Promoting Screening of Cognitive Impairment and Dementia in Vermont: A proposal for ongoing continuing medical education (CME)

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The University of Vermont College of Medicine
In alliance with Fletcher Allen Health Care

Introduction

In 2010, 11,382 Vermonters were diagnosed with dementia, many of whom had Alzheimer's disease (AD). In 2025, an estimated 1 in 8 Vermonters aged 65 or older will have some form of dementia.[1]

Reported rates of overlooked dementia are between 35% and 90% or greater.[2] Clinical presentations of dementia are often insidious and attributed to aging, making an accurate diagnosis difficult. Because of the challenges of dementia screening and diagnosis, primary care physicians (PCPs) are often unwilling to diagnose, discuss, and treat dementia due to AD.[3]

Although physicians are reluctant to screen for dementia, research in Vermont (VT) has shown a clear preference by patients and their families for earlier diagnosis.[4] A timely diagnosis allows the patient and their family to plan for the future and start treatment earlier.[3]

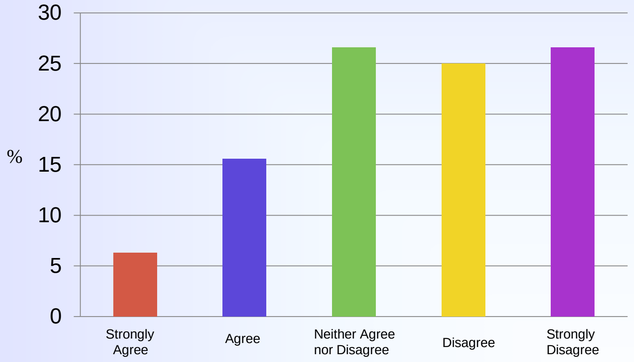
Our research demonstrated PCPs may be misinformed about the usefulness and implications of dementia screening and diagnosis. In an effort to further educate physicians, we propose instituting a mandatory continuing medical education (CME) hour focused on screening for dementia. Our project surveyed 72 physicians to determine their attitudes towards screening, the assessment tools they use, and their attitudes towards a required CME hour.

Methods

- 8 question survey was dispersed by SurveyMonkey® and Fletcher Allen Family Medicine Grand rounds to 438 PCPs. Results were analyzed using Excel.
- Cyndy B. Cordell, Director of Healthcare Professional Services at the national Alzheimer's Association headquarters, conferenced on the project.
- Students met with Dr. Patricia King, a board member on the VT Board of Medical Practice, to discuss establishing a CME hour for dementia screening in VT. A full board meeting was declined.

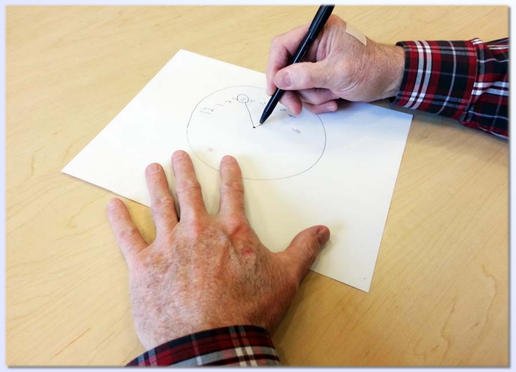
Results

I support a required CME hour focused on cognitive impairment and dementia as part of the Vermont 30 CME hour bi-annual relicensing requirement

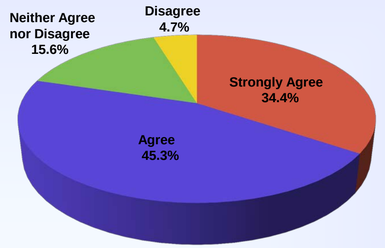


"I applaud your efforts to encourage self-assessment and self –directed learning on the topic of dementia screening. This is an important topic for the life-long learning of physicians and other health care providers."

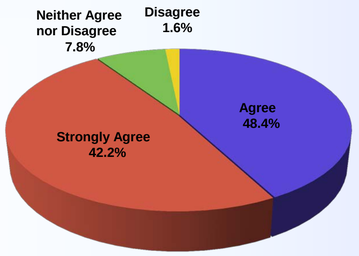
- Patricia King; MD, Board Member of VT Medical Practice Board



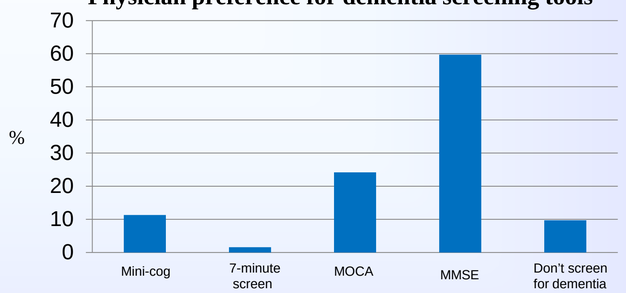
There is a solid rationale for screening elderly patients for cognitive impairment and dementia



It is important and worthwhile to screen patients for cognitive impairment and dementia



Physician preference for dementia screening tools



"When physicians become more educated and more passionate, they become more competent."

- Cyndy Cordell; Director, Healthcare Professional Services, Alzheimer's Association

Discussion

Early diagnosis of dementia and AD is warranted for social, financial, and medical reasons [3], and 80% of surveyed PCPs believed there was a solid rationale for dementia screening. However, a minority of VT PCPs regularly conduct screens [3]. Furthermore, the majority of surveyed PCPs use less sensitive screening measures like the MMSE. It appears that education emphasizing the importance of screening and the sensitivity of screening tools is called for.

A mandatory CME would be the most effective means of equally educating all VT physicians, and would prevent education from being limited to a self-selecting group of interested providers. However, over half of the surveyed PCPs were resistant to a mandatory CME hour for dementia screening education, and Dr. King stressed that establishing a mandatory CME hour would be extremely difficult. Dr. King recommended an optional online CME module as a more feasible alternative. An aggressive education plan utilizing voluntary CMEs could be used to educate PCPs in the short term, with a mandatory CME requirement being a longer-term goal.

Of surveyed PCPs, 75% indicated interest in an online module for education in dementia screening. An online module should address the rationale behind screening, information on effective screening tools and strategies, and effective follow-up care. Education in these areas would empower physicians in caring for patients and their family members.

Conclusion

Although VT PCPs are becoming aware of the importance of dementia screening, they demonstrate a lack of knowledge in effective dementia screening strategies. We explored the feasibility of instituting a mandatory CME hour in dementia screening for VT physicians, and found resistance among PCPs to mandatory education. The VT Board of Medical Practice also informed us that the outlook for instating a mandatory CME was poor. We instead propose the designing of a free, online CME hour, followed by a carefully planned dissemination strategy, to help educate VT PCPs in effective dementia screening.

Sources

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Smoke-Free Policy in Vermont Public Housing Authorities

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[1]University of Vermont College of Medicine; [2]American Lung Association; [3]Fletcher Allen Health Care

Introduction

The harmful effects of secondhand smoke have been widely documented.[1] In addition to exposure from smokers in the home, individuals who live in multi-unit housing face risks of exposure from other building tenants.[2] Public Housing provides a unique view of this issue since tenants often have little opportunity to move into a different building.[3] With more than 7 million people in the United States living in public housing, and 40% of units housing families with children, secondhand smoke can cause major morbidity and contribute to poor quality of life.[4] Past studies have also found that the experiences of the residents does not always match the expectation of the management.[5] We designed this study to assess the current status of smoking in public housing in Vermont, to assess barriers faced by residents and managers, and to set the stage for a shift to smoke-free policy. We gathered information on the entire state and then, using Burlington Housing Authority (BHA) as a sub-sample, gathered information from tenants and managers.

Methods

We took a two-armed approach for data acquisition:

Arm 1

Demographic information about Public Housing Authorities in Vermont

Data collected via structured phone interviews and Housing Authority websites

Arm 2a

Current BHA smoke-free policy and experiences regarding its implementation /enforcement

Data collected via structured interviews of two BHA building managers

Arm 2b

Demographics and tenants' opinions about smoke-free policy

Data collected via a survey given to BHA tenants and administered over two days

References

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2. Wilson, K.M., et al., Tobacco-Smoke Exposure in Children Who Live in Multiunit Housing. Pediatrics, 2011. 127(1): p. 85-92.
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Statewide Public Housing Authorities Data (Arm 1)

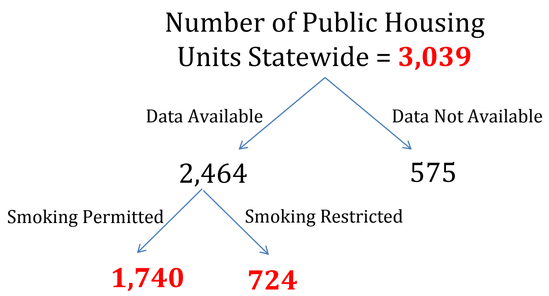


Figure 1. Statewide smoke-free policies

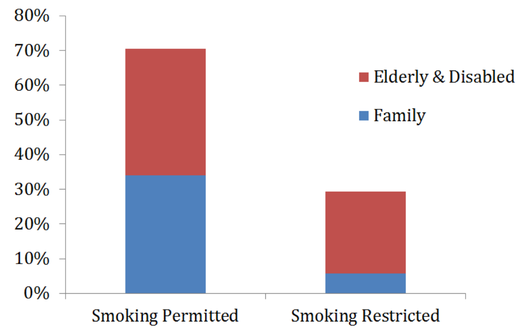
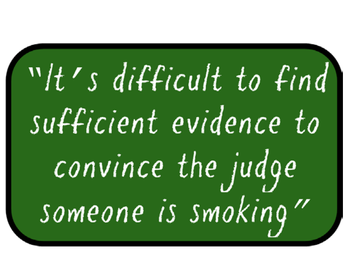


Figure 2. Residents protected by smoke-free policies

Burlington Public Housing Authority Data (Arms 2a & 2b)

Age (yrs)	Number (%)
25-44	12 (25.5)
45-54	6 (12.2)
55-64	16 (32.7)
65+	15 (30.6)
Smoking Status	
Current	17 (34.7)
Past	12 (24.5)
Never	20 (40.8)
Move-in Date	
Before Policy	37 (75.5)
After Policy	11 (22.4)
No Response	1 (2.0)

Table 1. Participant demographics



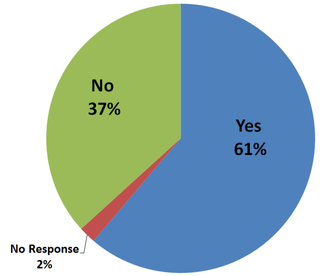


Figure 3. To the best of your knowledge, does any tobacco smoking take place in your building? n=49

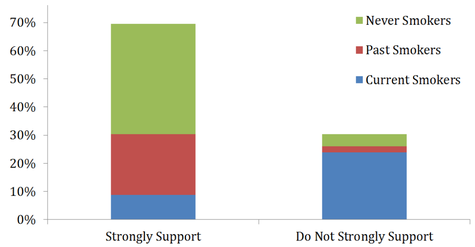
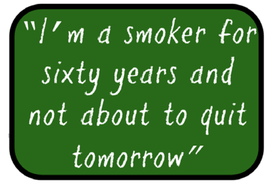


Figure 4. Support for smoke-free policy
n = 46 Analyzed by χ^2 *test* ($p < 0.0001$)



Results & Discussion

Statewide Housing Authority Survey (Arm 1)

- There are 9 multi-unit Public Housing Authorities in Vermont encompassing over 3,000 individual units
  - Smoking permitted in the majority of VT Public Housing (*Fig. 1*)
  - Existing smoke-free policy in Vermont public housing covers more elderly/disabled housing than family housing *(Fig. 2)*
- Anecdotally, housing authorities that reported successful implementation of a smoke-free policy made significant accommodations for current smokers

Burlington Housing Authority Surveys

- Manager Structured Interview (Arm 2a)
  - Difficult enforcement of smoke-free policy due to the burden of proof required to evict
    - Multi-violation process for non-compliant tenants
    - Final eviction disputes must be settled in a court of law
    - Additional enforcement options include cameras and tobacco smoke detectors, but these are costly
  - Unexpected expenses incurred by a smoke-free policy include more frequent rug replacement and elevator maintenance due to increased traffic through public areas
  - Compliance has improved over time and is now >90%
  - Since the smoke-free buildings mostly house the elderly and disabled, managers have faced criticism about mobility-impaired smokers
- Tenant Survey (Arm 2b)
  - Over a third of surveyed tenants (n=49) in smoke-free buildings are current smokers (*Table 1*)
    - Current smokers are less likely to support the smoke-free policy compared to never-smokers or past-smokers
  - 61% of tenants report smoking takes place in their buildings and 50% are 'somewhat' or 'very' bothered by it (*Fig. 4*)
    - Four out of 49 (8%) tenants admit to smoking inside

Conclusion

Our study highlights the significant paucity of smoke-free policies in public housing buildings in the state of Vermont. Our results indicate that public housing units designated for elderly and disabled tenants are more frequently protected by smoke-free policy than units housing families. Our survey identifies several obstacles to successful implementation of a smoke-free policy. Although tenant smoking cessation is an ideal goal, our results indicate adherence to policies will likely increase if accommodations for smoking tenants, such as designated outdoor spaces, are provided. The results of our study will be used by the American Lung Association to help housing agencies develop successful smoke-free policies.

