ASSESSING HEALTH CONCERNS & OBSTACLES TO DIESEL EXPOSURE REDUCTION IN VERMONT DIESEL VEHICLE OPERATORS

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BACKGROUND AND OBJECTIVES

Diesel vehicle idling reduction is an important national environmental and legislative issue. Exposure to diesel exhaust is associated with significant morbidity and mortality, including:
- Lung and esophageal cancer
- Asthma
- Cardiovascular disease
- Neurotoxicity
- Decreased sperm counts1 & testosterone deficiency2

Drivers of diesel vehicles have specifically been shown to have increased incidence and death from lung cancer3.

While public health efforts to reduce diesel idling in Vermont and elsewhere have identified employers’ significant financial incentives in fuel conservation, perhaps there is also a role for appealing to drivers themselves the people who are incurring the most direct exposure. It is unknown, however, whether Vermont diesel vehicle operators are aware of the health effects of diesel exhaust – or, more significantly, whether they are concerned about it.

In order to identify potential targets for future interventions to reduce diesel idling in Vermont, this study aims to probe the following:
- Have Vermont drivers been educated about exhaust exposure?
- Are they concerned about potential health effects of diesel?
- Are they satisfied with their understanding of the health impact of diesel fuel?
- What are their health concerns, more generally?
- What resources for health information do they respect?
- What are their specific obstacles to idling reduction?

METHODS: SURVEY DESIGN & SAMPLE

Anonymous surveys were administered by medical student researchers to 67 local delivery adult drivers, ranging from ages 24-67, at 7 diesel fleets in the Greater Burlington and Rutland, Vermont areas during November – December 2009 before morning delivery routes.

Businesses were targeted on the basis of lacking a no-idling policy and employing a diesel fleet of > 10 drivers. All participants completed surveys voluntarily, and surveys with >1 question skipped were excluded. Of 72 surveys returned, 67 met criteria for inclusion in data analysis.

REFERENCES

Double Red Blood Cell Donation Eligibility and Interest
Anderson, L.1, Bessoff, K.1, Chapman, B.1, Dunn, A.1, Larochelle, M.1, Scripps, T.1, Wood, J.1, Frenette, C.2, Dembeck, C.2, Carney, J.1, Fung, M.K.1
1University of Vermont College of Medicine, Burlington, VT; 2American Red Cross—Northern New England Region, Burlington, VT

INTRODUCTION
The process of double RBC donation by apheresis (DRBC), which facilitates the donation of two units of red blood cells (RBC) in a single donation session, was estimated to account for approximately 4% of blood donations in 2005, and is believed to be growing at a rate of 40% per year. Blood shortages in this country could be corrected by converting as few as 10% of current single unit whole blood donors to DRBC donors [1]. Advantages of DRBC donation may include reduction in donor-related exposures in recipients, improved cost-effectiveness of the donation process, and improved convenience for donors [1-4]. The profile safety of DRBC has been found to be equal to, and in some cases better than that of single unit whole blood donation, especially in young donors (<20 y/o) [5, 6]. DRBC donors have been shown to restore 92% of RBC volume in 4 weeks without iron supplementation [7], and to have no significant differences in hemoglobin, serum iron, or ferritin when compared with single unit whole blood donors six months after donation [8]. Our study seeks to quantify the number of current single unit whole blood donors who are both eligible for and interested in DRBC donation.

METHODS
An anonymous questionnaire consisting of 13 multiple-choice questions was mailed to 500 current whole blood donors (donors of whole blood of type O+, O-, A, B- from 2007 to present) as well as to 1500 lapsed whole blood donors (donors of blood type O+, O-, A, B- from 2000 to 2007 who are no longer donating). Participants were randomly selected from a list of previous whole blood donors in Vermont. The study was approved by the institutional review boards (IRB) of the University of Vermont and the American Red Cross (ARC). The surveys were sent by mail on ARC letterhead with enclosed self-addressed stamped envelopes. Surveys included an introduction that explained basic principles of DRBC collection as well as the purpose of the study. The responses of these surveys were entered into a spreadsheet and analyzed.

