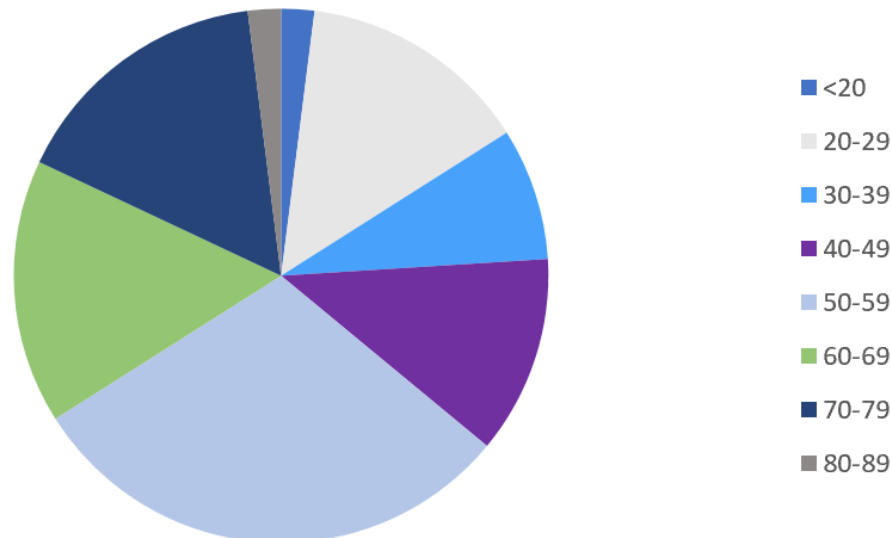
- Many iterations were rapidly made to the study design:



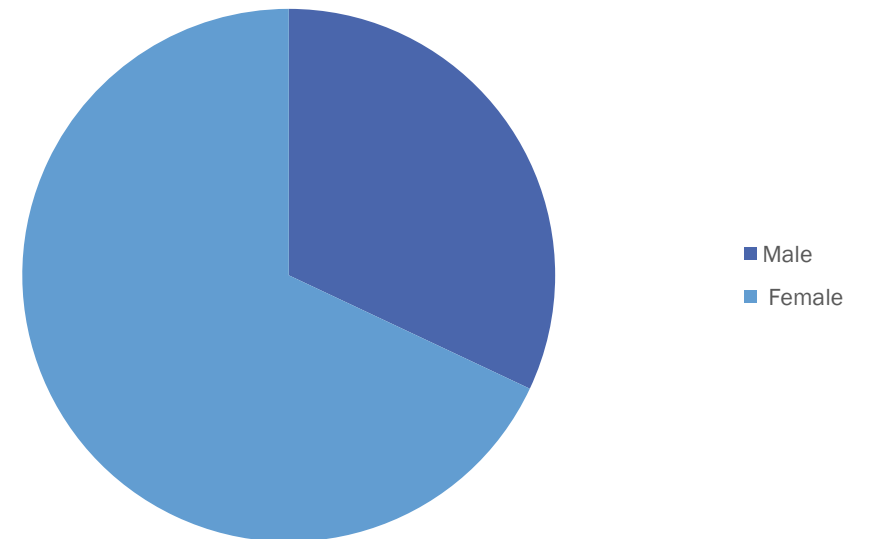
RESULTS - DEMOGRAPHICS

- 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

Ages of Respondents



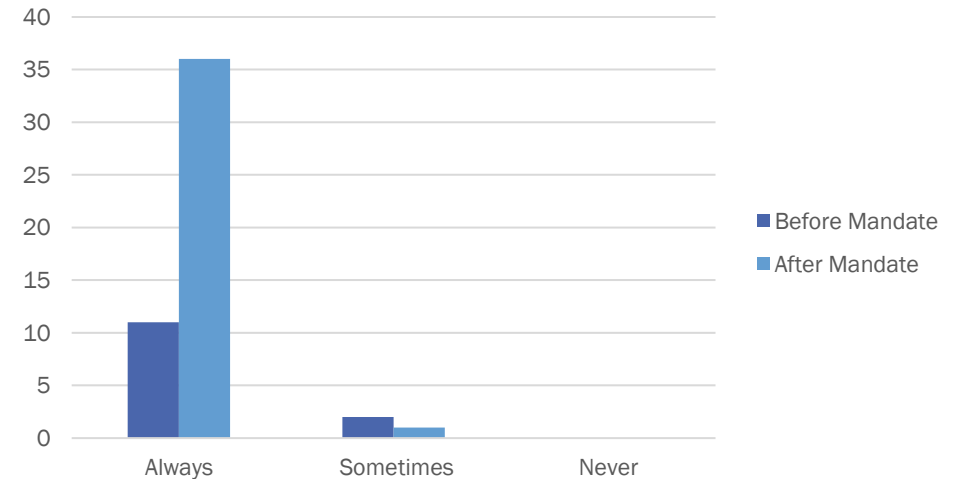
Genders of Respondents



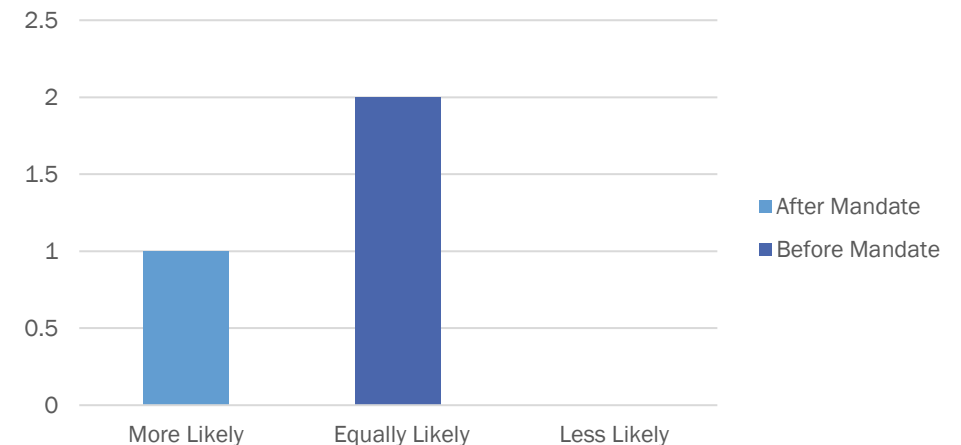
RESULTS

- 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



Likelihood of Wearing Mask After Motivational Interviewing



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)¹⁰
 - 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
 - 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 groups⁵
- 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

1. CDC COVID Data Tracker. (2020, January 21). Retrieved August 10, 2020, from <https://www.cdc.gov/covid-data-tracker/>
2. Ollila, H. M., Partinen, M., Koskela, J., Savolainen, R., Rotkirch, A., & Laine, L. T. (2020). Face Masks Prevent Transmission of Respiratory Diseases: A Meta-Analysis of Randomized Control Trials. *medRxiv*. <https://doi.org/10.1101/2020.07.31.20166116>.
3. Verma, S., Dhanak, M., & Frankenfield, J. (2020). Visualizing the effectiveness of face masks in obstructing respiratory jets. *Physics of Fluids*, 32(6). <https://doi.org/10.1063/5.0016018>.
4. Haisher, M. H., Beilfuss, R., Hart, M. R., Opielinski, L., Wrucke, D., Zirgaitis, G., Uhrich, T. D., & Hunter, S.K. (2020). Who is wearing a mask? Gender-, age-, and location-related differences during the COVID-19 pandemic. *medRxiv*. <https://doi.org/10.1101/2020.07.13.20152736>.
5. Vermont Department of Health. (2020). COVID-19 Preliminary Survey Findings Step Two: Social Marketing Campaign on Mask Wearing. <https://webpubcontent.gray.tv/wcax/docs/VDH%20COVID%20-%20Mask%20Wearing%20Survey%20Brief%20FINAL.pdf>
6. Vermont Department of Health (2020). Dashboard of Activity in Vermont. <https://www.healthvermont.gov/response/coronavirus-covid-19/current-activity-vermont#dashboard>
7. Bartsch, S. M., Ferguson, M. C., McKinnell, J. A., O’Shea, K. J., Wedlock, P. T., Siegmund, S. S., and Lee, B. Y. (2020). *Health Affairs* 39(6), 927-935. <https://doi.org/10.1377/hlthaff.2020.00426>
8. Niles, M. T., Bertmann, F., Morgan, E. H., Wentworth, T., Biehl, E., & Neff, R. (2020). Employment and Food During Coronavirus. *University of Vermont College of Agriculture and Life Sciences Faculty Publications*, 20. <https://scholarworks.uvm.edu/calsfac/20>
9. ABC News. (2020). New study shows effectiveness of different face masks.” <https://abcnews.go.com/WNT/video/study-shows-effectiveness-face-masks-71564966>
10. Vermont Department of Health. (2020). About Coronavirus Disease (COVID-19). <https://www.healthvermont.gov/response/coronavirus-covid-19/about-coronavirus-disease-covid-19>

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