Is Blood Donation an Opportunity for Hypertension Awareness?

[1]Hao J, [1]Kerrigan C, [1]Kreiger L, [1]McAvoy J, [1]Sikavi C, [1]Swift D, [1]Wickberg L, [2]Dembeck C, [2]Frenette C, [1]Carney J, [1]Fung M.
[1]UVM College of Medicine, [2]American Red Cross Northern New England Region, Burlington VT

Introduction

- Blood centers serve as a cornerstone of public health by providing potentially lifesaving blood products. Interactions with millions of potential donors provides these centers with a unique means of health education and screening opportunities[1,2].
- Hypertension screening is one potentially feasible option in these centers. Hypertension, a modifiable risk factor affecting one in three adults, contributes to nearly half of all cardiovascular disease related deaths in the U.S.[3]. **14.1 million U.S. adults are unaware of their hypertension[4],** which has designated this disease "the silent killer."
- Blood pressure screening is required in the United States for the donation of blood. **Many hypertensive donors, even those who are deferred for this reason, are never educated on the meaning of their blood pressure results**.
- Numerous studies have evaluated the efficacy of blood centers in screening populations for risk factors ranging from hyperlipidemia and hyperglycemia[5,6] to genetic diseases[7].

Our study seeks to determine:

1. **How many donors fall within the pre-hypertensive or hypertensive blood pressure range based on their reading at the time of donation.**
2. **How many at-risk donors are not aware of these hypertensive or pre-hypertensive readings.**
3. **Whether blood centers can effectively provide blood pressure education by means of an informational pamphlet.**

Methods

- 1200 voluntary and anonymous 25-question surveys were distributed to presenting blood donors through the Red Cross in VT and NH and collected from 10/10/12 to 10/26/12.
- Deferred donors could still participate in the study
- Participants first answered twenty-two questions, then read an informational pamphlet about hypertension. Three additional questions were asked regarding the utility of this handout.
- Prehypertension/hypertension was defined as having either a diastolic or systolic blood pressure measurement falling into the respective range.
- Data was double-entered into Microsoft Excel 2010 and crosschecked for accuracy.
- Descriptive statistical analysis was done using SPSS.

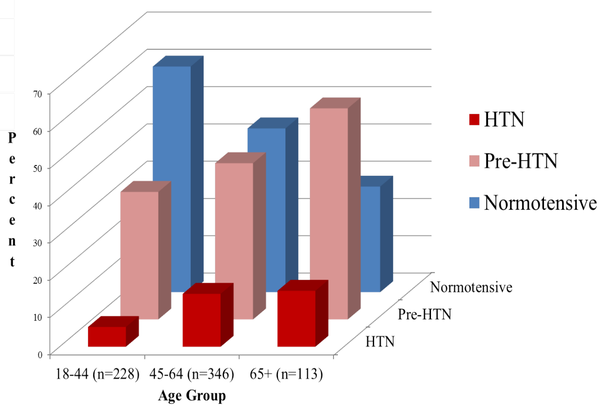
Less than half of donors had normotensive readings at donation

Self Reported Blood Pressure at Donation	N= 688
Normotensive (systolic <120, diastolic<80)	46.9%
Pre-Hypertensive (systolic 120-139 AND/OR diastolic 80-89)	41.7%
Hypertensive (systolic over 140 AND/OR diastolic over 90)	11.3%

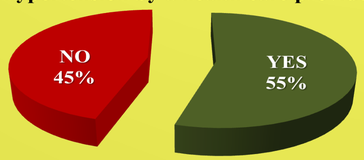
Donor Demographics

Gender	N=835
Male	47.4%
Female	52.5%
Other	0.1%
Age	N=836
	Mean 46.8 years old; Range 18-84
Race	N=807
Non-Hispanic white	80.7%
Multiple/Other	19.3%
Highest Level of Education Obtained	
Less than High School	0.4%
High School or equivalent	31.6%
Associate/Trade Degree	14.3%
Bachelors or above	53.8%
Donor Status	N=835
First Time Donor	5.0%
Repeat Donor	95.0%

The frequency of elevated blood pressure at donation increased with age



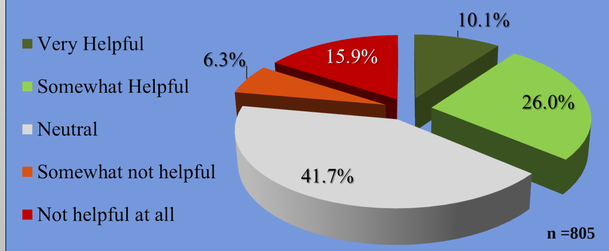
45% of donors with a hypertensive reading at blood donation had never been told they have hypertension by a health care provider



n =667

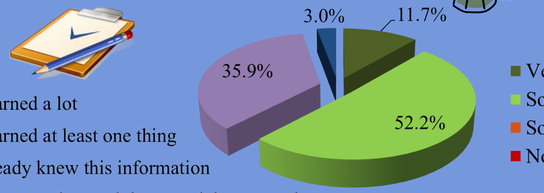
*those that selected "Hypertensive" for their blood

Before being given the pamphlet, a majority of donors were neutral or thought a pamphlet about high blood pressure would be helpful



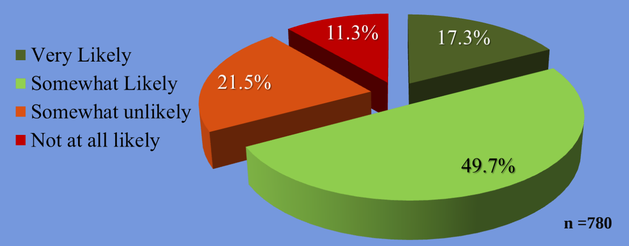
n =805

A majority of donors thought the pamphlet on high blood pressure was valuable



n =781

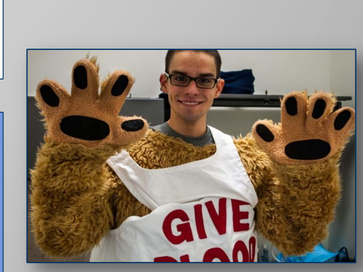
A majority of donors stated they were at least somewhat likely to use the information provided to make lifestyle changes

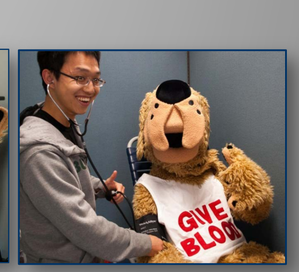


n =780

Conclusions

- Based on these findings, we conclude that there is an opportunity for increasing hypertension awareness at the time of blood donation.
- Within the highest risk group, those reporting a hypertensive blood pressure, almost half of them had not ever been told they had hypertension.
- In addition, the surveyed donors largely felt that the pamphlet of educational material about hypertension was valuable and were at least somewhat likely to use that information to make lifestyle changes.
- These findings suggest that increasing hypertension awareness as part of a blood donation screening is not only needed, but useful as a public health measure.





Acknowledgements

Tom Delaney, Ph.D; ARC Collection Staff and Supervisors. Nancy Gostyla, RN, Kathleen Bovat, RN Kristy Corbett, RN & Marni Willms, RN; Volunteers of Bennington, White River Jct., Shelburne, Rochester, Montpelier, Troy Richford, Charlotte, Burlington & Williston VT. Communities. Colebrook, Canaan & Groveton NH Communities. Also, University of VT, Green Mountain College, Dartmouth College, Fletcher Allen, Alice Peck Day Hospitals and Green Mountain Coffee Roasters

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Establishing a continuum of care to improve follow-up rates for survivors of sexual assault

Bole M[1], Ellis J[1], Hine W[1], Larson J[1], Nettlow D[1], Price J[1], Root K[1], Vastine K[2], and Gallant J[1].
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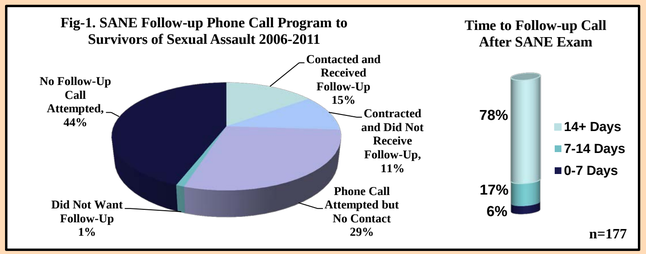
Introduction

In 2011 there were over 1,000 reported survivors of sexual assault in the state of Vermont[1]. Of those survivors who presented to the Fletcher Allen Health Care (FAHC) Emergency Department (ED), 34 were over the age of 18, and received an exam by a Sexual Assault Nurse Examiner (SANE)[2]. It is currently recommended that all survivors be seen by a health care provider within two weeks of their initial SANE exam to receive follow-up testing, treatment, and discuss recovery[3]. Less than 15% of survivors are known to attend a follow-up appointment. A published report has shown that if appointments are made before the patient leaves the ED, and support phone calls are made, follow-up rates can rise as high as 80%[4].

Objective: Identify barriers for survivors of sexual assault to accessing follow-up medical and psychosocial care after undergoing a SANE exam.



Material and Methods

Literature Review
- Researched data regarding sexual assault and medical response to sexual assault
  - Physical and emotional healthcare for survivors of sexual assault (survivors)
  - SANE programs and follow-up care for survivors of sexual assault

Review SANE data (Chittenden County)
- Received follow-up forms from FAHC ED SANE program
- Analyzed forms of adult (≥18 y/o) survivors.
  - See Figure-1

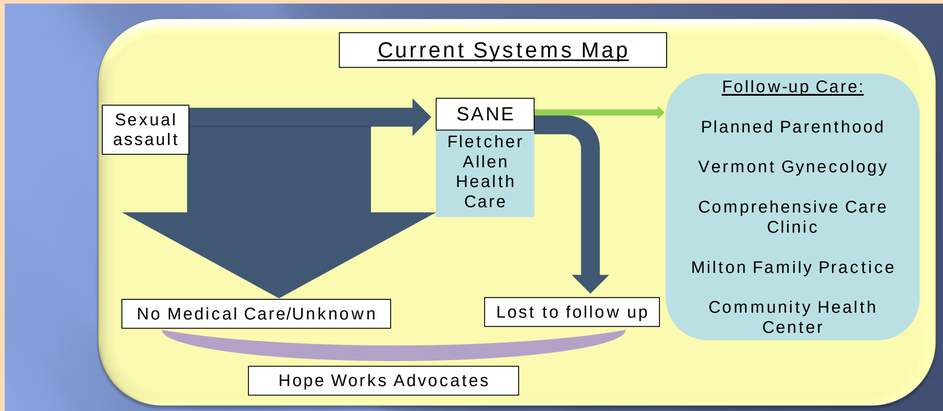
Define Problem
- Underutilization of available health care resources following sexual assault.

