

***Public Health Projects
Class of 2014***



***January 25, 2012
University of Vermont College of Medicine***

Welcome to our Poster Session and Community Celebration!

Today, we celebrate our 8th year of public health projects as a part of our curriculum at the UVM College of Medicine. Our collaborative work with our community is an integral part of our mission, because physicians have a role and responsibility in population health. Our educational goal is to help our students become better physicians through their actions in our community to improve public health. In addition to experiencing the challenges of improving population health, our students provide a community-service contribution from the perspective of an academic medical center.

With help from the United Way of Chittenden County Volunteer Center, health needs were identified by our local community agencies, and these 16 projects of the Class of 2014 were designed as "community first" to help meet these needs. Building on leadership skills learned during the first-year, using practical research methods, students worked with faculty and community agencies to find creative ways to put science into practice.

This year's projects cover a broad range of health issues: improving access to health care, including preventive care, increasing blood donations, promoting nutrition and physical activity, protecting children from exposure to environmental pollutants, improving health care in older Vermonters, identifying strategies to further support breast cancer survivors, and more. Projects reach vulnerable communities and people of all ages, and some impact policies that influence our health. Most of these public health issues are also national priorities, and our students' successes contribute to broader knowledge of community engagement, advocacy, and scholarship in public health.

Our special thanks to the Class of 2014, the United Way of Chittenden County Volunteer Center, Dean Morin, Medical Student Education, COMET, Medical Photography, and our UVM faculty mentors and participating community agencies, for their help, support, and participation.

Please enjoy our poster session and celebrate our students' work!

Jan K. Carney, MD, MPH

*Associate Dean for Public Health
Course Director*

Project: Screening for Alzheimer's Disease in Vermont Primary Care Practices

Community Agency: Alzheimer's Association,
Vermont Chapter

Abstract:

Introduction. Alzheimer's Disease (AD) is a progressive dementia that affects approximately 5.3 million Americans and is the sixth leading cause of death in the US. As of 2010, 11,000 Vermonters have AD. The Centers for Medicare and Medicaid Services recently included detection of cognitive impairment in the new Annual Wellness Visit rules. In light of these recommendations, the goal of the project was to ascertain physician attitudes and practices toward screening and early detection of AD.

Methods. An anonymous multiple-choice survey was distributed to 280 primary care physicians (PCPs) throughout Vermont; 63 surveys were completed. In addition, patients with dementia and their caregivers were invited to attend a focus group; 13 participants provided their perspectives on the diagnosis of dementia and shared their personal experiences.

Results. While 87% of physicians believe screening for AD is *not* important because there is no effective treatment, focus group participants consider a diagnosis essential for making plans, learning about their disease and establishing a "new normal." While the most common reason that physicians don't always screen for dementia is because other medical issues are more pressing, focus group participants stated that cognitive status should be addressed in every encounter because it's an everyday struggle.

Conclusion. We encourage PCPs to proactively screen for dementia, ultimately so that patients can maintain quality of life prior to the onset of late-stage disease. From our interactions with patients with dementia and their families, we learned that the diagnosis itself facilitates accepting and adapting to life with cognitive decline.

Students: Bryan Chow, Anne Coleman, Daniel Liebowitz, Mairi Lindsay,
Hayk Minasyan, Michael Mollo, Ashley Russo

UVM Faculty Mentor: William Pendlebury, MD, Jeanne Hutchins, MA
Community Faculty: Martha Richardson

Project: Breathing Easy: Lung Health and Associated Conditions in the Day Care Setting

Community Agency: American Lung Association, Vermont Chapter

Abstract:

Introduction. Air pollutants are associated with many health risks. Children in the day care environment are uniquely susceptible to lung damage, infection, systemic illness and pollutant-triggered hypersensitivity reactions from these pollutants. This is exacerbated in a state whose asthma rate is among the highest in the United States.

Objective. To assess the adequacy of Vermont's child care center regulations in protecting children from exposure to specific environmental pollutants linked to health risks. To compare Vermont's existing requirements to those in six surrounding states in order to make recommendations for possible improvement.

