



University of Vermont

Larner College of Medicine

Public Health Projects
Class of 2027
Fall 2024

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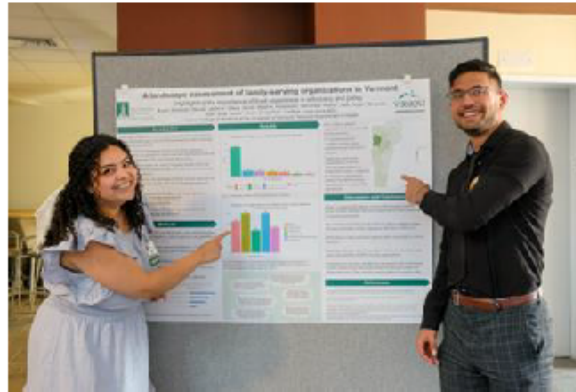
Community-Academic Partnership with the United Way of Northwest Vermont 20+ years!



Call for Projects

United Way of
Northwest Vermont
and partner
organizations

CALLING FOR FALL 2024 PUBLIC HEALTH PROJECTS! LARNER COLLEGE OF MEDICINE AT UVM



**Timeline: Proposal forms are due
February 2, 2024 - Questions?**

Jan K Carney, MD, MPH, Course
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What are Public Health Projects?

- Public Health Projects (PHP) began in 2004 in partnership with the United Way of Northwestern Vermont.
- Projects are community-initiated.
- Medical student teams of 6 are paired with faculty mentors and community mentors from participating agencies to guide students' work in short weekly meetings.
- Students answer your research question, collect, and analyze data, then provide a summary and poster in our annual Poster Session and Community Celebration.

What Kinds of Projects Can Students complete?

- Surveys, interviews, focus groups to gather data to answer a research question or help solve a healthcare, public health, or social health challenge.

Can we see sample projects and posters?

- Yes! See [UVM ScholarWorks](#) for past projects.

Some previous project topics:

Improving Community Blood Donation Rates

Using Telehealth to Meet Unique Needs of Rural Communities

Preventing Eating Disorders in Vermont Public Health Schools

Improving Access to Adult Home-Based Palliative Care

Identifying Barriers and facilitators to HPV Vaccination in Young Adults

Improving the healthcare experience for patients with intellectual and developmental disabilities

Reducing Emergency Room Utilization

Improving primary care recruitment in rural Vermont

Taking an Inclusive Sexual History for Gender Diverse Individuals



Course Objectives =

Combination of
Community
Experiences &
Public Health
Research

1. Synthesize **knowledge of public health learned through actions** in the community.
2. Describe and apply **basic public health research methods**.
3. Identify and apply **self-directed approaches to learning** that include receiving and giving feedback, critical thinking, and self-assessment procedures.
4. Demonstrate **professional attitudes and behaviors** including integrity, respect, courtesy and confidentiality
5. **Communicate effectively with diverse people, collaborate with members of a diverse group or team** to achieve common goals, and manage conflict in ways that respect those involved and promote problem-solving.
6. **Identify aspects of culture and diversity in the community** and demonstrate sensitivity and responsiveness to others' culture, age, gender, sexual orientation, education, income, and disabilities
7. Apply principles of public health research to develop and complete a research project addressing a **public health issue identified by the community**.
8. Create and present a **poster** summarizing a research project.
9. Devise **practical approaches** to improve health in our community.
10. Identify **connections** between improving health in **patients and populations**.



Community Humility

THE COMMUNITY IS EXPERT IN ITS PEOPLE,
ORGANIZATIONS, CULTURE, AND WHAT
APPROACHES WILL MOST LIKELY SUCCEED.



Public Health Project Themes

WEDNESDAY

Health Behaviors

Access to Health Care/Rural Health

Social Determinants of Health

Health Policy and Advocacy

Community Health Needs Assessments

Specific Public Health topics/issues

FRIDAY

- Health Behaviors
- Access to Health Care/Rural Health
- Social Determinants of Health
- Health Policy and Advocacy
- Community Health Needs Assessments
- Specific Public Health topics/issues



Project Title: Communication Accessibility Issues in Healthcare

Summary: Overall Objectives:

- Assessment of current communication practices
- Technology integration for accessibility
- Training healthcare professionals
- Policy advocacy and implementation
- Community engagement and education

Understanding the Communication Experiences of Patients with Intellectual and Developmental Disabilities in Healthcare Settings

Introduction

Champlain Community Services (CCS) provides highly personalized support to Vermonters with **Intellectual and Developmental Disabilities (IDD)**. The Larner College of Medicine is partnering with CCS to explore the challenges faced by their consumers, particularly those who are non or minimally speaking in healthcare settings.