RESULTS
The process of double RBC donation by apheresis (DRBC), which facilitates the donation of two units of red blood cells (RBC) in a single donation session, was estimated to account for approximately 4% of blood donations in 2005, and is believed to be growing at a rate of 40% per year. Blood shortages in this country could be corrected by converting as few as 10% of current single unit whole blood donors to DRBC donors [1]. Advantages of DRBC donation may include reduction in donor-related exposures in recipients, improved cost-effectiveness of the donation process, and improved convenience for donors [1-4]. The profile safety of DRBC has been found to be equal to, and in some cases better than that of single unit whole blood donation, especially in young donors (<20 y/o) [5, 6]. DRBC donors have been shown to restore 92% of RBC volume in 4 weeks without iron supplementation [7], and to have no significant differences in hemoglobin, serum iron, or ferritin when compared with single unit whole blood donors six months after donation [8]. Our study seeks to quantify the number of current single unit whole blood donors who are both eligible for and interested in DRBC donation.

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DISCUSSION
• Despite the overwhelming interest in DRBC donation, the majority of survey respondents who are eligible DRBC donors (L/R) had never heard of DRBC donation before completing this survey.
• Patient safety, including higher quality RBCs and lower transfusion risks for patients were among the most appealing features of DRBC donation, which suggests that altruism may motivate interest.
• Donor education should be directed at alleviating misconceptions and increasing awareness in regards to the details of the DRBC procedure.
• When educating eligible donors it is important to emphasize that DRBC has the potential to reduce the total amount of time required to donate the same amount of blood annually relative to multiple single unit donations. Furthermore, it will also be important to emphasize that it may result in a higher quality product and a lower risk profile for recipients.
• Based on our results it may be important to target males and non-iron deficient individuals regardless of age when advertising for DRBC donation.
• A future study could focus on recruiting donors from this study to participate in DRBC donation so as to compare participation to stated interest.

ADDITIONAL RESULTS
Of the respondents who were eligible for double RBC donation:
• 37% (44/118) were aware of the DRBC donation process.
• 5% (6/118) are students, 6% (7/118) are part-time employees, 75% (88/118) are full time employees, 10% (12/118) are retired, and 5% (1/118) are not employed.
• 81% (95/118) reported donating at the donation center.
• 16% (12/75) of lapsed donors and 7% (3/42) of repeat donors experienced an adverse reaction after a whole blood donation.

ACKNOWLEDGEMENTS
Special thanks to the volunteers of the American Red Cross Burlington Donor Center for assembling and distribution of surveys.

REFERENCES
THE WHAT’S, WHERE’S, AND WHY’S OF WHAT YOUR FAMILY EATS: THE BURLINGTON CHILDREN’S SPACE FARM TO TABLE PROGRAM

Loren Babirak, Kelly Cunningham, James Dunlop, Jenny Nguyen, Cheddi Thomas, Zea Schultz, Michael Visker, Nancy Drucker, MD, Barbara Frankowski, MD

University of Vermont College of Medicine and Burlington Children’s Space

Introduction

Preventing childhood obesity is a national priority, and changing dietary behavior in both children and adults is challenging. Burlington Children’s Space, Inc. (BCS), a private, non-profit early education and childcare center providing services for families in the Burlington area, is trying to do just that. The Farm to Table Project was designed to positively influence the food choices of students and their families as well as to cultivate a relationship between families and local farmers. In an effort to secure expanded funding for the school’s food program, BCS requested that we assess the effectiveness of their Food Program.

Methods

Survey Design: 17 question survey was designed to assess the eating habits and behaviors of the families of the children who were enrolled in the Child and Adult Care Food Program (CACFP) Food Program or “farm to table” style program. Data was collected by administering the survey on site to the parents of children who were enrolled in our garden/playground project called “the garden belongs to the children.” (n=37). A follow up interview was conducted with a volunteer subgroup (n=15) of the survey participants, using open-ended questions, over dinner prepared and served at BCS.

Results

37 surveys distributed; 37 surveys returned –

100% response rate

Discussion

• The Farm to Table program is showing promise in its ability to influence the eating habits of young children. The program has not only enriched the lives of the children in the program but has also benefitted the parents by saving them time and giving them peace of mind. Future directions of this project could be aimed at improving the eating habits of the entire family.

Recommendations

• Posting brightly colored flyers on bulletin boards by the entrance to the school to improve communication between BCS and families regarding the Farm to Table Program.
• Including healthy recipes in BCS’s lunch menu calendar to increase the number of families who try the recipes at home.
• Providing the families with samples of the different foods prepared that week.
• Compiling a BCS community cookbook of recipes contributed by the parents and staff.
• Utilizing more ingredients from local sources or farms for meals.
• Organizing “Family dinner nights” hosted by BCS to highlight the Farm to Table program.
• Publishing a year book including pictures of the children and their favorite recipes.