Design Focused Interview
- Interview designed to address system of care specific to Chittenden County.
  - Constructed an interview assessing survivors' transition from the ED to centers providing follow-up care.

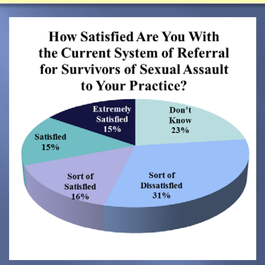
Conduct Focused Interview and Collect Data
- Based on SANE follow-up forms, seven local organizations* that provide care for survivors of sexual assault were identified. A standardized and focused interview was administered to thirteen individuals** from these sites.

Data Analysis
- Responses from the thirteen interviews were compiled and analyzed.
- Conclusions and recommendations were made based on literature review, analyzed data from SANE follow-up forms, and focused interview results.

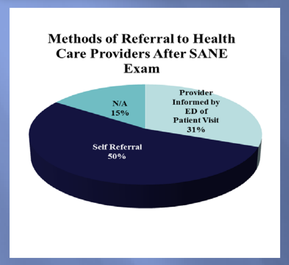
* FAHC ED, HOPE Works, Planned Parenthood, Community Health Center, Milton Family Practice, Vermont Gynecology, Comprehensive Care Clinic
** 2 victim advocates, 1 social worker, 1 NP, 1 PA, 1 RN SANE, 1 LPN, 1 call center coordinator and 5 practice supervisors/managers



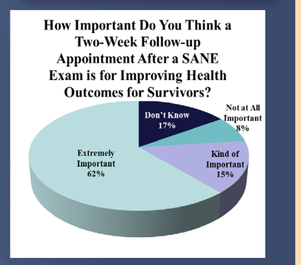
92% of those surveyed stated their organization would benefit from additional training regarding the care of sexual assault survivors

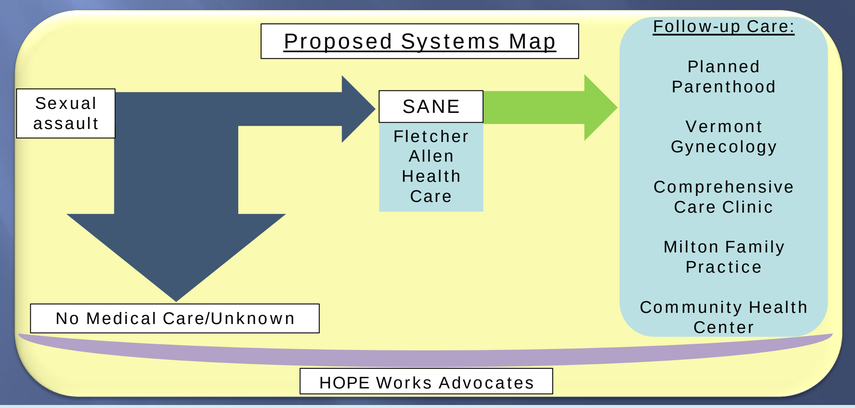


85% of survey respondents stated their organizations would be extremely likely to participate in a standardization of follow-up appointment scheduling for survivors of sexual assault, the remaining 15% said it was likely



85% of those surveyed stated the follow-up phone call is extremely important, the other 15% rated it as important.





"The biggest thing is making the transition from the emergency setting to the office setting as seamless as possible. Break down the barriers to accessing care. If we can do that it would be a big victory." - Dr. Tom Lishnak, Milton Family Practice

Conclusions

- SANE programs are effective in providing consistent and comprehensive medical care, and improving psychological well being for survivors. The medical community highly values the work done by the SANE program.
- A published case report shows that follow-up appointments made before the survivor leaves the ED increase follow-up to ~80%. FAHC currently encourages the survivors to schedule their own follow-up health care appointment and the SANE nurses make follow-up phone calls where possible.
- Interview data indicates that most local health care providers:
  - Are not satisfied with the current system of referral for survivors.
  - Consider a follow-up appointment after a SANE exam extremely important.
  - Believe it is extremely important for SANE nurses to make follow-up phone calls to survivors.
  - Would like more training regarding care for survivors of sexual assault.
- In Chittenden county, there is currently no system to track the number of survivors who receive the recommended two week follow-up.

Recommendations

- Encourage local organizations to increase public outreach, knowledge, and resources for survivors.
- Encourage greater visibility of resources available for survivors, i.e. websites and printed materials.
- Strengthen collaboration between local organizations serving survivors of sexual assault.
- Consider allocation of additional resources to SANE nurses in order to improve communication with survivors after the SANE exam and promote greater rates of follow-up care.
- Consider changes allowing SANE nurses to assist survivors in scheduling follow-up appointments before discharge from the ED.
- Promote education for health care providers and support staff regarding trauma informed care and local resources available for survivors.

Acknowledgements

We would like to thank the following organizations for their time and answers to our survey questions: Community Health Center, Hope Works, Milton Family Practice, Comprehensive Care Clinic, Vermont Gynecology, Planned Parenthood: Burlington Health Center, Burlington Community Justice Center and Fletcher Allen Health Care.

Thank you to the Parallel Justice Health Care Subcommittee, Raj Chawla, and Dr. Tom Delaney for their help and input with our project.

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Opiate Prescription Practices and VPMS Use: Impacts of the Vermont Prescription Monitoring System

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The University of Vermont College of Medicine
In alliance with Fletcher Allen Health Care

Burlington Partnership for a Healthy Community

Introduction

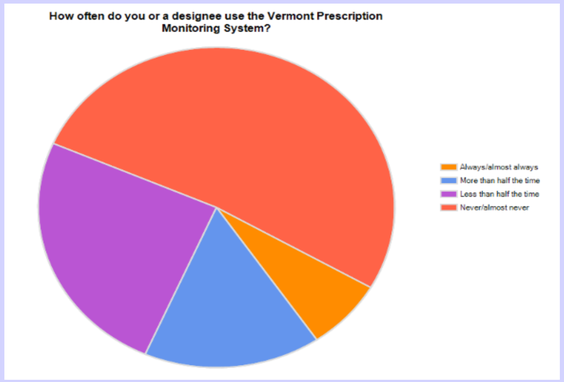
Prescription drug diversion has become a major problem in the state of Vermont. According to 2010 data from the National Survey on Drug Use and Health, most people get access to prescription drugs for purposes of misuse through family and friends. This accounts for both drugs which are given away and those which are taken without permission.

This research used a top-down approach to examine a cause for apparent excess in prescription medications. The goal was to assess prescription practices of Vermont doctors and utilization of the Vermont Prescription Monitoring System (VPMS). This information is intended to provide insight into potential methods of reducing prescription drug diversion.

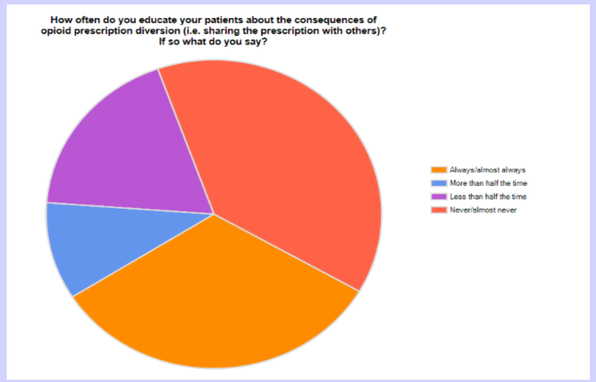
Methods

- An online anonymous survey was distributed to 552 MDs throughout Vermont.
- 57 surveys were returned
- 10 multiple choice questions assessed the following subjects
  - Use of the VPMS
  - Doctor education on prescribing opioids
  - Patient education on the use of opioids
- Data were analyzed with the program STATA using bivariate logistical regression
- Charts/graphs were generated through Survey Monkey and the STATA program

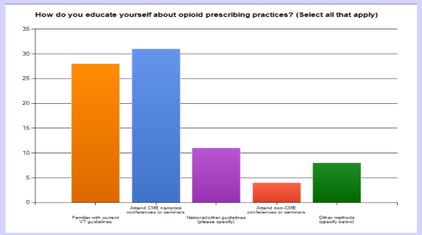
Results



"I'm inefficient enough with our EMR, I need one less thing to bog down my patient care"

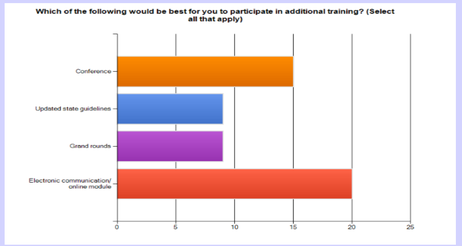


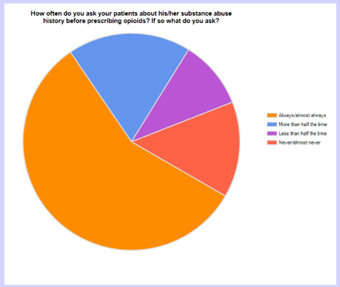
"Someone who is going to do this won't be dissuaded by anything I say - they already know it's illegal."

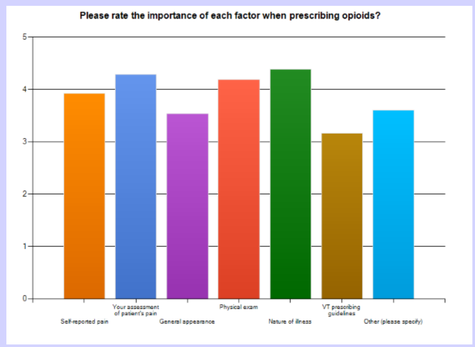


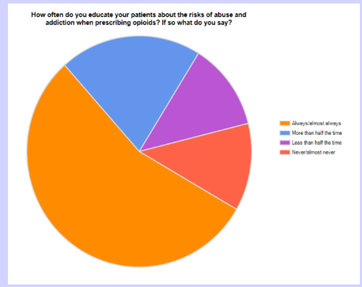
"Once we are in the system, if we could type in a list of names and get a list back-- this would allow an easy review for those patients seen on a daily basis. Obviously, coordinating with NH and NY would be helpful as nothing prevents a patient from filling scripts out of state and thus avoiding surveillance."

"We have so many inefficiencies built into our patient encounters. This needs to be extremely quick and easy to access."









Discussion

- Only 25% of doctors use the VMPS more than half the time, with many indicating that they do not use the program for long-term patients
- Reasons for lack of use included:
  - Doctors do not know enough about the program to use it
  - It is too inefficient for work flow
  - It is not updated in a timely manner
- One solution may be to integrate the VPMS with Fletcher Allen's current EMR. This will make the system more accessible and time-efficient
- Most opiate diversion occurs when a single provider prescribes to a single patient who then diverts that prescription, indicating the potential importance of educating patients on drug diversion
- Doctors report a wide variety of approaches to educating patients on the consequences of diversion
  - One option utilized is a formal opiate usage contract between patient and practitioner
- More than one third of respondents indicated that they never talk with their patients about diversion
  - Some doctors expect that their patients should understand that diversion is illegal, thus there is no need for discussion
  - Others believe there is no level of conversation that will dissuade those who are intent on redistribution from doing so
- If these beliefs about the futility of patient education are widespread, they may add to the problem of diversion
- A proposed solution to address the problem of diversion is to prescribe smaller amounts of controlled substances more frequently
  - Obstacles to this include inconvenience as well as direct financial and time costs to both the patient and prescriber
  - Doctors offices do not have the staff or time slots to accommodate the increased number of appointments that would result
  - This could be overcome if requirements changed to allow for the electronic prescribing of opiates

Addressing Health Needs of Burlington Probation and Parole Clients

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INTRODUCTION

Vermont currently has a 50-70% recidivism rate for offenders. Higher rates of recidivism have been noted in individuals with specific health risks, especially mental health and substance abuse issues. Studies have found that offenders often experience difficulty accessing healthcare, but that successfully linking individuals to healthcare reduces recidivism. Criminal justice literature notes that probation/parole is an ideal time to implement health interventions, but substantial barriers (expense, time, logistics) exist.