Methods. We reviewed the potential risks posed to children by the following EPA-identified pollutants: carbon monoxide (CO), pesticides, radon, biological contaminants, asbestos, smoking, ventilation and volatile organic compounds (VOCs). We examined state child care center regulations in Connecticut, New Hampshire, Maine, Massachusetts, New York, and Rhode Island and compared them to Vermont's regulations, then posing recommendations to the American Lung Association (ALA) for improvements within Vermont.

Results. With regard to asbestos, smoking, VOCs, and ventilation, Vermont has the most protective regulations in the northeast. Other states surveyed afforded children additional protection from CO, radon, pesticides, pet dander, and lead.

Conclusions. To better protect children's respiratory health, Vermont should consider the addition of mandatory radon testing, more comprehensive CO monitoring, and parental notification of pesticide use and the presence of animals to child care regulations. The addition of more extensive lead testing requirements, such as those in Massachusetts, would also be beneficial for protecting overall children's health.

Students: Richard Carrick, James Corbett-Detig, Anastasia Coutinho, Justine Hum, G. Michael Krauthamer, Sarah Marsh

UVM Faculty Mentors: Gerald Davis, MD
Community Faculty: Rebecca Ryan

Project: Should 16 Year-Olds Be Allowed to Donate Blood? A Vermont Perspective

Community Agency: American Red Cross, Northern New England Region

Abstract:

Introduction. Blood collection agencies are constantly being challenged to provide sufficient blood for transfusions. Blood donations from 16 year-olds are only accepted in 38 states, but not in Vermont. This study examined the opinions of Vermont blood donors regarding 16 year-olds donating blood.

Methods. An anonymous survey was distributed to 2,000 Vermont residents who are donors in the American Red Cross Northern New England Blood Services Region. The survey contained 7 demographic questions and 15 statements grouped into domains of donor autonomy, donor safety, and benefit to society. Within each domain, a global statement was included to assess attitudes apart from blood donation.

Results. Based on 526 returned surveys, the majority of respondents (62.5% whole population and 68.8% parents of 16 year-olds) agreed that 16 year-olds should be allowed to donate blood. No difference in attitudes was found between the total population, all parents, parents of 16 and 17 year-olds, and non-parents. There was a general consensus in favor of 16 year-old blood donation regarding autonomy, safety, and benefit to society.

Conclusions. The majority of Vermont blood donors favor 16 year-olds donating blood. Future studies could be expanded to include non-blood donors to make a broader statement about how comfortable residents are with allowing 16 year-olds to donate blood in Vermont.

Students: Gabriel Crowl, Anees Daud, Vanessa Franz, Nicholas Phillips, Maia Pinsky, Jennifer Pons, Areg Zingiryan

UVM Faculty Mentor: Mark Fung, MD
Community Faculty: Carol Dembeck, Chris Frenette

Project: Exploring Barriers to Exercise Among Adolescents at the Burlington Boys and Girls Club

Community Agency: Boys and Girls Club

Abstract:

Introduction. Boys and Girls Club of Burlington (BGCB) is a non-profit agency that holds after-school activities for adolescents including music, art, technology, and physical activities. The BGCB has struggled to encourage physical activity among its participants.

Objective. Our study was designed to identify deterrents to participation as well as changes that could be made to improve participation.

Methods. We administered an optional 10-question survey to 44 adolescents, ranging from age 9-14. Survey topics included their preferred activities at the BGCB, barriers to participating in physical activities, and opinions of possible additional activities.

Results. We found gym was the favorite among 64% of both boys and girls of all ages while 21 % of youth reported Computer Room as their favorite activity. Some of the biggest barriers we found among the non-gym-favoring youth (NGFY) were worried about getting hurt and being watched by other. While the NGFY did not like some of the activities provided by the BGCB, they do like swimming at the Essex pool, natural walks, and playing capture the flag. In addition, we also found that NGFY preferred activities small group activities where both boys and girls were present over larger groups.

Conclusion. Based on our results, changes that could be made to improve physical activity would be to 1.) Increase low-skill activities 2.) Expand opportunities for the most popular existing physical activities 3.) Incorporate new activities with an emphasis on smaller groups 4.) Incorporate more non-contact sports 5.) Continue to offer predominantly coed activities.