The Farm to Table program is showing promise in its ability to influence the eating habits of young children. The program has not only enriched the lives of the children in the program but has also benefitted the parents by saving them time and giving them peace of mind. Future directions of this project could be aimed at improving the eating habits of the entire family.

References

1. Children’s Food Preferences: A Longitudinal Analysis
   *Journal of the American Dietetic Association, Volume 102, Issue 11, November 2002, Pages 1638-1647

2. Differential associations of fast food and restaurant food consumption with body mass index in young adults

3. The nutrition label—which information is known at all?
   *Nutrition and Food Science, Volume 32, Issue 2, Pages 92-99

4. Higginson CS, Rayner M, Draper S, Kirk TR
**Nutrition and Social Eating Habits Among Seniors Living Independently**

Cappelletti C.1, Corse L.1, Kinney A.1, Lapalme S.1, Sandygren N.1, Scribner D.1, Stump M.1, Delaney T.1, Holmes M.1, Dugan M.2, Berry P.1

**University of Vermont College of Medicine1, Cathedral Square Corporation2**

**Background:**
Older adults have unique nutritional needs due to physiologic changes that occur as part of the normal aging process. Maintaining adequate nutrition has the potential to reduce morbidity and mortality related to chronic disease, fall risk, dementia and Alzheimer’s disease.1 Aging also poses an increased risk of isolation and lack of social interaction, particularly noted at mealtimes. Unintentional weight loss is an independent risk factor for early mortality.2 Social eating is related to higher food intake,3 and meal programs can improve nutritional risk for vulnerable seniors.4 We partnered with the Cathedral Square Corporation (CSC) to assess nutrition and social eating in residents at Heineberg Senior Housing in Burlington, VT and conducted focus groups to determine general nutritional concerns and evaluate potential interventions.

**Methods:**
Subjects: 99 volunteer residents from Heineberg Senior Housing ranging in age from 52-98 years with a median age of 83 years (10% males, 85% females; 5% unrecorded).

Interviews: The Seniors Aging Safely at Home (SASH) program staff conducted interviews examining general aspects of daily living and health maintenance, chronic disease, nutrition, mood, and cognition.

Data Analysis: Interview responses were summarized as percentages and frequencies. Categorical data were evaluated using χ² tests and continuous variables were analyzed with ANOVA and Pearson correlations. Data were analyzed using SPSS, with α = 0.05 for all tests. Statistical analysis focused on nutrition and related variables.

**Results:**

The figure below illustrates 5 domains of eating habits amenable to intervention among Heineberg residents.

![Figure 1: Key nutrition variables](Image)

A composite nutrition score was created based on 11 dichotomous questions about eating habits where higher scores correlated with poorer nutrition. A significant association was found between a poor nutrition score and the medical conditions listed in the left column below.

<table>
<thead>
<tr>
<th>Medical conditions significantly associated with poor nutritional score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANOVA Test</strong></td>
</tr>
<tr>
<td>ED Visits per year</td>
</tr>
<tr>
<td>Fallen</td>
</tr>
<tr>
<td>Heart Condition</td>
</tr>
<tr>
<td>Chronic Pain</td>
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<tr>
<td>Diabetes</td>
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</tbody>
</table>

**Focus Groups:** Based on a search of the relevant literature and review of interview data, we developed discussion guides for two sixty minute focus groups which were conducted at Heineberg. Focus groups assessed the feasibility of interventions involving nutritional intake and reviewed program staff findings of nutritional score and the following medical conditions: arthritis, anxiety, digestive problems, bowel incontinence, recurrent diarrhea, recurrent constipation, and cancer. Additionally, Pearson correlation showed a significant association between depression and nutritional score (r=0.30, p=0.02).

**Discussion:**
Our data suggests poor nutrition is significantly associated with increased ED visits, falls, heart conditions, chronic pain, diabetes, and depression. Based on a combination of the literature and two focus groups, we have identified three possible interventions to improve nutrition among seniors:

- Daily multivitamin usage—particularly with vitamins B, D, E, K and increased intake of calcium, potassium, and fiber
- Increased availability of group meals and themed dinners
- Individualized nutrition plans focusing on prevention of unintentional weight loss

Due to the nature of the Heineberg facility, we recognize that these findings may not be broadly generalizable. However, we believe that the areas we have identified are likely to be generally effective in improving seniors’ nutritional status and overall health.