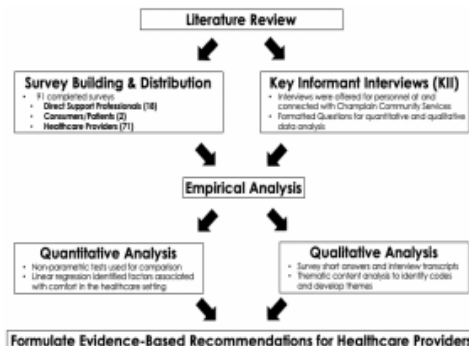
Challenges Faced in Healthcare Settings

- **Misconceptions** that non-speaking people with IDD cannot feel or express pain³
- Unfamiliarity of healthcare professionals with **ADA requirements**^{4,5}
- Disuse of **adapted pain scales**^{1,2}

Project Objectives

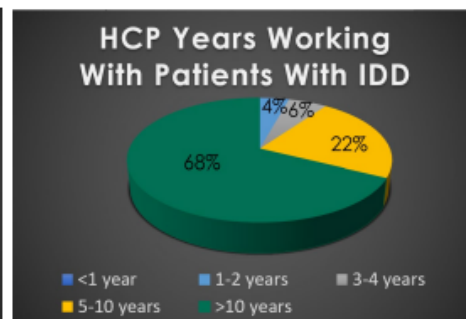
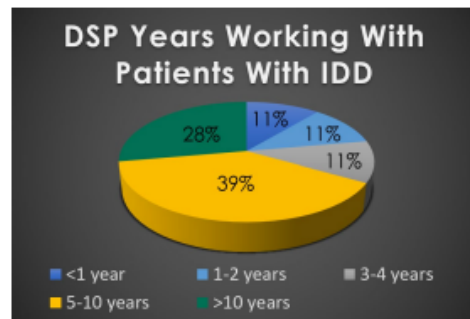
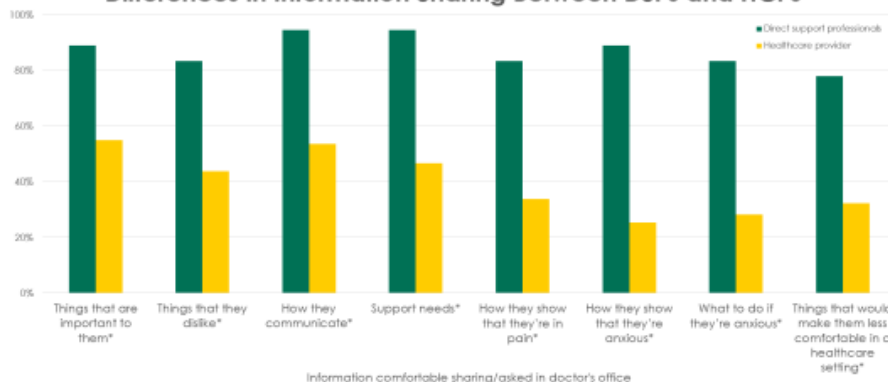
- **Gather perspectives** from healthcare providers (HCPs), CCS direct support personnel (DSPs), and CCS consumers on their experiences treating, supporting, and being patients with IDDs
- Create an **evidence-based model** for the patient, DSPs, and HCPs to bridge and ameliorate communication barriers

Methods



Results

Differences in Information Sharing Between DSPs and HCPs



Key Anecdotes in Support of a Patient-Centered Approach

Medical Jargon

"Sometimes I don't understand the **medical language**" (Individual with an IDD)

Need for Personalized Care

"It's actually **respectful** to establish how they [individuals with IDD] respond or communicate their needs around health [and] pain." (DSP)

Lack of Direct Communication

"The **doctor didn't know I was hurt** and wasn't listening... this is **my body**... they don't listen to us." (Individual with an IDD)

Incomplete Understanding of Unique Needs

"It takes a **little bit longer** for us to register what is going on...give us time." (Individual with an IDD)

Discussion

The proportion of HCPs with greater than five years of experience working with patients with IDD is **significantly higher** than the proportion of DSPs; yet DSPs report communication challenges between HCPs and patients.