Students: Peter Cooch, Nazia Kabani, Vincent Kan, Gabriel Morey, Therese Ray, Sara Staples

UVM Faculty Mentor: Pam Farnham, RN
Community Faculty: Jack Stackhouse

Project: A Community Model to Improve Physical Activity in Children

Community Agency: Burlington Children's Space

Abstract:

Introduction. The prevalence of overweight and obese children aged 2-5 in the United States is 21.2%, and in Vermont it is nearly 30%. Although the National Association for Sports and Physical Education offers some guidelines for physical activity in preschool-aged children, there is not clear policy in place pertaining to this matter.

Objective. We sought to assess physical activity in preschool-aged children attending Burlington Children's Space (BCS).

Methods. Parents' opinions about physical activity at BCS were assessed using questionnaires. BCS Preschool teachers were asked to assess activity in students in one-week periods both before and after attending a workshop about physical activity in preschool-aged children.

Results. Children at BCS received an average of 136.5 min/day and 148 min/day of exercise in the first and second surveyed weeks, respectively. Parents of BCS children reported that they were satisfied with the level physical activity at school. Winter weather was not found to limit children's physical activity.

Conclusions. In many ways, BCS offers a paradigm model for providing a high level of physical activity for children. For other preschools, aspects of the BCS model that could be implemented include: 1) creating a culture of physical activity at the childcare center, 2) devoting resources to ongoing education of childcare center staff, 3) finding creative ways to incorporate physical activity into preschool curriculums.

Students: Hany Abdallah, Laura Caldwell, Conor Carpenter, Katherine Scovner, Timothy Snow, Karan Verma

UVM Faculty Mentor: Jan Gallant, MD
Community Faculty: Sarah Adams-Kollitz

Project: Assessing Health Needs of the Burlington Probation and Parole Population

Community Agency: Burlington Probation and Parole

Abstract:

Introduction. Healthcare issues of inmates have been studied extensively in the past. Health status and medical issues of parolees, particularly of rural areas of the United States, have received very little attention.

Objective. Evaluate health risks among the probation and parole population in Burlington, Vermont and guide recommendations towards improving health outcomes.

Methods. A 30-question health-risk assessment questionnaire to assess the health risks and quality of life was administered. The survey focused on evaluating health-related needs of the population. The survey assessed parolees' knowledge of the available health services, as well as attitudes towards tobacco use, diet, and health habits. Demographic data were collected to evaluate characteristics specific to parolees in a rural setting.

Interventions. Five problem areas requiring most urgent intervention were identified and presented to the Burlington Probation and Parole Office case workers. Evidence-based recommendations were made aiming at improving access to and continuity of medical and mental health care, as well as providing preventive services to modify health risk factors of the low-risk offenders.

Conclusions. Our project has generated preliminary data describing healthcare needs of this population. Smoking and mental illness/depression have been identified as prevalent in this population. Future directions are to identify the best resources to meet the needs of the population. Project results were presented to the Burlington Probation and Parole staff along with preliminary reference materials. An in-depth training should be given to the staff for each of these problem areas for screening and recommending resources to help the population in need.

Students: Nicole Benson, Katelynn Ferranti, Laura Frischer, Jonathan Galli, Kevin Kuruvilla, Stanislav Lazarev, Nathan Louras

UVM Faculty Mentor: Jill Jemison
Community Faculty: Herb Sinkinson

Project: Depression in the Elderly: Attitudes of Seniors and Practices of Health Care Providers

Community Agency: Cathedral Square Corporation

Abstract:

Introduction. Support And Services at Home (SASH) is housing with senior services developed by Cathedral Square Corporation. Depression in the elderly community is well-documented and is often undiagnosed or undertreated. Our goal, along with SASH, was to investigate depression from the perspective of seniors and local primary care providers.

Methods. An anonymous 15-item participant survey was distributed in one of three SASH residences to assess how comfortable the residents are speaking to their physician about depression, their support system, and barriers for seeking help. Secondly, an anonymous 16-item questionnaire was emailed to healthcare providers (HCP) affiliated with Fletcher Allen Health Care to assess their screening practices and treatment for depression in seniors.