**Acknowledgements:**
We’d like to thank Ken Bridges, the SASH program coordinator, for his help with organization and feedback. We’d also like to thank Rajan Chawla for his help with formatting and layout of the poster.

**References:***
Food Shelf Friendly: Increasing the Nutritional Quality of Food Shelf Donations

Carballo, D.1, Kamarchik, A.1, Nadeau, L.1, Noyes, I.1, Reed, M.1, Salisbury, L.1, Ward, N.1, Meehan, R.2, Carney J.1
1University of Vermont College of Medicine, Burlington, VT; 2Chittenden Emergency Food Shelf, Burlington, VT

Introduction
Food insecurity is a household-level economic and social condition of limited access to nutritionally adequate and safe food (1). Food banks provide a major source of sustenance for individuals experiencing food insecurity, many of whom deal with obesity, diabetes and hypertension (2), however, the nutritional contents of many donations to these operations fail to meet the dietary recommendations set forth by the USDA for individuals with many chronic health conditions (3). In the present economy there is increasing demand for the services of local food shelves, however, often these organizations are unable to sufficiently meet the needs of their clients with regard to quantity, and perhaps more importantly, the nutritional quality and variety of food available. One cause of the lack of nutritionally rich donations is poor public education about the needs of the food shelf and its clients (4). This study seeks to determine if consumer education at the point of purchase can influence donation decisions to increase the quantity and improve the nutritional quality of items donated to the Chittenden Emergency Food Shelf in a sustainable and reproducible manner.

Methods
Seven major grocery stores in Chittenden County, VT with food collection bins benefiting the Chittenden Emergency Food Shelf (CEFS) were chosen to participate in the study.

• Each was assigned to a study group (Table 1), based on the ability of the store to participate in each intervention.

• Twenty healthy food items were chosen for promotion during the study using criteria created during prior UVM College of Medicine/CEFS projects (Figure 1) (5, 6).

• Baseline data were collected for four weeks, after which the interventions were implemented for four weeks. Donations were counted to determine the total number, as well as the number of items from the specified list of healthy foods.

• The resulting proportions were used as the dependent measures in the statistical analysis. Data were summarized using means and 95% confidence intervals; statistical analysis was done using one ANOVA with α=0.05.

Results

Table 1. Participating stores, and study group assignments.

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Store, location</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>Price Chopper, Shelburne Rd.</td>
<td>Baseline control</td>
</tr>
<tr>
<td></td>
<td>Price Chopper, Williston Rd.</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>Hannaford, Dorset St.</td>
<td>Poster placed at the entrance to the store encouraging donation with tear-off lists of the 20 selected healthy items</td>
</tr>
<tr>
<td></td>
<td>Hannaford, Shelburne Rd.</td>
<td></td>
</tr>
<tr>
<td>Group C</td>
<td>City Market, Winooski Ave.</td>
<td>Poster placed at the entrance to the store encouraging donation and stickers placed on the aisles on the shelves under the 20 selected healthy items</td>
</tr>
<tr>
<td></td>
<td>Healthy Living, Dorset St.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shaw's, Shelburne Rd.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Healthy food items promoted during the study.

- Kidney Beans (low sodium), canned
- Sweet Kernel Corn (low sodium), canned
- Tomato Puree, canned
- Sliced Carrots (low sodium), canned
- Cut Yams, canned
- Pear Halves in juice, canned
- Peach Slices in Juice, canned
- Chunk Pineapple in Juice, canned
- Unsweetened Applesauce, jar
- Peanut Butter, Creamy, unsalted
- Old Fashioned Oats
- Long Grain Brown Rice
- Pasta (whole wheat)
- California Seedless Raisins
- Dry Roasted mixed nuts (unsalted)
- Canned Tuna (in water)
- Canned Chicken (in water)
- Low sodium min tomato soup
- Cereal (sugar content < 10g)
- Spaghetti sauce (low sodium)

The proportion of healthy donations increased from the first 4 weeks (mean=19.9, CI 15.5-24.3) to the second 4 weeks of the study (mean=37.1, CI 28.5-45.8, F=12.9, p=.001).