Communication challenges include:

- **Lack of assistance with...**
 - Treatment plan coordination
 - Patient portal and health insurance navigation
 - Medical jargon
- **Observed instances where HCPs showed a lack of...**
 - Patience for patient anxiety
 - Knowledge of patient communication needs
 - Inclusion of individual with IDD in medical decision making

Recommendations

- **Personalized patient info sheets:** general info about patient's life, preferences, communication style and pain expression
- HCP **upfront inquiry about pain** expression and communication preferences of patients with IDD
- Conversion of paperwork to **verbal interview format**
- **Increased HCP education** regarding IDD

HCPs must adopt **patient-centered communication approaches** to mitigate communication challenges and provide efficient and compassionate care.

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4. Aggarwal H, Campbell EG, Reissman J, Iezzoni LI. Communicating with patients with disability: perspectives of practicing physicians. *J Gen Intern Med*. 2019;34(7):1139-1145. [doi:10.1007/s11366-018-0444-8](https://doi.org/10.1007/s11366-018-0444-8)
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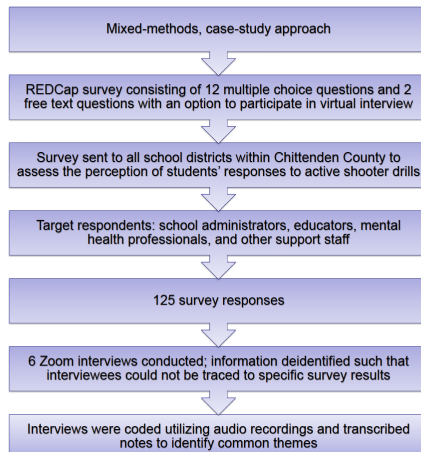
¹The Robert Larner M.D., College of Medicine at The University of Vermont, ²Vermont Public Health Association

Background

In 2022, 177 gunfire related incidents on school grounds were reported in the U.S. with 148 of these being injuries and 57 resulting in death.¹ Among the 95% of U.S. schools that conduct active shooter drills, the most widely practiced type is a traditional lockdown drill, with doors locked, lights off, and students in an out-of-sight corner.² In Vermont, the Agency of Education mandates active shooter drills in the form of options-based training, for all public schools. However, specific guidelines for these drills are not provided. While lockdown-styled drills remain common in Vermont, there is a growing emergence of adaptive drills, such as *Run-Hide-Fight*.

Minimal data is available on the efficacy of active shooter drills and there are growing concerns related to a lack of guidance and potential harmful effects on students' mental health. **The purpose of this study is to gain insight on professional educators' perceptions of preparedness, emotional consequences on students, and efficacy of active shooter drills in Chittenden County public schools.**

Methods



Results

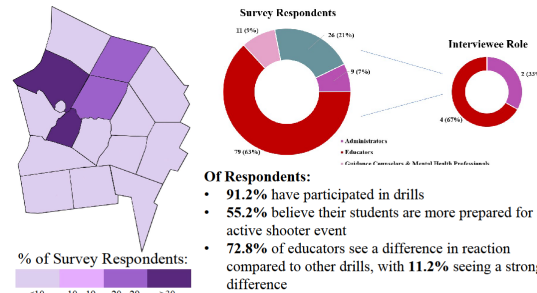
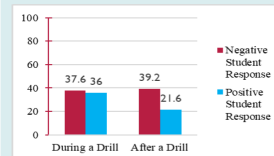
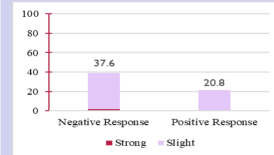


Figure 1. Adverse effects on students during and after active shooter drills



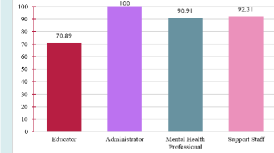
37.6% of respondents who observed some negative response **during** a drill
 36% of respondents who observed some positive response **during** a drill
 39.2% of respondents who observed some negative response **after** a drill
 21.6% of respondents who observed some positive response **after** a drill

Figure 2. The magnitude of responses after the active shooter drills



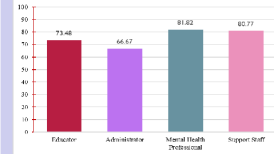
1.6% observed a strong negative response (crying, visible panic) **after** a drill
 37.6% observed a negative response (anxiety) **after** a drill
 20.8% observed a positive (calm, cooperative) response **after** a drill
 0.8% observed a strong positive response (empowered, confident) **after** a drill