The 2011 UVM Public Health Project with Burlington Probation and Parole (BPP) identified key areas of health concern among Chittenden County probationers and parolees: mental illness/depression, smoking, alcohol/ substance use, nutrition/fitness, and health/ dental insurance status.

OBJECTIVES

Part I: Analyze strategies for disseminating information about health resources addressing these self-identified areas of concern.

Part II: Explore the self-perceived roles of BPP staff in connecting parolees with health resources, and their recommendations for effectively doing so within the Probation and Parole system.

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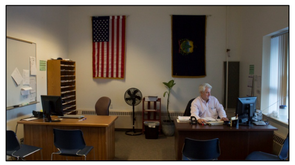
MATERIALS & METHODS: PART I

Materials. Developed for the study:
- Health resource sheet with contact information for organizations offering assistance in the five health areas identified by the 2011 UVM survey (see Introduction).
- Nine-item questionnaire regarding the utility of the health resource sheet.

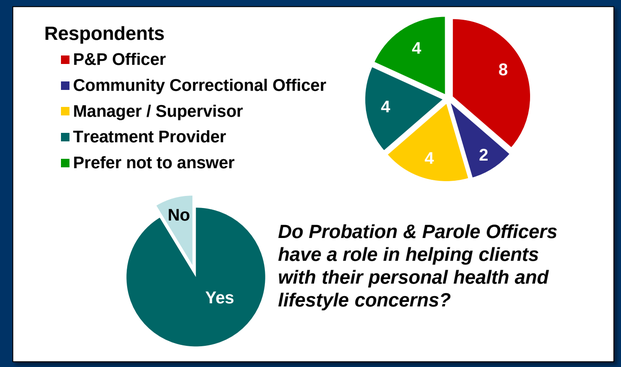
Study design. Adult subjects required to register at the BPP office were chosen to participate. These included probationers and low-risk offenders on parole (individuals released from prison in the past 6 months, non-institutionalized at the time of study and living in the community) who were assigned to a Probation & Parole Officer for further supervision. The goal was to assess the utilization of a health resource sheet based on the manner in which it was given to a BPP client.
- *Control group*: handed resource sheet with the standard packet of intake forms.
- *Intervention group*: given resource sheet by a medical student after the BPP intake process, who delivered a brief script detailing its purpose and describing the follow-up questionnaire.

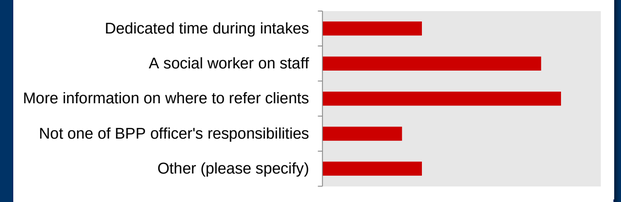
Following BPP protocol, all clients return after 10 days for a follow-up appointment, at which time the questionnaire was given to both groups by BPP staff to be completed and submitted securely and anonymously on site. The follow-up questionnaire hoped to assess the degree to which the health resource sheet was used by BPP clients.



RESULTS

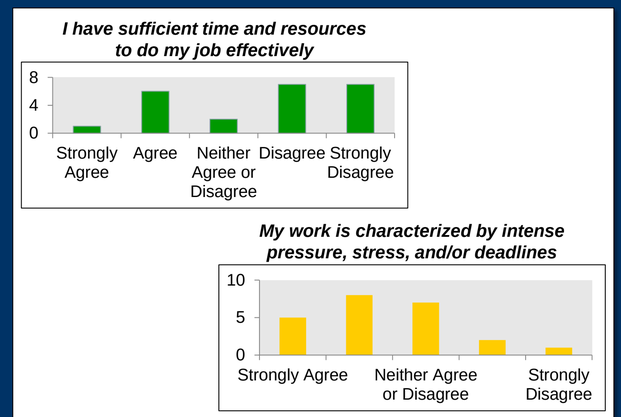
We received no valid data. This occurred for two reasons: (1) five questionnaires from the control group and zero questionnaires from the intervention group were collected; (2) the five questionnaires collected were distributed incorrectly, and thus all results had to be discarded.





"It would especially be helpful to have a social worker, mental health professional, and/or medical professional … to support our efforts with particularly difficult offenders."

"…I would like to [be able to] say something to the effect of 'there is a weekly health orientation on X day/time at Y location. Those people can help you navigate the system.'"



MATERIALS & METHODS: PART II

In light of inadequate data from Part I, a second study was created.

Materials. A 12-item survey was created and administered to the BPP staff pertaining to their own health, job responsibilities, and burn-out.

Study design. The goal was to evaluate whether the parole officers believe it is their responsibility to address health and wellness needs of their clientele. Secondarily, validated burnout questions were also included.

RESULTS

The survey had an 44% response rate (23 out of a possible 61). Responses indicated that BPP staff strongly feel that they have a role in helping clients with their personal health and lifestyle concerns. However, they do not feel that they have the time or knowledge to do so effectively, and also stated feeling overwhelmed, stressed, and underappreciated. BPP employees indicated that implementing supports such as social workers and better information about where to refer clients would help them to improve the health of their clients.

RECOMMENDATIONS

The literature shows that models placing social workers on-site in medical homes improve health outcomes. Community Health Centers of Burlington is developing a medical home model, but currently those services are neither comprehensive nor adequate to address the needs of BPP clients. Without a local medical home resource or in-house capacity to assist BPP clients with their health issues, a different solution is needed.
We propose a pilot program to (1) place a social worker on-site at BPP to meet with all clients after intakes, and (2) investigate this intervention's effects on recidivism and health outcomes. The UVM Department of Social Work may be able to provide MSW students completing required practicums.

Evaluating Barriers to Health in Homebound Individuals

A Collaboration with the Chittenden Emergency Food Shelf Homebound Delivery Program

Clements, B[1]; Goldberg, T[1]; Gorlen, D[1]; Goveia, E[1]; Hughes, K[1]; Mealiea, D[1]; Meredyth, N[1]; Meehan, R[2]; Anton, A[2]; Carney, J[1]
University of Vermont College of Medicine[1] & Chittenden Emergency Food Shelf[2]

Introduction

In Vermont, 14.4% of the population has one or more disability, with ambulatory disabilities comprising the majority[1]. Homebound seniors are frequently afflicted by multiple comorbid conditions. These conditions, such as hypertension and diabetes, can be worsened by food insecurity and lack of proper nutrient intake [2,3]. In Vermont, 10.9% of households reported food insecurity in 2007 and 62% of Vermonters reported some barrier to providing nutritious foods to themselves or their families[4]. In order to relieve some of the food insecurity faced by homebound individuals in Vermont, the Chittenden Emergency Food Shelf (CEFS) Homebound Delivery Program (HDP) currently serves 130 individuals, providing one week's worth of groceries to them each month. The aim of this project was to learn more about the homebound population served by the CEFS in order to better meet the needs of these individuals.

Methods

Demographics:

	Number of Participants (n=35)	Percentage
Gender		
Male	9	25.7
Female	13	37.1
No Data	13	37.1
Age		
<45	2	5.7
45-60	9	25.7
61-75	18	51.4
>75	6	17.1
Education		
No High School	9	25.7
Some High School	6	17.1
High School Grad	11	31.4
Some College	4	11.4
College Degree	5	14.3
Ethnicity		
Caucasian	34	97.1
African American	1	2.9
Smoking status		
Yes	8	22.9
No	23	65.7
No Data	4	11.4
Drinking status		
Yes	3	8.6
No	28	80
No Data	4	11.4

Survey:

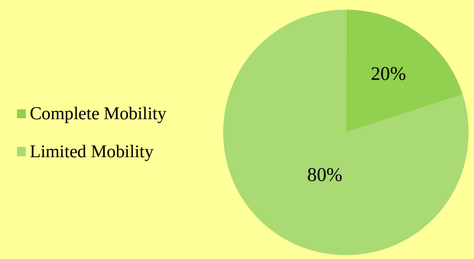
- A survey was conducted via telephone (n=26) and in-person interviews (n=9)
- 35 multiple choice questions assessed demographics, satisfaction of the program, mobility constrains, health care access and health status
- Data was analyzed with two-tailed Fisher exact tests using 2012 GraphPad Software.

Detailed Interviews:

- Two individuals were re-interviewed in-person to gather qualitative perspectives on their lives and experiences with the program

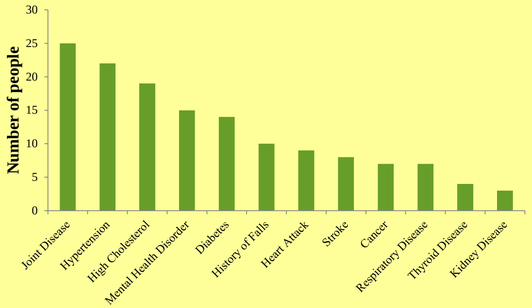
Results

How Mobile Are You?

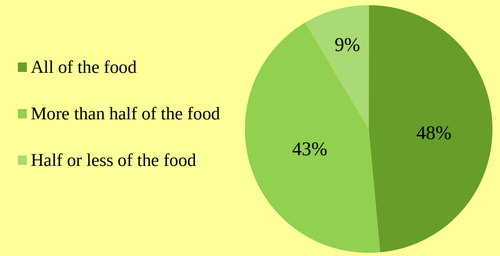


- The most common mobility limitation reported was difficulty walking around the house

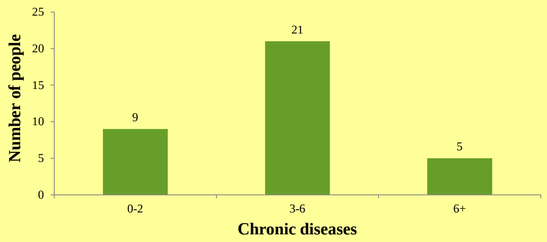
Burden of Chronic Disease



How much of the food you receive each month do you eat?



Prevalence of Chronic Disease in Homebound Program



- 66% of those surveyed reported living alone
- 100% of respondents had insurance with 91% being enrolled in either Medicare or Medicaid
- 63% of those with greater than 5 chronic illnesses stated a preference for pre-packaged food

"I started working with the food shelf a few years back. They were a great help. Without them I don't think that I could survive. Because with the little income I get, social security is not that much, and my rent goes up…it's a great help. Whatever they bring me I use."

Diane, 87
Burlington, VT

Discussion

- Our population study included only 35 people, therefore the power was not large enough to produce significant comparisons between groups; however, general trends were noted, especially in the between the categories of age, number of chronic illnesses, and preference for pre-packaged meals over groceries
- Younger respondents (≤ 60) held a stronger preference for prepackaged meals than did those over 60 (72% vs. 42%, p=0.15)
- 11% were referred to the HDP from a physician, while 71% discovered it through the food shelf or friends
- Overall satisfaction with the program was excellent
- Although the HDP is targeted toward homebound individuals, 20% of respondents categorized themselves as "completely mobile"
- Despite the average respondent reporting over four chronic medical conditions, 66% self-reported average to above-average health
- Participants tend to be connected to a number of other community organizations, such as 3SquaresVT, VNA, Meals on Wheels, and the Champlain Housing Trust
- Lack of health insurance does not appear to be a barrier to health in this population

Conclusions

The majority of participants heard about the program through friends or the food shelf, suggesting that there could be a role for health care providers to vastly expand the homebound population served, assuming available resources and funding. Given the satisfaction and success with the program, the Chittenden Emergency Food Shelf Homebound Delivery Program serves as a model for addressing food insecurity in the homebound population.

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WHAT ARE THE BARRIERS AND MOTIVATORS TO EXERCISE IN 50-65 YEAR-OLD ADULTS ?