When Groups B and C were grouped and compared to Group A there was a significant interaction of intervention versus control between the control period and the intervention period (F=4.75, p=.054).

Comparing Groups B vs. C during the intervention period revealed a significant effect in which the Group B means were higher (mean=58.4, CI=45.6-71.2 vs. mean=34.4, CI 21.1-47.3, F=8.36, p=.01).

Discussion and Conclusions
This study demonstrated that by educating potential donors and increasing consumer awareness, it is possible to improve the quality and quantity of donations; both intervention groups showed significant increases in the proportion of healthy donations.

Hannaford Supermarket’s “Fund a Feast” program, in which consumers could purchase and donate a box of selected nutritious items coincided with the study. In conjunction with intervention B, these stores showed a significantly greater increase in healthy donations than intervention C.

Limitations to our study included the inability to randomize stores to groups due to corporate regulations; low statistical power; unforeseen variables: such as overlapping food drives, and movement of intervention items.

A promising direction for future studies could be to implement a program similar to Hannaford’s “Fund a Feast” in order to independently test its effectiveness in improving the nutritional profile of food donations.

Lessons Learned
There is a growing need in our community for the services of the CEFS. We will see food shelf clients among our future patients, and it will be important for us to teach our students to understand the problem of food insecurity.

Consumers want to help ameliorate hunger in our community. Creating interventions that make participation easy and require little upkeep will be most effective and effect the greatest, most sustainable change.

References
Identifying barriers to care in the Burmese and Bhutanese refugee populations of Burlington, Vermont

Arscott T1, Costello B1, DiPalma K1, Folk A1, Malgeri M1, Miller A1, Purcell R1, Bourgo J2, and Kessler R1

1 University of Vermont College of Medicine, 2 Community Health Center of Burlington, Vermont

Introduction
Many refugees who escape persecution in their own country have trouble navigating and accessing the American health care system1. Language barriers often impair effective communication, while financial challenges can be prohibitive after the eight-month government insurance subsidy for new refugees expires2. In addition, many refugees do not understand the concept of chronic disease, which is a concern considering the overall rise in hypertension (HTN) and type-two diabetes mellitus (T2DM) in the US population3.

Understanding how refugees access health care, and how well they understand chronic disease, is essential for organizations providing medical care for these populations. Little is known about how the Burmese and Bhutanese refugees experience the Vermont health care system, nor how well they understand chronic diseases such as HTN and T2DM. To address these limitations, we conducted focus groups with these two Vermont refugee populations at the Community Health Center of Burlington, Vermont (CHCB).

Background on Study Population
• Of the 2.6 million refugees that have resettled in the US since 1975 more than 5,000 have resettled in Vermont
• Included in this population are 42 Burmese and 131 Bhutanese who began to arrive in 2006 and 2007 respectively4,5,6 (fig. 1)

Methods
• Focus groups were organized by community members who provided translation. They were conducted at the CHCB, lasted two hours, and were transcribed and moderated by members of our group.
• Demographic information was collected from Burmese and Bhutanese participants (Fig. 3).
• The questions assessed 1) transportation barriers to accessing healthcare; understanding of 2) appointments/referrals, 3) prescription medication, 4) the US healthcare system; 5) the patient/provider relationship; and knowledge of 6) HTN and 7) T2DM.
• Research was conducted with approval of the UVM Committees on Human Research and with informed consent and photography permission of all participants.
• Transcriptions of the focus groups were used to develop recommendations for the CHCB.

<table>
<thead>
<tr>
<th>Focus group size (% of Vermont population)</th>
<th>Burmese</th>
<th>Bhutanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (range)</td>
<td>34.7 (17-65)</td>
<td>46.9 (29-59)</td>
</tr>
<tr>
<td>Chronic disease (%)</td>
<td>14.3</td>
<td>33.3</td>
</tr>
<tr>
<td>Hypertension (%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type-two diabetes mellitus (%)</td>
<td>14.3</td>
<td>11.1</td>
</tr>
<tr>
<td>Health insurance (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed (%)</td>
<td>14.3</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 3. Focus Group Demographics.

Results
Transportation barriers
• The expiration of the bus pass at 8 months frustrated and confused both populations.
• Difficulty finding appointments and language barriers made asking for directions difficult.

Appointment barriers
• Lack of translation services made scheduling appointments difficult and resulted in some missed appointments.
• Lack of patient support at Fletcher Allen Health Care (FAHC) made referrals difficult to navigate.