Figure 3. High school respondents (%) who believe there are sufficient mental health resources



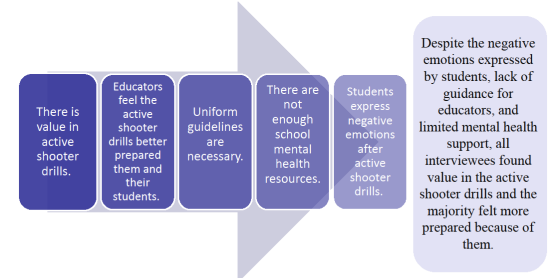
70.89% High School Educators
 100% High School Administrators
 90.91% High School Guidance Counselors
 92.31% High School Support Staff

Figure 4. High school respondents (%) who believe there is value in active shooter drills



73.48% High School Educators
 66.67% High School Administrators
 81.82% High School Guidance Counselors
 80.77% High School Support Staff

Interview Themes



Discussion

- Most professional educators in Chittenden County see **value** to active shooter drills, regardless of perceived adverse effects seen in students or method of drill.
- A majority of educational professionals report that students have a **different reaction to active shooter drills when compared to other practices**, such as fire drills. This might indicate a negative association with active shooter drills.
- Negative responses**, such as acute outbursts of distress, are seen both during and after active shooter drills, suggesting evidence of lingering psychological effects resulting from lockdown drills.
- However, a nearly-identical number of respondents observed some **positive response** in students during active shooter drills.
- Mixed responses regarding adverse effects observed among students underscores the important need to **standardize drill guidelines** to minimize variability.

Recommendations

- ✓ Ensure schools have adequate mental health resources to address potential adverse effects following active shooter drills.
- ✓ Vermont public schools may benefit from uniform guidelines for active shooter drills from the Agency of Education.
- ✓ Expand data collection to all schools in Vermont and directly assess students' perceptions.
- ✓ Assess broader issue of gun control as it relates to the necessity of conducting lockdown drills.

References

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²Saggers, Beth, et al. "Are Schools' Lockdown Drills Really Beneficial?—a Commentary." *Journal of School Health*, vol. 91, no. 6, 18 May 2021, pp. 451–453. <https://doi.org/10.1111/josh.12020>.

³David, R. (2022). K-12 School Shooting Database. Retrieved April 28, 2023, from <https://k12edh.org/all-shootings>

INTRODUCTION

- Many Vermonters report difficulties in accessing necessary healthcare.¹
- The COVID-19 pandemic has worsened this phenomenon, particularly in rural communities.²
- Telehealth became a widespread solution to healthcare access issues during COVID-19.
- Telehealth is defined** as the delivery of health care through **remote technologies**³ including **video and phone appointments**, sending and receiving messages, and remote monitoring.⁴
- In 2020, **telehealth use increased 63-fold** nationally, with **Vermont** being one of the states with the **most usage**.⁵
- The continued use of telehealth beyond the COVID-19 pandemic may **improve** health disparities in **access to care** for rural Vermont.

Objectives

- To investigate perspectives on telehealth among (1) **patients** and (2) **healthcare providers**
- To investigate use of telehealth among patients in (1) **Chittenden County (urban)** versus (2) the **remainder of Vermont (rural)**

METHODS

- Cross-sectional study design using REDCap online survey, disseminated through:

- Patients:** Front Porch Forum
- Providers:** LCOM Faculty



- Data collected:

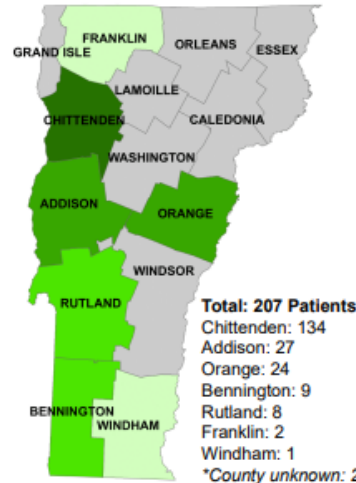
- Demographics:** gender, ethnicity, age, town, insurance, medical specialty
- 5-Point Likert Scale:** access, satisfaction, insurance, health outcomes, wait time, burnout, internet connection, privacy, number of appointments

- Respondents were excluded if they did not complete at least 80% of the survey

- Data analyzed in SPSS (χ^2 and odds ratios)