Results. Response rate for the healthcare provider survey was 22.9% (49/214); 47% use no standardized testing procedure in their evaluation of depression; 70% follow-up with patients referred for mental health treatments "often" or "always". Finally, 72% of HCPs consider patient limitations either "often" or "always" when selecting a referral organization for elderly patients. Response rate for the senior residents' survey was 49.8% (123/247). 89.4% agreed with "If I felt depressed, I would bring up these feelings with my healthcare provider." 83.7% would turn to their support system if feeling depressed; 82.9% would turn to their HCP; 40.7% a private counselor/psychiatrist, and 17.9% other community health agencies.

Conclusion. Barriers preventing seniors from seeking help included stigma, isolation, and time limitations at appointments. Further, there is discrepancy between the treatment modalities that physicians prefer and those available within the community.

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UVM Faculty Mentor: Patricia Berry, MPH
Community Faculty: Molly Dugan

Project: Community Pediatrics and Growing Kids in South Burlington

Community Agency: Child Care Resource

Abstract:

Introduction. Although research has shown that early identification and intervention for young children with developmental delays can improve outcomes, pediatric health care providers do not consistently use validated screening tools according to the national guidelines. Furthermore, collaboration between health care providers and community resource organizations is beneficial to families requiring additional support. The use of these tools and the value of collaboration have not been investigated with respect to care provided to children living in South Burlington.

Objective. To examine area pediatric health care providers' assessment of development through the use of available screening tools and to assess collaborations with community resources.

Methods. Eight pediatric health care providers (7 physicians, 1 nurse) serving the South Burlington pediatric population were interviewed regarding their use of developmental screening tools and community resources. A standardized survey composed of open-ended questions was utilized. In addition, a short focus group and a presentation of the preliminary interview findings were conducted at the Pediatric Medical Staff meeting at Vermont Children's Hospital/Fletcher Allen Health Care.

Results. The Ages and Stages Questionnaire and screening tools in the Bright Futures Guidelines were most commonly used in assessing development by the practitioners interviewed. Resources used for the care of patients with additional needs included the Visiting Nurse Association, Children's Integrated Services (CIS), and the Howard Center.

Conclusion. Pediatric health care providers use a wide variety of developmental screening tools. In our qualitative interviews, providers identified that improved communication, access to information, and additional education can improve developmental health care.

Students: Leah Carr, David Drimmer, Hannah Foote, Nicholas Koch, Jerry Lee, Dane Slentz, Anjali Varigonda

UVM Faculty Mentor: Wendy Davis, MD

Community Faculty: Joey Hager, Elizabeth Meyer

Project: 3 Squares VT Food Assistance Usage by Patrons at the Chittenden Emergency Food Shelf

Community Agency: Chittenden County Emergency Food Shelf

Abstract:

Introduction. Thirty-nine percent of the more than 12,000 Vermonters who are served by the Chittenden Emergency Food Shelf are not enrolled in 3SquaresVT, Vermont's food assistance program. This negatively impacts Vermont's economy and stresses charitable organizations, including the CEFS. This study examined CEFS clientele awareness, utilization, and barriers to their participation in 3SquaresVT.

Methods. An 8 question survey was designed to assess clientele awareness and affiliation with 3SquaresVT. Basic demographic data was also collected. Surveys were in an interview format and a total of 202 complete patron responses were collected.

Results. Data revealed that most CEFS patrons are aware of 3SquaresVT (94%). The majority of those who are aware are participating in the program (61%). Among the remaining 39% who are not enrolled in 3SquaresVT, "not qualifying" was the most common reason reported, followed by "convenience" and "difficulty of applying". Demographic analysis revealed that women are almost twice as likely as men to participate (RR = 1.9) and that patrons to the food shelf during the second half of the calendar month are 1.7 times more likely to be participating.

Conclusions. The Chittenden Emergency Food Shelf may be able to increase their clientele's participation in the 3SquaresVT program by screening all patrons during their intake survey and distributing informational material to those who are not aware or have limited knowledge of the program. Additionally, allocating CEFS personnel to assist clients with the application process, especially in the first half of the month, would increase participation in 3SquaresVT.