Prescription medications
• Burmese refugees had problems understanding prescription instructions, while Bhutanese did not.

Background on Study Population
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Limitations
• Focus groups were small and not randomly assigned; thus, may not be representative of population.
• Additionally, with the use of interpreters some information may have been lost.

Discussion/Recommendations
• Lengthening the time of the free bus pass would help to ease transportation for the refugees.
• Educational programs should begin during the refugees’ first 8 months. These programs would cover:
  • Options for insurance after the loss of Medicaid
  • Information about the US health care system
  • Chronic disease education
• Lack of translation services hinders care at all levels.
  • For patients with limited English, it is essential to have translators onsite at all possible healthcare appointments for the provision of adequate care.
  • Providers should be encouraged to provide translated and/or pictorial instructions when giving out prescription medications.
• These recommendations may be beneficial to existing and future refugee populations studied.

Conclusion
The respondents appear to struggle with lack of understanding of the health care system due to inadequate education, inadequate translation services, and fear of or loss of Medicaid.

Acknowledgements
A sincere thank you to the Community Health Center of Burlington, especially Jon Bourgo, Htang Lay and Leela Neupane; Dr. Rodger Kessler, Dr. Jan Carney, Aaron Hurwitz, and Raj Chawla of the UVM COM.

References:
INTRODUCTION

• Number of children with autism and related disorders has been growing in Vermont in the last ten years.
• Puppets in Education, Inc (PiE) recently added a new program, Friend 2 Friend Programs-Vermont (F2F), that will work with grades K-8 to educate students and teachers about autism spectrum disorders (ASD).
• Goal is to promote understanding, acceptance, empathy and mutual friendships between children with ASD or other social communication disorders and their peers, siblings and classmates.
• Students from the University of Vermont College of Medicine partnered with PiE to evaluate the current needs of the community, determining what information would be most useful in the F2F program.

METHODS

• Literature review was done to determine appropriate topics for inclusion in the survey.
• Three surveys were formed to assess the needs of: parents with children with ASD, parents without children with ASD, and educators. Three surveys assessed:
  • current programs or curricula involving understanding of ASD and social communication skills.
  • needs of parents and educators regarding their understanding and integration of children on the spectrum.
  • the respondents’ priorities for addressing issues associated with ASD.
• Surveys were administered via telephone.
• Qualitative and quantitative data were analyzed from the survey responses.

RESULTS

• Surveys were collected from 11 parents with children with ASD, 8 parents without children with ASD, and 10 educators.

Current Programs:

• Most parents and educators state their schools already have programs in effect addressing social skills development and differences/disabilities.
• Of those with programs, only 50% of all groups believe their school’s current programs are effective.
• Limitations to program effectiveness included lack of diversity in Vermont, lack of inclusion of students with ASD in the classroom and lack of school- and district-wide formal curriculum.
• Most educators feel confident about balancing the needs of students with ASD with those of their peers in the classroom, though they mention a lack of training and increasing amount of coursework makes it difficult.
• “We as educators are still evolving and learning with them.”

DISCUSSION

• Many educators and parents feel there is a current need for educational programming regarding ASD in the classroom setting.
• Most respondents believed the Friend 2 Friend Program would be an effective way to address ASD.
• Several respondents discussed inclusion of children with ASD in the classroom with their peers.
• Subject recruitment was difficult, but once enrolled they were enthusiastic about providing information.

RECOMMENDATIONS

• Further exploration by PiE should measure the effectiveness of the Friend 2 Friend program in addressing these topics.
• This may serve as a future area of research for the establishment of a large-scale social skills communication and inclusion program in the classroom.
• Our research group advocates for inclusion of all children in the classroom.

Fig. 1. Histograms illustrating the distribution of responses for the topics: A) importance of including children with autism in peer activities, and B) importance of information on the causes of autism. Rating of importance is given on a scale of 1 to 10, with 10 being most important.
Nutrition and Exercise Education Initiatives in a Community Setting

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University of Vermont College1 of Medicine and NeighborKeepers2

Introduction
Maintaining a nutritious diet and physical activity is a challenge for many people, but especially for those with limited financial and social resources. Barriers to adequate exercise and healthy food include prohibitive costs of gym membership and high-quality foods, lack of time during the day in which to exercise or prepare meals, and lack of access or transportation to exercise facilities or grocery stores. We assessed whether adoption of healthy exercise and eating habits could be established and sustained by educating participants on healthy diet guidelines and on non-traditional exercise forms. We encouraged family-centered activities such as walking, gardening, cleaning, dancing, and playing with children. We quantified changes in participants' pre- and post-educational diets and exercise habits with 3-day dietary recall logs and pedometer-measured daily steps.