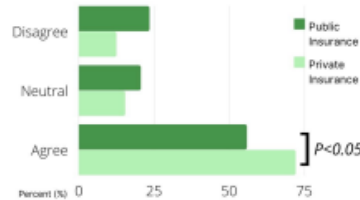
RESULTS: PATIENTS

Number of Survey Respondents



- 72%** of patients were **satisfied** with the **interactions** they had with their providers via telehealth
- 56%** of patients **agreed** that telehealth allowed them to **see providers** they would not have otherwise been able to
- 60%** of patients **agreed** that telehealth improved their **access** to healthcare overall
- 69%** of patients did **NOT** find that telehealth made getting appointments with **specialists** easier
- There were no statistically significant differences when comparing Chittenden County to the remainder of Vermont*

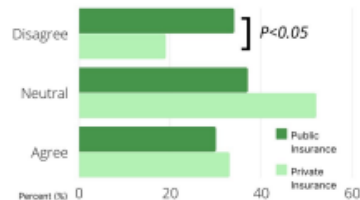
"Telehealth has made scheduling healthcare appointments easier"



Scheduling appointments was:

- 2.04 times **easier** for those with **private insurance** vs public insurance ($P < 0.05$)
- 2.57 times **easier** for those **≤ 59 years old** compared to **≥ 60 years old** ($P < 0.01$)

"Telehealth has made getting appointments with specialists easier"



Finding specialists was:

- 56% **less difficult** for those with **private insurance** vs public insurance ($P < 0.05$)

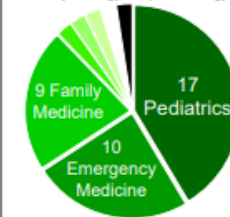
Understanding insurance telehealth policies:

- 50% **more likely** in those **≥ 60 years old** compared to **≤ 59 years old** ($P < 0.001$)

RESULTS: PROVIDERS

Provider Specialties

1 Adult Primary Care, 1 Inpatient Hospitalist, 1 Urgent Care, 1 Gynecology, 1 Ophthalmology



Total: 41 Providers

"I've been on both sides of telehealth now and see benefits for patient and provider ... If we believe in the importance of the history in making diagnoses, then telehealth, well done, can help effective and efficient care."
– Provider Response

- 63%** of providers were **satisfied** with the **interactions** they had with their patients via telehealth
- 81%** of providers **agreed** that telehealth allowed them to **see patients** they would not have otherwise been able to
- 73%** of **providers** agreed that telehealth has led to **improvements** in patient **outcomes**
- Pediatricians** were **2 times** more likely to be **satisfied** with their patient **interactions** via telehealth
- 74%** of **Emergency Medicine** providers were **NOT** satisfied with their patient **interactions** via telehealth ($P < 0.001$)

DISCUSSION & CONCLUSIONS

- Overall, the **majority of patients** in our study were **satisfied** with their telehealth interactions (72%) and agreed that telehealth **expanded their access** to healthcare (60%).
- However, literature suggests there are limitations that prevent equal access to telehealth across the state.⁶
- Lack of significant differences in our study between Chittenden County and the remainder of Vermont may be due to variations in public/private insurance, **access to internet**, and specialists under-utilizing telehealth.
- The biggest concerns among patients and providers with the use of telehealth was the **lack of physician exams**, which could be addressed through patient and provider education and the use of **at-home technologies**.⁷
- The survey was limited as a convenience sample and may not equally represent all Vermont practitioners and patients.

References

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Examining Vermonters' Attitudes Towards a Sugary Beverage Excise Tax

Campbell, Avery¹; Cunningham, Elle¹; Eaton, Jenna¹; Kahla, Christine¹; Kambli, Ru¹; Mari, Mikaela¹; Strohbahn, Ian¹; Tenney, Alyssa¹; Zuk, Tina²; Tracy, Paula¹

¹The Robert Larner M.D. College of Medicine at the University of Vermont, Burlington, Vermont ²American Heart Association

Background

- Americans consume more added sugars from sugar sweetened beverages (SSB) than any other food source.¹
- SSB consumption is associated with increased risk of cardiovascular diseases,^{2,3} dyslipidemia,² and diabetes^{4,5} for adults, as well as obesity and metabolic disorders for children.⁶
- Multiple U.S. cities have implemented SSB taxes, reducing consumption of unhealthy beverages while funding public health efforts targeting social and health disparities.⁷

Objectives

- Our project examines Vermonters' attitudes towards implementing a sugary beverage excise tax.
- We investigate whether revenues going toward various public health efforts will influence their support.