Addante[1], Raymond A., Benson[1], Patrick M., Chen[1], Liqun, Ford[1], Jenna, Louie[1], Jessica, Mensch[1], Kenneth S., Poljak[1], Dijana, Schlosser[1], Kathryn, Farnham[2], Pam, Jasinowski[3], Alexandra

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[3] Greater Burlington YMCA, Burlington, VT

INTRODUCTION

- The health benefits of exercise in older adults have been well established, but barriers prohibit regular exercise.
- Benefits of exercise in adult populations include improved cardiovascular health, decrease in bone fractures, and increased mental capacity[6].
- Current federal guidelines for exercise for adults state[7]:
  - 2 hours and 30 minutes of moderate intensity on 2 or more days a week OR
  - 1 hour and 15 minutes of vigorous exercise on 2 or more days a week
  - each working all muscle groups
- Among 70-year olds, the largest barriers to health were: poor health, lack of company, interest, transportation and/or opportunity for sport/leisure[12].
- Social cognitive theory suggests that the motivation to exercise in a particular individual is based on three things[13]:
  - Self-efficacy
  - Outcome expectations
  - Self-evaluated satisfaction or dissatisfaction

  In particular, self-efficacy was lower in older individuals
- Positive enforcement of self-efficacy can be a means to ensure that individuals will continue to exercise[10].
- Social support and the ability to interact with others increase activity in 65+ year-olds[2].
- Having a primary care provider or participating spouse is a positive influence to adopting a healthier and more active lifestyle[14].

METHODS

- A survey instrument was created and disseminated at community sites in the Greater Burlington area to a 50-65 year-old adult demographic.
- The survey was designed and based on previous participation in the greater Burlington YMCA program. The topics explored were based on trends of YMCA participant behavior, including popular activities, expressed barriers to exercise, and participant demographics.

Demographic Information		% of Respondents
Sex	M	52
	F	48
Occupation	Retired	23
	Employed Full-time	16
	Employed Part-time	4
	Student	0
	Unemployed	3
	Other	4
Education	High School Graduate or GED	6
	Professional or trade certificate/degree	4
	Bachelor's degree	15
	Graduate degree	25
Primary Care Doctor	Yes	46
	No	4
Activity Level	Less than once per week	1
	1-2 days per week	4
	3-4 days per week	10
	5 or more times per week	35

Table 1: Demographics

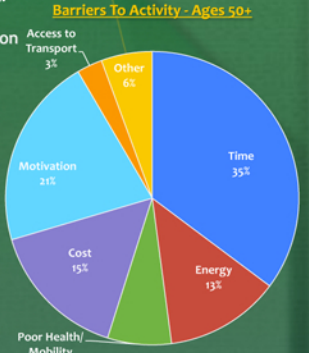

Figure 3: Barriers to Activity

RESULTS

- The greatest motivators of physical activity in the 50+ age group were: **Improving health** (78%), **Reducing Stress** (64%), **Losing Weight** (56%) and **Boosting Energy** (56%). *Figure 1.*
- The 50+ age group was the most interested in: **Outdoor activities** (90%), **Mindfulness activities** (50%), **Aquatic activities** (36%), **Dancing** (32%) and **Volunteering** (32%). *Figure 2.*
- **Time** (35%), **Motivation** (21%), **Cost** (15%) and **Energy** (13%) were reported to be the largest barriers to activity in the 50+ age group. *Figure 3.*
- 92% of those surveyed in the 50+ age group had a Primary Care Physician. *Table 1.*

Figure 1: Motivators for Activity

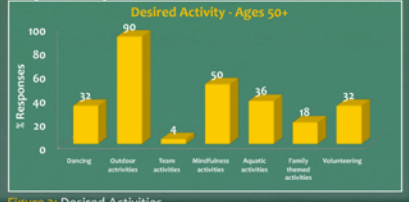

Figure 2: Desired Activities

CONCLUSIONS

- Time was reported as the greatest barrier to exercise. Offering programming at a variety of times may help overcome this barrier.
- Motivation was also a significant barrier to exercise. Respondents listed improving health, decreasing stress and losing weight as sources of personal motivation. Emphasizing these aspects when recruiting or advertising can encourage participation.
- Cost was reported as another significant barrier to physical activity. The YMCA already provides sliding scale rates and can continue to advertise their flexible fees.

RECOMMENDATIONS

- Outdoor and mindfulness activities were the most popular categories in our data. By using the natural resources in Vermont, the YMCA can provide activities to encourage this demographic to increase their physical activity.
- Since 92% of the population that we surveyed had a primary care physician we feel that this would be the best location to advertise and provide information for upcoming classes and activities that the YMCA will be organizing.

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Screening for Food Insecurity in Primary Care

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The University of Vermont College of Medicine
In alliance with Fletcher Allen Health Care

Hunger Free Vermont

Introduction

Food insecurity is an inadequate availability of nutritional and safe foods or a reduced ability to obtain these foods in socially acceptable ways(1). Of all Vermont households, 13% are food insecure(2), and one in five Vermont children experiences hunger or food hardship(3).

A variety of organizations have opted to educate physicians and healthcare workers about public health issues – including food insecurity – using internet-based Continuing Medical Education credits. A majority of surveyed physicians prefer the online to the traditional CME format, mainly because it can be accessed at their convenience(4, 5).

Hunger Free VT (HFVT) is a non-profit organization whose mission is to end the injustice of hunger and malnutrition among Vermonters. In order to educate the community about food insecurity, HFVT has developed an online Continuing Medical Education (CME) course titled Childhood Hunger in Vermont: The Hidden Impacts on Health, Development, and Wellbeing. While 59 participants registered for the course, it was only completed by two. Hunger Free Vermont needed information on why the providers did not complete the course.

Screening for food insecurity during the patient visit can be an effective way to identify families at risk(6). How to best implement screening in the primary care setting has not been reported in the literature. Therefore, we needed the perspectives of healthcare providers and patients to gain insight into how this practice improvement might be implemented.

Objectives

- To develop recommendations for the HFVT CME course that will increase participation and completion rates as well as impact healthcare practices
- To determine the manner in which healthcare providers would prefer to be educated about the issues of hunger and food insecurity in VT
- To identify provider opinions about when and how screening questions about food insecurity should be asked during a well-child physician visit
- To identify patient views regarding their discussion of food access with providers in the pediatric setting

Methods

HFVT CME Survey

We conducted an 11-question survey of registered users asking about their satisfaction with the HFVT's CME course via RedCap software and email.

Parent Survey

A four-question written survey on the topic of food insecurity screening was administered to parents in a Burlington pediatric office over one week.

Focus Groups

We conducted two focus groups on the topic of hunger screening opinions and practices with nurses, office staff, and physicians in Chittenden County pediatric care offices.

Results

CME Survey

Out of 51 surveys about the HFVT CME course that were delivered successfully, a total of 10 participants responded. Four respondents were nurses, and two were physicians. The single greatest identified strength of the CME course was the videos, followed by the online format, course content, and documents (Figure 2). The greatest barrier to completing the course was that it took too long (Figure 1). The majority of respondents indicated that a follow-up email would have helped them complete the course, and almost all felt that the course has impacted their practice.

Pediatric Survey

Surveys were administered to parents in the waiting rooms of two local pediatric offices. A total of 61 surveys were completed. Respondents overwhelmingly agreed that providers do not ask about food insecurity (Figure 4). When asked how providers could be more helpful in identifying and addressing food insecurity, the majority of respondents selected "just talk to me about it" (Figure 3).

Focus Groups

Two focus groups conducted at local pediatric offices highlighted important contrasts between the ways physicians and nurses view CME credits, continuing education, and screening for food insecurity (Figure 5). Significantly, all participants believed that in-person training was ideal for education about food insecurity. Physicians also believed that follow-up from the training organization would be helpful in identifying obstacles to implementing the screening questions, including editing existing intake forms.

Figure 1: Total Respondent Identified Weaknesses

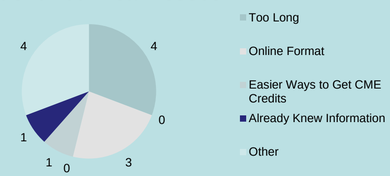


Figure 2: Total Respondent Identified Strengths

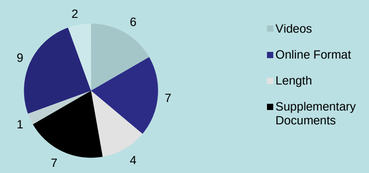


Figure 3: How could health care providers be more helpful in identifying and addressing concerns about having enough food?

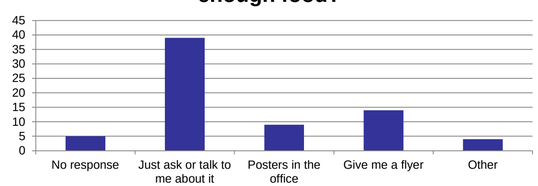
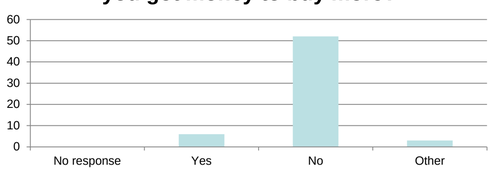


Figure 4: Has your health care provider ever asked you if you worried about your food running out before you got money to buy more?



Conclusions

The CME was seen as a time-intensive course that contains valuable information, which could possibly be delivered in an alternate and more concise manner.

Many patients are not being asked about food insecurity by their healthcare providers during routine visits. We believe this is due to the topic's sensitive nature and short appointment times.

Patients want healthcare providers to talk to them about food insecurity as a primary means of opening the discussion, while nurses and doctors agree that it is a difficult conversation to have due to the sensitivity of the issue. Some physicians believe incorporating questions about food insecurity into office intake forms would be the best screening method.

Figure 5: Focus Group Comments

Physicians Say…	Both Agree…	Nurses Say…
It's hard to find time to ask about food insecurity in a 15 minute visit.	we tend to ask patients with financial or weight problems.	Physicians should be the ones to ask about food insecurity.
The response rate will be higher with a paper questionnaire.	discussions on diet and growth are the best times to bring it up.	Many of the forms patients fill out aren't reviewed by anyone.
Patients would be more comfortable responding on paper.	we don't want to be seen as accusing parents of not feeding their children.	There's less chance of misunderstanding when asking face-to-face.

Recommendations

- We recommend that the CME be shortened, with repetitive information removed. The CME should remain free to providers.
- We recommend that HFVT explore the possibility of traveling presentations for Vermont clinics that will expose providers to the topics of food insecurity and hunger screening. The speaker could advertise the CME to providers as part of the interaction. A new flyer should be developed with information specific to local food insecurity resources (in addition to the standard 211 flyer).
- Additionally, a template intake form for screening patients will be provided to HFVT for use in Vermont clinics.

Lessons Learned

- Surveys and emails are convenient ways to communicate, but some of our best information came from face-to-face encounters.
- Make suggestions for improvement clear and as easy as possible to implement – people will be more likely to accept your ideas for change.
- Some public health issues are more subtle or sensitive than others – you may be surprised at their prevalence in your community.

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3 http ://www.hungerfreevt.org/learn/what-is-the-issue

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Pilot Study of the Effects of Tai Chi on Elderly Fall Risks

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[1]University of Vermont College of Medicine, Burlington, VT [2]Living Well, Bristol, VT

Introduction:

- Among people over the age of 65, 1 in 3 people fall every year.
- In Vermont, falls are the leading cause of injury death among seniors.
- The practice of Tai Chi, an ancient mind-body art form that's evolved into a modern day fitness regimen, has been shown to reduce falls in this population.
- Studies have demonstrated additional benefits of Tai Chi including increased muscle strength, balance, mood, confidence and sleep.

"I'm not afraid of falling anymore."

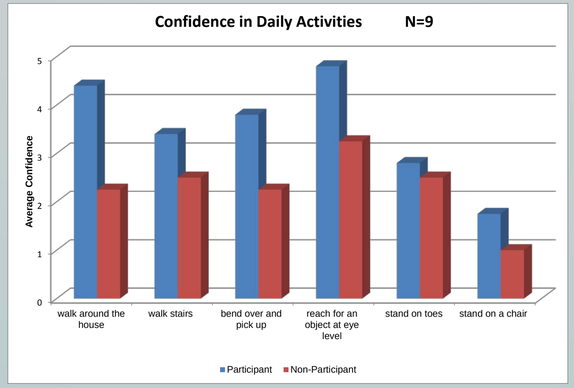
Objectives:

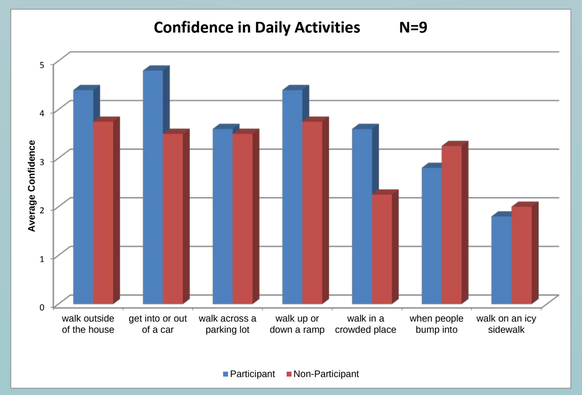
- To measure fall confidence in participants and non-participants of Tai Chi.
- To Identify barriers to participation in Tai Chi at an integrative healthcare assisted-living facility.