Students: Ashley Atiyeh, Elizabeth Blasberg, Katelyn Cushmanick, Daniel Edberg, Mairin Jerome, Patrick Ng

UVM Faculty Mentor: Jan Carney, MD, MPH

Community Faculty: Rob Meehan

Project: The Effects of Game Based Nutrition Intervention on 5th Graders School Lunch Choices

Community Agency: City Market

Abstract:

Introduction. Evidence shows that consumption of fruits and vegetables has health benefits, yet children across the country consume less than levels recommended by the USDA. A recent study showed that intervention coupled with food-based education was successful in improving eating habits.

Objective. Our goal was to improve the food choices made by 5th graders eating lunch at school through a game-based intervention.

Methods. A survey about food choices was given to both the 4th and 5th grades of a local school before and one week after the intervention. Only the 5th grade took part in the intervention, which was a life-sized game using food images as a game board and students as game pieces and was designed to meet 3 key goals: nutritional education, exposure to healthy food, and an entertainment component for positive reinforcement.

Results. Prior to the intervention, 5th graders liked the taste of fruits significantly more than 4th graders (97.9% vs 77.8%, $p = 0.009$), and also had a significantly higher belief that fruits were good for them (78.7% vs 55.6%, $p = 0.028$). After the intervention, a significantly higher number of 5th graders liked both the color of vegetables (50.0% vs 31.9%, $p = 0.041$), and the texture of fruits (52.3% vs 25.5%, $p = 0.004$) compared to pre-intervention. 4th graders showed no significant changes.

Conclusion. While a one hour lesson may be enough to encourage more positive attitudes about fruits and vegetables, a longer intervention may be necessary to influence eating habits.

Students: Adam Ackerman, Karina Eastman, Albert Emery, Paige Georgiadis, Camilo Martinez, David Reisman, Maramawit Wubeshet

UVM Faculty Mentor: Robert Luby, MD

Community Faculty: Caroline Homan, Sarah Heusner

Project: Assessing Wellness Needs of Breast Cancer Survivors in Vermont

Community Agency: Dragonheart Vermont

Abstract:

Introduction. Approximately 500 breast cancer diagnoses are made annually in Vermont. The "Survivorship NOW" program, sponsored by the non-profit organization Dragonheart Vermont, provides survivors with post-treatment support. To create programming that best serves survivors, the University of Vermont College of Medicine and Dragonheart Vermont worked together to assess survivor needs regarding exercise, nutrition, and emotional support.

Methods. An anonymous two-page (16-item) survey was used to assess survivor needs and community involvement. 127 surveys were obtained from 208 self-identified cancer survivors (7 respondents' data excluded) attending the 4th Annual Vermont Cancer Center Breast Cancer Conference October 7, 2011. Responses to open-ended items were coded into categories. Likert-like scales of agreement were used for items targeting support program settings.

Results. Respondents indicated that health improvement resources for nutrition and exercise would improve their quality of life. They were most likely to participate in an exercise program (54%) and 38% of the participants interested in an exercise program preferred a group setting. Most (77%) were likely to use a consolidated nutritional information source such as a newsletter. In the open ended questions, respondents cited the importance of support from family, friends and health care providers. Most (70%) would likely use a buddy system for support.

Conclusions. Suggestions for Survivorship Now include setting up exercise groups in communities outside of Chittenden County, providing a nutrition information newsletter, creating a buddy-matching program, and enhancing volunteer opportunities. Implementing such strategies may further support needs of breast cancer survivors.

Students: Alison Alpert, Wai Lun Au, David Larsen, Jenna Pariseau, Vanessa Patten, Elizabeth Robison, George Vana

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Community Faculty: Linda Dyer

Project: Assessing Bullying Behaviors and the Efficacy of Bullying Prevention in Fourth Grade Classrooms

Community Agency: Puppets in Education

Abstract:

Introduction. Bullying is an increasingly common issue faced by children and adolescents today. Puppets in Education (PiE) aims to intervene by providing children with the information and skills needed to handle bullying through the use of life-sized puppets and interactive workshops. The purpose of our study was to determine the efficacy of PiE's Bullying Prevention Program.