Methods

- A nineteen-question anonymous survey was distributed online, via community forums, and in-person locations.
- Registered Vermont voters ≥18 years old were included.
- Data were collected from 11 out of 14 Vermont counties.
- Descriptive statistics and χ^2 tests were performed using R. P values were calculated with Monte Carlo simulation due to small sample sizes.

References

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Results

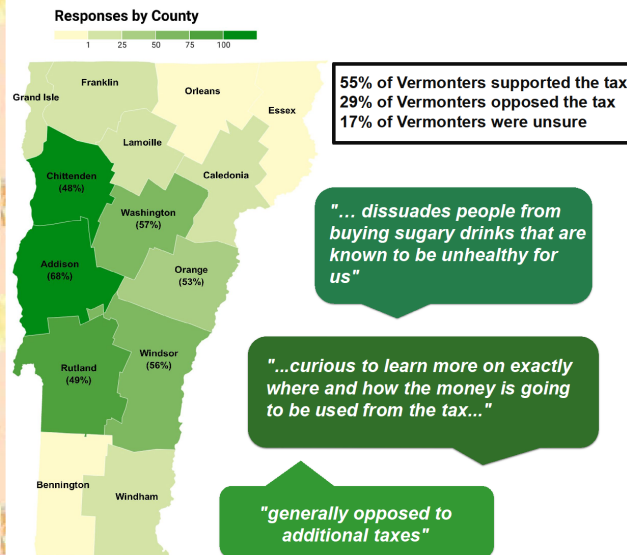


Figure 1: Survey responses by county. Percentage indicates percentage of respondents in support. Percentage support from counties with less than 10 respondents excluded from figure to protect anonymity.

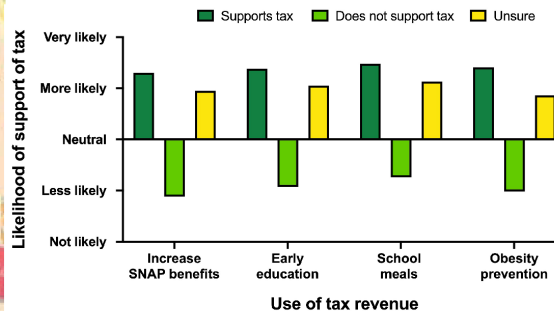


Figure 2: Respondents were asked to rate how likely they were to support a sugary beverage tax if the tax revenue went towards the four categories listed above. Possible responses were "Not likely", "Less likely", "Neutral", "More likely", or "Very likely". These responses were numerically coded -2 to 2, with higher values corresponding to greater support, lower values corresponding to less support.

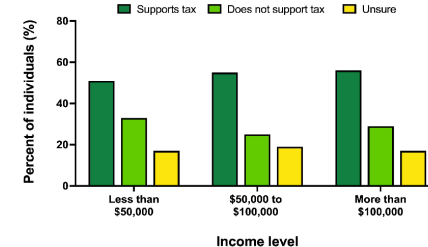


Figure 3: There was no statistical difference in support for a sugary beverage tax between income groups.

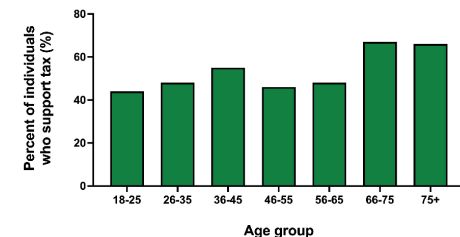


Figure 4: There was a statistical difference in support for a sugary beverage tax between age groups: $\chi^2(1, N = 521) = 24.85, p = 0.02$.

Discussion

- Over half of respondents were in support of a sugary beverage excise tax.
- If Vermont legislature tried to pass a sugary beverage excise tax, those opposed to the tax would be less likely to support it if the revenue went towards public health efforts; however, those in support or unsure of their support were more likely to support the tax if revenue went towards public health efforts.
- Of the proposed public health efforts, use of revenue towards school meals had the greatest average increase in support amongst all groups.
- The survey was limited as a convenience sample and dependent on internet access. These factors potentially limit the generalizability of this study to the general population because of selection bias.

In Conclusion

- **Obligatory Goal:**

- A summary of the work presented as a poster at the Robert Larner College of Medicine Annual Poster Session and Community Celebration

- Additional Goals.....

Contact Information:

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Thank you for your
time and attention!

Comments??

Questions?? ?