Methods:

- 30 minute interviews with 9 of 14 residents (age > 60) of Living Well Residential Care Home (men = 3, women = 6).
- Interviews with Tai Chi participants included 7 demographic questions and 13 questions about sleep, mood, and confidence.
- Non-participants were asked 10 questions related to barriers to attending Tai Chi classes.
- All study participants completed the ABC scale for assessment of fear of falling.

"I feel stronger and it gives me continuity in my life."





Results:

- Tai Chi participants appeared to rate themselves as more confident in performing daily tasks without falling in 11/13 categories on the ABC scale.
- Participants reported increased balance (80%) and confidence (80%) since starting Tai Chi.
- Non-participants reported physical limitations and time of class as barriers to participation.

"My knee pain is gone!"

Conclusions:

- Living Well reports their fall rate as 25%, which may be lower than that of the national fall rate of 33% for seniors (age> 65) as reported by the CDC.
- Tai Chi participants at Living Well report high levels of balance and confidence.
- Accommodating physical limitations and offering varying class times may increase participation in Tai Chi.

"I can go outside by myself and enjoy the weather."

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Analysis of Learning Outcomes in an LGBTQ+ Medical School Curriculum

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Introduction

Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) youth are at increased risk for negative health outcomes such as sexually transmitted diseases, depression, substance abuse, and anorexia/bulimia, when compared to their heterosexual peers.[1] In addition, LGBTQ+ youth have increased barriers to healthcare as compared to heterosexual youth, varying from lack of insurance to lack of trust of the provider.[2]

From the provider perspective, one New York study identified that 51% of physicians reported that they did not feel prepared to deal with issues of sexual orientation with adolescent patients, and 75% thought that adolescent sexual orientation should be addressed more in physician training.[3] According to a survey conducted at the University of Vermont College of Medicine, 89.9% of the Class of 2016 and 85.4% of the Class of 2015 did not feel informed about resources for LGBTQ+ patients.[4]

The purpose of this public health project is to assess the impact of the current curriculum at University of Vermont College of Medicine on students' knowledge of issues relevant to LGBTQ+ youth and comfort interacting with LGBTQ+ youth in a clinical setting. A literature review and input from Outright VT! were the basis of a survey that accompanied three standardized patient encounters.

Methods

Survey:

Two anonymous surveys were distributed to 104 University of Vermont College of Medicine 2nd year medical students before and after 3 clinical skills encounters with standardized patients. Surveys were voluntary and made available online.

The survey contained 3 demographic and 30 general questions that assessed knowledge, attitudes and skills of UVM COM students pertaining to youth who identify as LBGTQ+.

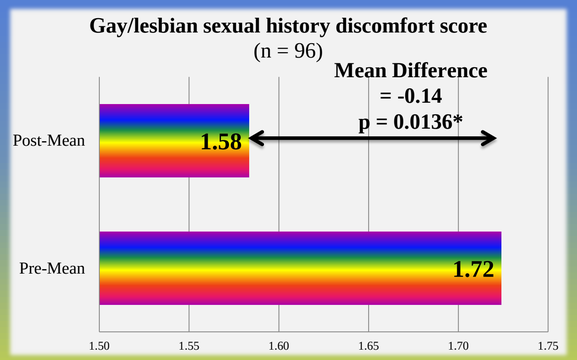
True or False Knowledge statements assessed student understanding of risk factors, screening standards, stereotypes and misconceptions of the LGTBQ+ community. Attitudes and Skills statements were based on a 4-point Likert scale.

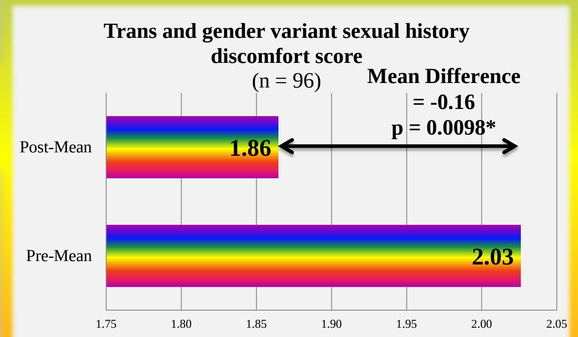
Encounter:

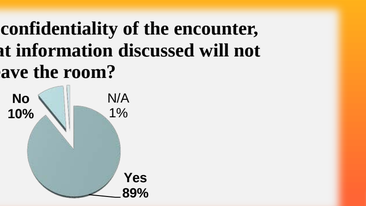
After an introductory lecture, students participated in 3 patient encounters with representative LGBTQ+ standardized patients. Students took a patient centered sexual history and collectively generated a differential diagnosis based on the patient's chief complaint.

Analysis

Data analysis and management was conducted in JMP/SAS (SAS Institute, Cary NC). Descriptive frequency distributions and means were generated. Comparison of pre curriculum exposure versus post curriculum exposure responses were conducted with paired t-tests and McNemar's test for paired samples. The survey was offered to 104 medical students. The pre survey response rate was 100%. The follow-up rate was 92.3% (n = 96). Those who were lost to follow-up were compared to the analysis sample with t-tests and Fisher's exact tests. There were no significant differences between survey participants and those lost to follow-up.







KNOWLEDGE QUESTIONS	n	%	n	%	p-value
Correct answer [TRUE] to "Tobacco use among lesbian, gay and bisexual youth is higher than heterosexual youth."	49	51.0	84	87.5	<.0001
Correct answer [FALSE] to "Among males 14 years of age or older, less than half the HIV infections are from male-to-male sexual contact."	23	24.0	53	55.2	<.0001
Correct answer [FALSE] to "Men who have sex with men do not need to be vaccinated for HPV."	89	92.7	94	97.9	0.0588
Correct answer [FALSE] to "Lesbians and bisexual female youth have a significantly lower prevalence of pregnancy than heterosexual youth."	47	49.0	58	60.4	0.1724
Correct answer [FALSE] to "There is no difference between sex and gender."	92	95.8	95	99.0	0.1797
Correct answer [FALSE] to "Lesbians are more physically active than heterosexual women."	77	80.2	78	81.3	0.8185
Correct answer [FALSE] to "When compared to heterosexual youth, lesbian, gay, bisexual and transgender youth experience less school related violence."	93	96.9	95	99.0	0.3173

Results

Fifty (52.1%) respondents were male, 46 (47.9%) were female; 38 respondents (39.6%) were 26-30 years old, 52 (54.2%) were younger than 26 and 6 (6.3%) were older than 30. All 96 (100%) respondents knew at least one person who identified as LGBTQ+, with most familiarity among gay and lesbian populations.

Out of a 4 point score with 4 being disapproval and 1 being approval, discomfort for exploring the following genre of topics with a patient decreased significantly: same sex practices by 0.06 (p-value < .05), gay or lesbian sexual history by 0.14 (p-value < .05), bisexual history by 0.16 (p < .05), and transgender and gender variant sexual history taking by 0.16 (p < .05).

In answering true or false questions that tested material covered in the medical school curriculum about LGBTQ+ issues, there was a 13% increase in knowledge scores (from 70% correct to 83%, p-value <0.01). Tobacco use among LGB youth being higher than heterosexual youth was answered correctly by 84 (87.5%) respondents after the curriculum, compared to 49 (51%) (p-value <0.01) before completing the curricula.

In addressing history taking skills important to the LGBTQ+ population[6], 89% of respondents confirmed with the patient that the information would be kept confidential and 36% asked the patient to clarify unfamiliar terms (with 57% responding to this task as not applicable.)

Discussion

After a lecture series and patient encounter concerning the LGBTQ+ youth there was significant increase in knowledge concerning medical issues important to the LGBTQ+ youth. In addition, there was an increase in comfort with taking a sexual history regardless of the sexual preference or gender identity of the LGBTQ+ patient. During the patient encounter the majority of medical students assured the patient about confidentiality, an important practice emphasized by LGBTQ+ youth. After exposure to LGBTQ+ topics in the curriculum, medical student's attitudes towards sexual preference shifted with a small but significant decrease in disapproval of same sex attraction and behavior.

This project establishes a method in which to examine future curriculum change concerning topics on LGBTQ+ youth. Survey results suggest that the UVM curriculum has a modest but significant positive impact on attitudes, knowledge and skills needed to provide quality medical care to LGBTQ+ youth. A recent study indicates that medical schools devote little time to education on LGBTQ+ health[7]. The improvements seen in this study argue that teaching LGBTQ+ content in the curriculum is beneficial. In addition, given that students reported highest levels of discomfort in taking sexual histories from transgender and gender non-conforming patients, the authors recommend developing a standardized patient encounter that reflects these communities. In addition, it would be useful to re-survey this cohort after the completion of their first year of clinical rotations in order to assess the degree to which they retained the benefits of the pre-clinical curriculum on LGBTQ+ health.

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The Sara Holbrook Community Center: A Needs Assessment

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University of Vermont College of Medicine[1], Sara Holbrook Community Center[2]

Introduction

The mission of the Sara Holbrook Community Center (SHCC), located in the heart of Burlington's Old North End (ONE), is to "develop responsible and productive children, youth and families through social development, educational and recreational opportunities."[1] SHCC offers an after school program for 36 elementary school students. In recent years, disrespectful behavior and bullying have become a growing problem in the program. We conducted a needs assessment of the SHCC and staff. The assessment examined the strengths and challenges facing the program and devised potential recommendations to address staff-identified issues.

Demographics Across VT[2]

- 86% of students at the Sustainability Academy at Lawrence Barnes are eligible for free/reduced price lunch.[3]
- The median income of the Old North End is $34,000 per year, with 8-12.9% earning less than $10,000 per year.[2]

Overall Themes

Home & Community

Resources

Governance & Administration

Program Structure

Strengths

Unstructured Free Play

Positive Community

Reputation & Impact

Staff Dedication & Diversity

Ability to Stretch Budget

Recommendations

Field Trips

External Programming

Parental Communication

Student Individuality

Frequent Staff Meetings

Clarify Staff Roles

Focus on Staff Training

Develop Fundraising Campaign

Challenges

Resistance to Change

Demographics of Old North End

Staff Communication & Roles

Limited Time, Space & Money

Mural outside SHCC

"…kids come to us in kindergarten and leave us in 5th grade and I have seen a huge amount of growth in that period of time."

-SHCC Staff Member

Methods

We created and administered a 21 question interview in a semi-structured format to the 6 staff members. Each interview was recorded, transcribed and rendered anonymous. From these transcripts, we conducted a qualitative needs assessment and identified 4 themes. We highlighted strengths and challenges for each category and developed recommendations to address these challenges.

Afterschool participants during "Circle Time"

"…to have a place that is very safe and gives them a sense of safety and fun, it just goes a really long way."

-SHCC Staff Member

Conclusion

The needs assessment revealed various strengths and challenges of the SHCC after school program. Addressing two or three of the challenges while also nurturing their strengths will ensure SHCC's continued vital role serving the Old North End.