Methods. Students from three fourth-grade classrooms in Chittenden County were asked to complete a short survey and participate in small focus groups before and after viewing PiE's Bullying Prevention Program. Focus groups were led by 2nd-year medical students from the UVM College of Medicine. Data from the surveys and focus groups were quantitatively and qualitatively analyzed using Microsoft Excel.

Results. The majority of students have been bullied before (61%). Survey analysis shows the PiE presentation increased knowledge as evidenced by an increased number of students indicating the correct answer on the survey. Survey and focus group data suggest that most children would find it easiest to walk away from a bully and tell an adult. Overall, focus group analysis shows that students felt more comfortable dealing with bullying behavior following the presentation.

Conclusions. The data from our focus groups and surveys strongly suggest that the PiE Bullying Prevention Program is effective in its goals of empowerment. From our findings, our recommendations for improvement include coupling the strategy of walking away from a bully and telling an adult, using concrete examples and quotes that students can use, and incorporating role play with a bully.

Students: Amanda Boutrus, Alyson Guillet, Chelsea Harris, Duong Hua, Rola Khedraki, Aaron Maxwell, Prabu Selvam, Jordan Smith

UVM Faculty Mentor: Stephen Contompasis, MD
Community Faculty: Deb Lyons

Project: Cremations, Dental Amalgams, and You

Community Agency: Vermont Department of Health

Abstract:

Introduction. One third of all caries fillings done in 2002 in the U.S. utilized amalgam, a metal alloy containing as much as 50% mercury and is a known toxicant. Secondly, mercury from amalgam can be released into the air during cremation. In Vermont, amalgams are popular for caries repair and cremation has become a preferred alternative to interment of an intact body. We investigated current medical opinion on use of dental amalgams and potential emission of mercury from crematoria.

Methods. A literature review was performed to investigate the impact of mercury based amalgams on individuals. A survey was done of Vermont cremations to obtain estimates of annual activity and trends. An algorithm was derived to estimate emissions value from crematoria.

Results. Known effects of mercury include neurotoxicity, kidney toxicity, allergies and GI disturbances but effects of chronic mercury exposure from amalgams are not clear. To date, studies of mercury levels in the environment from crematoria are inconclusive.

Discussion. It has been challenging for research studies to find health effects significantly associated with amalgams, causing lack of consensus on amalgam toxicity among professional societies. It is likely that the algorithm derived to estimate emissions underestimates the amount of mercury released from crematories.

Conclusion. Studies of amalgam safety are limited. Consequently, we recommend patients be educated on possible amalgam toxicities prior to its use. Our research supports the recommendations of the FDA, to avoid amalgam use in patients with known metal allergies. We encourage testing and tracking crematoria for actual mercury emissions.

Students: Calvin Kagan, Alison Krywanczyk, Xingfu Liang, John Malcolm, Molly Rovin, Bianca Yoo, Bailey Zhao

UVM Faculty Mentors: Jan Carney, MD, MPH
Community Faculty: Razelle Hoffman-Contois, MS, Heidi Hales, PhD

Project: Barriers to Adult Vaccinations in Vermont**Community Agency:** Vermont Department of Health**Abstract:**

Introduction. Rates of adult immunization in Vermont are below the *Vermont Immunization Program Goal Tracker* targets. As complete immunization would significantly decrease morbidity and mortality from infectious disease, UVM COM students sought to determine and understand barriers to complete immunization from the perspective of relevant primary care physicians in Vermont.

Objective. Assist the Vermont Department of Health (VDH) with future policy initiatives to improve rates of adult immunization.

Methods: An electronic survey was emailed to 572 internal medicine and family medicine doctors across Vermont. The survey included 26 questions to assess current knowledge, behavior, and perceptions toward adult immunization.

Results. Data from 88 respondents (15.4% response rate) showed that most physicians adhered to and agreed with current CDC recommendations. The top practice-related barrier to complete immunization was lack of patient reminder system, followed by lack of provider time. The top patient-related barriers included lack of patient-perceived need, patient concern about immunization safety, cost to patient, and uncertainty regarding immunization history, respectively. Regarding potentially beneficial interventions, respondents stated that use of an electronic reminder system, as well as a state-wide immunization registry, would be helpful.