References:

[1]SHCC Website (www.saraholbrookcc.org); [2]U. S. Census Bureau, 2010 Census; [3]Burlington School District Food Service

Heat vs. Health: Wood Smoke in Vermont

Cunningham, M[1]; Golikeri, A[1]; Leveillee, E[1]; Makrides, J[1]; Ng, H[1]; Trang, J[1]; Wilkison, M[1]; Hales, H[2]; Hoffman-Contois, R[3]; Carney, J[1]

University of Vermont College of Medicine (1); Department of Environmental Conservation (2); Vermont Department of Health (3)

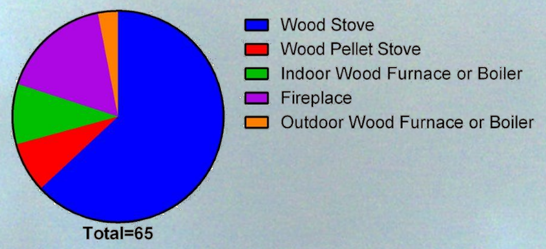
Introduction

- Many Vermonters use wood as a fuel source for heating during the winter months [1,2].
- Wood-heated homes can generate a significant amount of potentially harmful wood smoke [3,4].
- Wood smoke emissions, particularly particles below 2.5 microns, have been associated with respiratory and cardiovascular disease, and subsequent morbidity [5-7].
- There are a variety of wood fuel sources and heating devices that can significantly impact the amount of wood smoke emissions and efficiency of wood burning units [8,9].
- We surveyed the public's knowledge about the health effects of wood smoke, the types and condition of burning appliances used, and fuel sources.
- We assessed public awareness about methods to reduce health risks and the best avenues to provide additional information and resources.

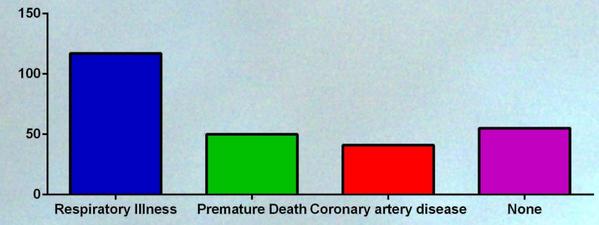
Methods

- We developed and administered a 2-page survey to assess Vermonters' current wood burning practices, types of appliances, and awareness of potential health impacts of wood smoke.
- We collected surveys (n = 234) at 3 polling locations in Chittenden County: Burlington (n = 67), Milton (n = 58), and Williston (n = 109).
- Data were entered into Excel and 10% were randomly selected for quality control check.
- Descriptive statistics were analyzed in Excel; statistical significance was determined using Graph Pad.

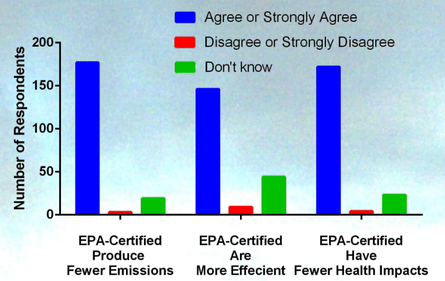
Primary Wood Burning Appliances



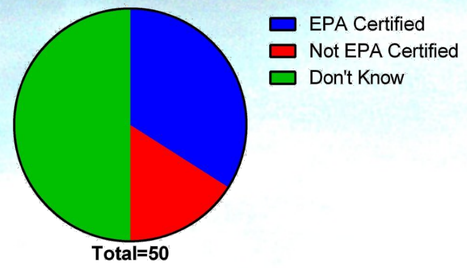
Health Concerns



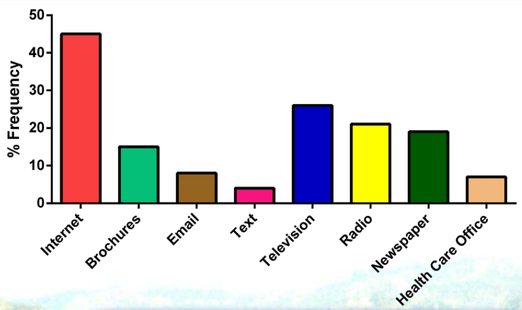
Beliefs about EPA-certified Stoves



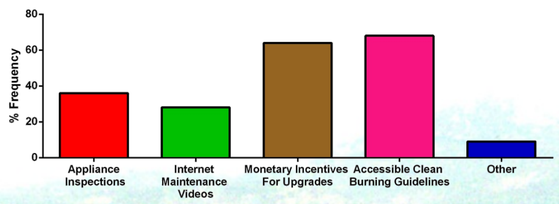
EPA-certified Stove Status



Preferred Information Resources



Emission Reduction Assistance



Discussion

- The majority of respondents (61%) were concerned about effects of wood smoke on respiratory illness.
- Significantly more participants were uncertain ("Don't Know") regarding the efficiency of EPA-certified stoves (21.8%) than were uncertain about emission reduction (9.4%; p=0.005) and health impacts (11.4%; p=0.026).
- Those who want assistance in proper wood stove use would like easy access to published guidelines (68%) and monetary incentives for equipment upgrades (64%).
- More respondents who heat with wood want information about reducing health risks of wood smoke than do those who do not heat with wood (30% vs. 14%, p=0.01).
- There was no significant increase in knowledge of wood smoke hazards among those who have, or who live with someone who has, respiratory or cardiovascular disease.

Conclusion and Suggestions

- Survey respondents were overwhelmingly concerned about the respiratory complications associated with wood smoke, yet divided on the best methods to reduce wood smoke emissions.
- Uncertainty persists among respondents concerning the efficiency of EPA-certified wood stoves.
- We suggest targeted internet-based information including: proven methods of lessening wood smoke emissions, benefits of adopting EPA-certified stoves, and how to confirm a stove is EPA-certified.
- Our project highlighted the need for additional succinct and accessible health information about wood smoke.
- We also identified a need for increased public awareness of available information.

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Review of Sudden Unexpected Infant Deaths in Vermont 2002-2011

Brooks, S[1]; Hedges, J[1]; Hughes, J[1]; Kuo, C[1]; Robichaud, M[1]; Wingfield, P[1]; Davis, W[2]; Carney, J [1]

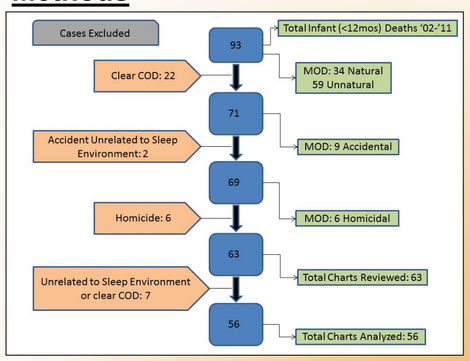
1: UVM College of Medicine 2: Vermont Department of Health

Introduction

Every year, 4500 U.S. infants die suddenly of no immediately obvious cause (Sudden Unexpected Infant Death or SUID). SUID levels overall have plateaued and remain a significant, and potentially preventable, cause of mortality among infants. In particular, deaths related to infant sleep environment have drawn attention as a potential target for education and change.

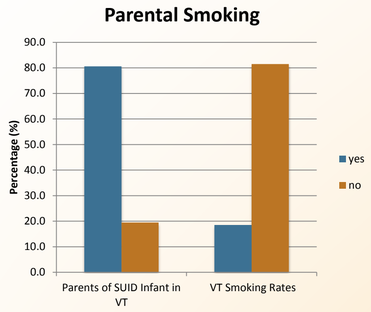
Vermont SUID incidence parallels the national statistics. However, recent analysis of data collected on opinions regarding immunizations (ASTHO 2009) suggested that the characteristics of VT SUID population might diverge significantly from the national picture of public health. This Public Health Project sought to accurately define the characteristics of SUID in Vermont by reviewing pertinent infant death records from 2002-2011 in order to determine if the national trends apply to Vermont. The goal was to identify the target population and develop strategies to promote the 2011 recommendations for a safe infant sleeping environment.

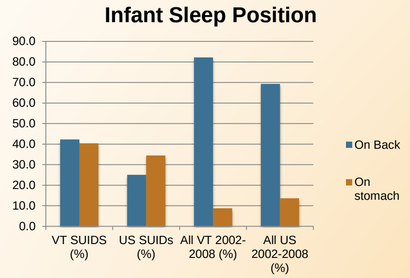
Methods

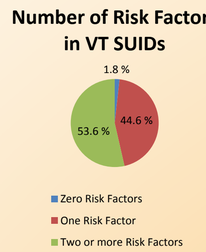


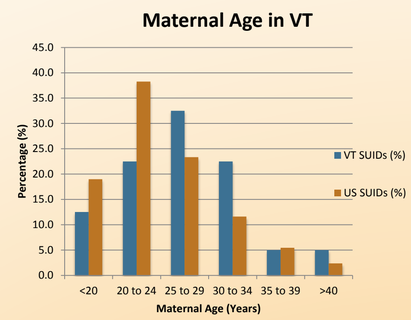
- Chart review of SUIDs (1/1/02 – 12/31/11) at the VT Office of the Chief Medical Examiner
- Comparative descriptive analysis of demographics sleep environment and parental risk behaviors (VT vs. US)

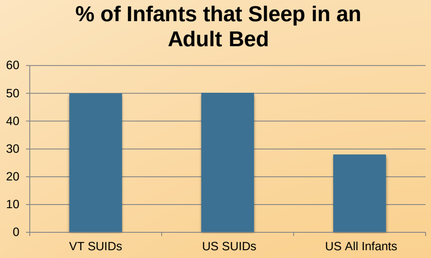
Results

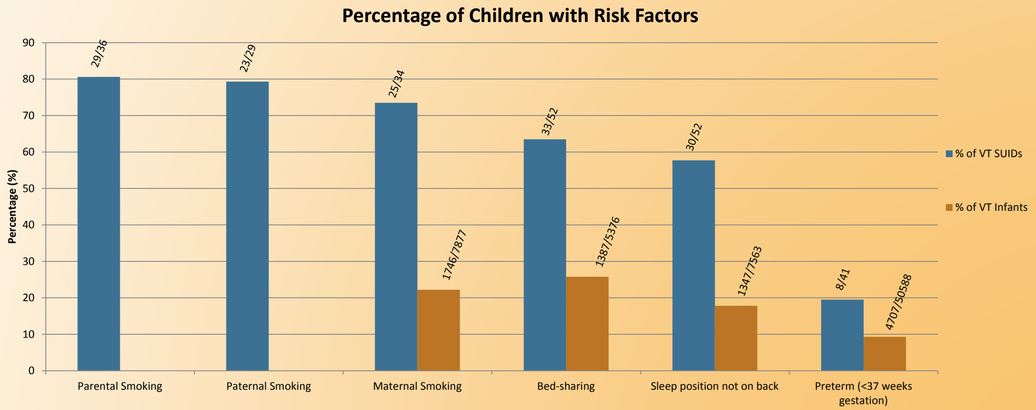












- Bed-sharing, maternal smoking, and non-supine sleep position are statistically significant risk factors for SUIDs in VT, all with p values of <0.0001 using a chi-square test with a Yates correction

Discussion/Conclusion

- Risk factors for SUIDs in VT are similar to those nationally including bed sharing, maternal smoking and non-supine sleep position
- Smoking was the most prevalent, modifiable risk factor
- Average VT maternal age was 27 vs. 24 nationally
- Incomplete death scene data collection limits analysis

Safe sleep environment includes:

- Avoid smoke exposure
- Back to sleep for every sleep
- Safety-approved crib
- Firm sleep surface with fitted sheet
- No soft objects or loose bedding
- Room-sharing without bed-sharing
- Avoid alcohol and illicit drug use
- Avoid overheating and over-bundling
- Avoid wedges and positioning devices

Recommendations:

- VT should continue to follow national safe sleep recommendations.
- SUID prevention campaigns should target smokers.
  - Analyze tobacco research and campaigns for effective methods.
- Improve data collection
  - Create a form with yes/no checkboxes
  - Have separate questions for alcohol and drug use
    - Include timing, frequency and duration
  - Include socioeconomic factors (education, housing, employment, marital status)
  - Record BMI of bed sharer
- Reach a national consensus on SUIDs definition and data collection to aid future analysis.

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Money Follows the Person: Transitioning Nursing Home Residents into the Community

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Nancy Tran, Shane Verhoef, Hope Yu, Linda Martinez, Rio Demers, Jeanne Hutchins, William Pendlebury, MD
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INTRODUCTION

The State of Vermont offers several housing options for Medicaid eligible nursing home (NH) residents; however, there are few opportunities to fully integrate into the community. Our aim was to create an option for NH residents to transition into an Adult Family Home (AFH) with financial help from Money Follows the Person. Our motivation for exploring AFHs was to provide NH residents with a better living experience. Individuals admitted into NHs showed decline at 6 months. Changes included: Somatization, Independent Sensitivity, Depression, Anxiety and Psychoticism. Residents transitioning out of NHs into Assisted Living Facilities showed improvements in the following areas: Physical Well Being, Psychological Well Being, Environmental Well Being, Social Well Being and Overall Quality of Life.

METHODS

Survey:

- A 10-question survey was distributed to 38 NHs throughout Vermont by email; 19 total respondents with 14 completed surveys.
- The survey evaluated the needs of the NH population, particularly the level of assistance required in various ADLs.
- Data was analyzed using Microsoft Excel.

Focus Group:

- 5 current home and service providers from Addison County were interviewed by phone.
- Providers shared their perspective regarding: the rewards and challenges of being a home and services provider; the AFH model; quality assurance; and the benefit of residents transitioning out of NHs into the community.

Model:

- A model for an AFH was constructed from components of pre-existing models in other states to address qualification criteria, assessment and care planning, requirements and training for providers, resident agreements, and quality assurance strategies.

SURVEY RESULTS

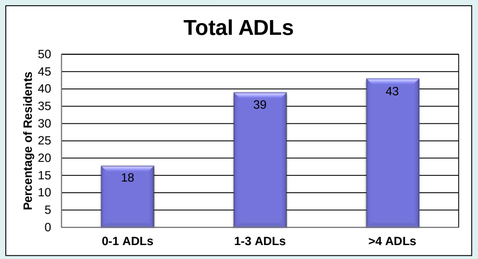


Figure 1. ***Average Number of ADL Deficits Across Vermont Nursing Home Residents (n = 14)***

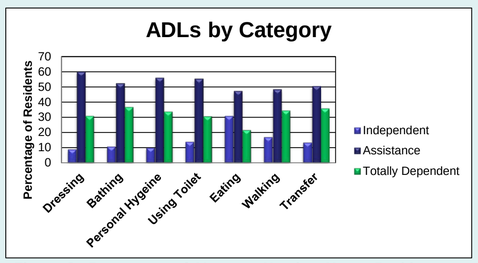


Figure 2. ***Percentage of Vermont Nursing Home Residents at Varying Levels of Independence Across Selected ADLs (n = 14)***

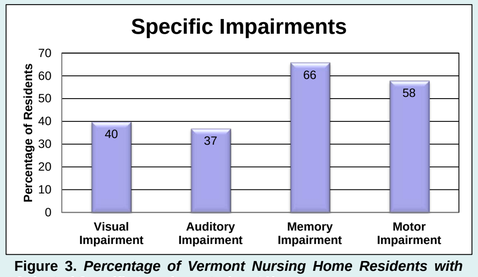


Figure 3. ***Percentage of Vermont Nursing Home Residents with Selected Specific Impairments (n = 19)***

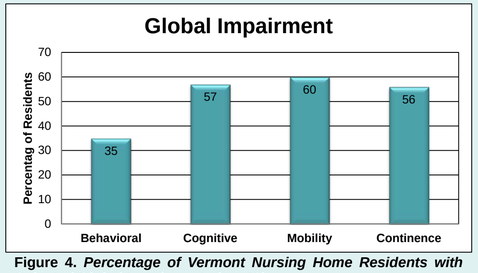
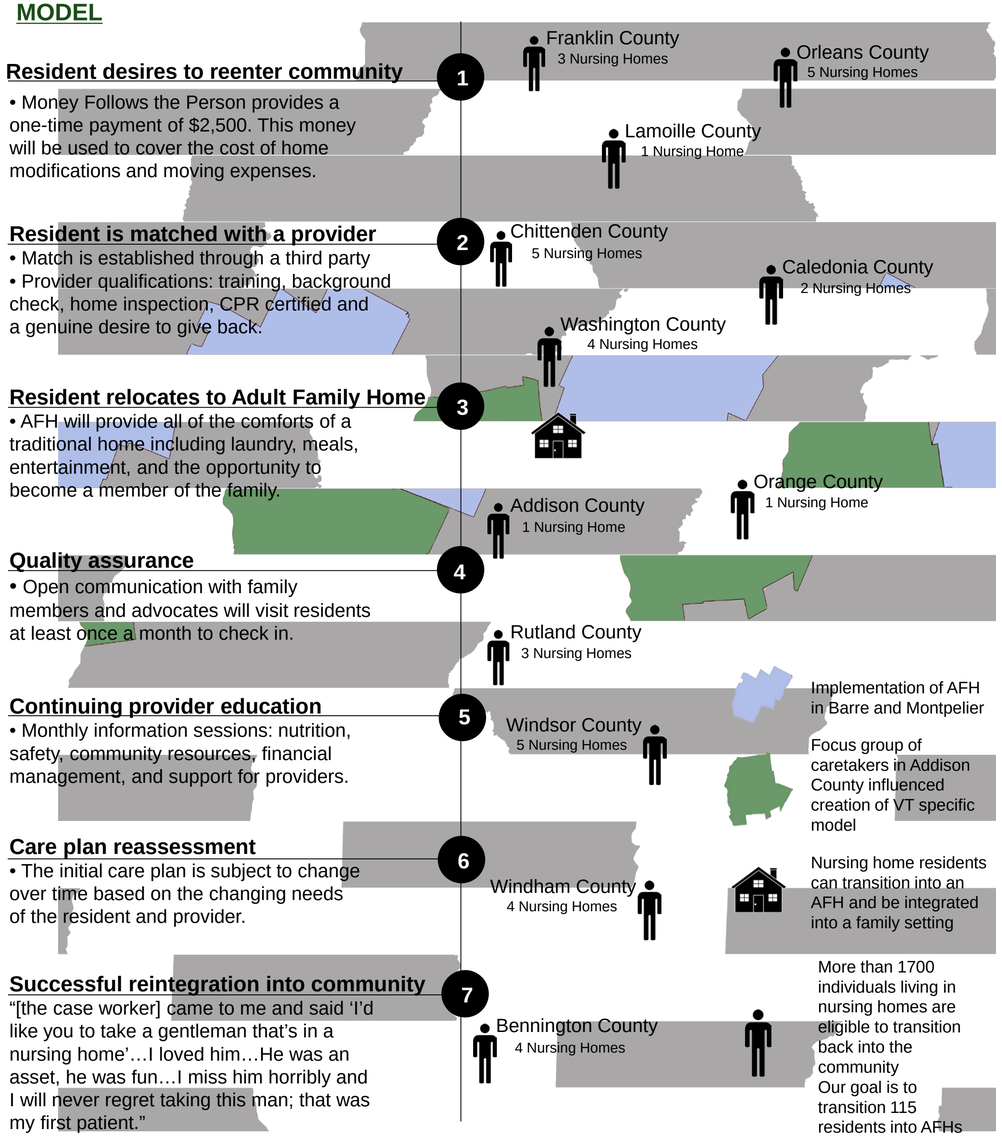


Figure 4. ***Percentage of Vermont Nursing Home Residents with Selected Global Impairments (n = 19)***

MODEL



"If you can give a person a second chance to live in society you should do it. Who wants to grow old alone in a nursing home?"

"I loved seeing the little things that made them happy. They were realizing that there was another way to live."

CONCLUSIONS

- Research has shown that admittance to a NH is associated with a decline in several measures of well-being.
- Quality of life of NH residents improves after transition into the community.
- Money Follows the Person is necessary to help Medicaid-eligible NH residents make the transition.
- Our survey showed that a significant population of NH residents exists who are able to transition into the community.
- The focus group showed there are many families and individuals willing to accept and care for the needs of these residents.
- Our proposed Adult Family Home model for Vermont , based on models implemented in other states, as well as the perspective provided by our focus group, outlines how this transition can be made.

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Assessing Attitudes Towards Tobacco Advertising in Winooski, VT

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Introduction

There are approximately 75,500 adult smokers in Vermont, making up about 15% of the state's adult population[1]. These rates are relatively higher in low-income populations. Winooski, Vermont is vulnerable to high tobacco use rates given that 23.6% of Winooski residents live below the poverty line[2].

The majority of tobacco users begin in their youth[3]. Tobacco advertising, which has been shown to have a direct, dose-dependent association with tobacco use in youth[3], is highly prevalent in stores in Winooski. In conjunction with the Winooski Coalition for a Safe and Peaceful Community (WCSPC), we assessed the attitudes toward tobacco advertising within the Winooski Community.

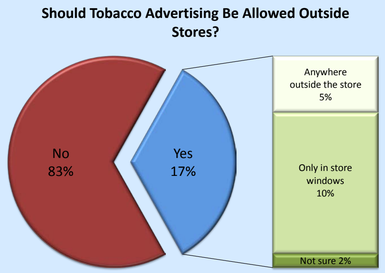
Objectives

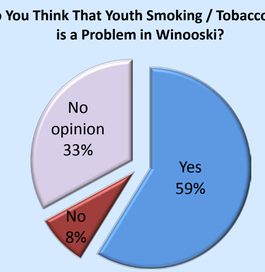
- Initiate the *Small Changes, Big Impact*[4] protocol
- Assess attitudes toward tobacco advertising and youth tobacco use in Winooski, VT
- Provide the WCSPC data for efforts to reduce tobacco advertising and use

Methods

- Designed a survey to assess the opinions of adult community members towards tobacco advertising and youth tobacco use in Winooski
- Administered the survey in three different settings:
  1. Sent home with students of the Winooski school district
  2. In-person at the parent-teacher conference at the Winooski school district
  3. In-person at the Winooski Community Health Fair
- Organized a free health fair at the Winooski Community Health Center

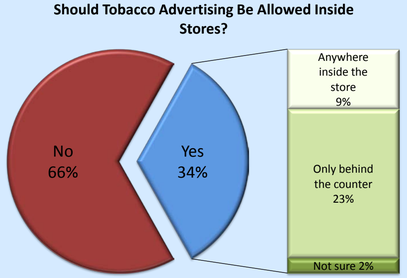
Results

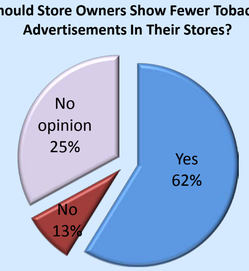




- 18 % of respondents identified themselves as smokers.
- 59% of respondents thought that youth are influenced by tobacco advertising in stores.
- Respondents thought that grocery stores (77%), pharmacies (77%), corner stores (54%) and gas station/convenience stores (55%) should not post advertisements and signs for tobacco products.

Eric Chang takes a blood pressure measurement at the Winooski Health Fair





	Nonsmokers	Smokers	Overall
Tobacco advertising should **not** be allowed inside stores	71%	29%	66%
Tobacco advertising should **not** be allowed outside stores	85%	65%	83%
Store owners should show ***fewer*** tobacco advertisements inside stores	63%	59%	62%
Youth smoking & tobacco use is a problem in Winooski	66%	29%	59%

- Respondents thought that grocery stores (66%), pharmacies (73%), corner stores (41%) and gas station/convenience stores (43%) should not sell tobacco products.
- 26% of respondents reported that they or other members of their family received advice from a doctor regarding tobacco products use in the past year.

Discussion

Youth exposed to tobacco advertising are more likely to smoke or use tobacco products[3]. The majority of respondents believe that youth smoking and tobacco use in Winooski is a problem and that store owners should decrease or eliminate tobacco advertising. This demonstration of community support for reduced tobacco advertising will be instrumental for achieving the goals of the *Small Changes, Big Impact*[4] initiative in Winooski, VT.

4

Conclusion

- The majority of respondents believe that tobacco products should not be advertised anywhere inside or outside of stores.
- Both smokers and non-smokers think store owners should show fewer tobacco advertisements/displays in their stores.
- The majority of survey respondents think that grocery stores, pharmacies, corner stores, and gas station/convenience stores should not post advertisements and signs for tobacco products.

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