Conclusions. There appears to be no problem with access to information regarding immunization guidelines. Rather, specific barriers, both practice-related and patient-related, seem to play significant roles in impeding complete adult immunization.

Students: Katherine Anderson, Francesca Boulos, Ashley Miller, Bhanu Muniyappa, Mayu Toner, Nicholas Wilkie

UVM Faculty Mentor: Burt Wilcke, PhD

Community Faculty: Christine Finley, MSN, MPH, Michelle Force, PhD

Project: Huntington's Disease: Assessing the Needs of Patients and Caregivers in Vermont**Community Agency:** Visiting Nurse Association**Abstract:**

Introduction. Prevalence of Huntington's disease (HD) in Vermont has not been studied extensively; best estimates are based on extrapolations from national data. As a result, it has been difficult to assess the needs of these patients and provide a formal infrastructure for managing and following patients. The goal of this study was to quantify the number of patients living with a diagnosis of HD in Vermont, and to examine gaps in utilization of services that could increase quality of life for patients and families.

Methods. A survey was developed based on published studies, The Huntington's Disease Society of America (HDSA) questionnaires, and preliminary discussions with the Chittenden County HD support group members. Surveys were completed by patients, family members, and professional caregivers and contained both quantitative and qualitative measures.

Results. The HDSA estimates there are 62 individuals diagnosed with HD in Vermont, while Medicaid codes identify 69 patients. 15 surveys were received representing an estimated 22% of the study population. Responses indicated under-utilization of services by those patients living in and being cared for at home. Patients report regular visits to a neurologist, but are under-utilizing additional recommended services.

Conclusions. A case management system that provides coordinated care for patients would potentially improve utilization of services, including long-term care planning, physical, and occupational therapy and psychological counseling. An in-patient facility located in the Burlington area with easy access to the aforementioned services and providing specialty care for HD patients could improve the infrastructure and our ability to follow these patients.

Students: Agnes Balla, Caitlin Baran, Larry Bodden, Joseph Foley, Kelly Gardner, Laura Rabideau, Christopher Taicher, Benjamin Ware

UVM Faculty Mentors: James Boyd, MD

Community Faculty: Linda Martinez, RN

Project: Assessing Barriers to Healthy Food Access in Winooski, Vermont

Community Agency: Winooski Coalition for a Safe and Peaceful Community

Abstract:

Introduction. Local food environment is an important determinant of residents' dietary intakes. Residents who live in neighborhoods with poor access to supermarkets have less healthy diets and lower daily intake of fruits and vegetables. Lack of transportation may contribute to health disparities across socioeconomic classes. Winooski, Vermont lacks a large grocery store; insufficient transportation and pedestrian sidewalks make it challenging for residents to access supermarkets.

Methods. We designed a survey to assess where Winooski residents shop for produce and identify barriers to accessing fresh fruits and produce. We administered surveys to residents on two separate days.

Results. Most participants obtained fresh produce from Shaw's or Costco. More than half consumed greater than 3 servings of fresh produce daily. Price and lack of access to public transport were identified barriers to obtaining fresh produce. Statistical analysis revealed a correlation between household size and servings of fresh produce consumed by each individual (Freeman-Halton extension of Fisher's exact test; $p = 0.047$).

Discussion. Studies have shown supermarkets have a diverse and affordable produce selection. Just over half of participants are consuming 3 or more servings of fresh produce daily; however, 51% reported distance and/or transportation as obstacles to accessing stores. An overwhelming majority stated that the best way to increase access to the local supermarket would be through increasing public transportation to the site. From our data, increasing access to the local supermarkets through public transportation would greatly enhance Winooski resident's ability to access fresh produce and improve their health.

Students: Griffin Biedron, Bethany Collins, Margaret Gordon-Fogelson, Michael Lam, Heather Lutton, Andrew Ng, Anurag Shukla

UVM Faculty Mentors: Hendrika Maltby, PhD, RN

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