Methods
Study population: 15 adults of different ethnicities and socioeconomic standing living in Chittenden County, Vermont.

Baseline Data: A 12 question survey was administered to obtain each participant’s height, weight, age, living and working conditions and basic information on diet and exercise. Each participant was then given a pedometer and three food diaries and was instructed to record the number of steps they took each day as well as the amounts and kinds of food they ate for each meal and snacks. The participants recorded this data for three consecutive days.

Intervention: Two weeks after collecting the baseline data, our group spent 45 minutes giving three 15 minute educational sessions to the NeighborKeepers group. In these sessions we presented information on the benefits of eating a low fat, low sodium diet filled with fruits, vegetables and whole grains. We also emphasized the benefits of exercise and activity and supplied lists of local resources and ideas for fun, healthy, family-oriented activities. A simple, six question pre- and post-test were administered before and after each discussion.

Activity: One week after the talks we accompanied a group of our study participants and other NeighborKeepers to the South Hero Applefest as a way of demonstrating a good way in which to incorporating both exercise and healthy foods into fun activities.

Follow-Up: Four weeks after the educational intervention and apple picking, we distributed another set of three food logs as well as a follow-up post-test.

Results

- Pre- and Post-Intervention Test Results
  - "We would like to thank you for all the information that you have given us."

- Improvement in numbers of days on which people attained at least 50% RDA

Conclusion
Due to a small sample size and inconsistent or absent survey responses, we could not statistically prove that the use of didactic sessions, food logs, pedometers, and organized community activities improved the exercise and eating habits of participants. However, we did observe distinctly positive testimonial responses among participants, who noted that our methods promoted an increased awareness and inspiration to maintain healthy lifestyles through exercise and nutrition. In addition, participants also commented on an improved sense of community that stemmed from attending didactic health talks and participating in activities like apple-picking. Limitations to our study included pedometer malfunction, a communication barrier due to language differences, a limited survey size, and inconsistent attendance of educational meetings. We recommend that future research focus on a smaller group of participants that can be more consistently and conveniently followed over time. We also believe that incorporating a system of incentives and/or rewards for achieving exercise and nutrition goals would favorably influence the results and could be investigated in future studies.

References


Alcohol Misuse in Elderly Care Facilities

Martha Choate; Francisco Corbalan; Mei Lee Frankish; Jessie Kerr; Semeret Munie; Jonathan Nucum; Thomas Pace; Thomas Delaney, PhD; Wendy Carty; Colleen McLaughlin; Robert Karp, MD, CMD

Background

While alcohol misuse is largely reported as a problem in younger populations, recent studies have shown that it may be a significant, underreported, and under-diagnosed problem in the senior population (1). Alcohol misuse in this population is further confounded by its association with serious co-morbidities including falls, confusion, and reactions with medications. These problems can be difficult to identify in the aging population, as they may be mistaken for dementia, depression, or other illnesses (2). Even less studied than alcohol use patterns in the general elderly population are the prevalence and patterns of alcohol use in senior care facilities. In Chittenden County, Vermont, these facilities appear to vary widely in how they identify and assist residents with alcohol misuse issues. Understanding their policies will be an important step towards developing effective strategies for reducing alcohol misuse among residents.

The importance of understanding and identifying alcohol-related problems in the elderly is critical as the aging population continues to grow (2, 3). Proper intervention has the potential to have a real impact; studies have shown that older people have a greater ability to adhere to treatment plans than those in younger age groups, which may contribute to treatment success (4, 5).

Objectives

The objectives of this study were to:
- Determine the prevalence of alcohol-related issues in area nursing, assisted living, and independent living facilities.
- Better understand the range of policies related to alcohol consumption at these facilities.
- Identify resources currently used by facilities for residents struggling with alcohol misuse issues.
- Gain an understanding of what additional resources may be beneficial in the future.

Methods

Participants: Staff members of 13 Chittenden County area nursing, assisted living, and independent living senior care facilities.

Survey: A contact at each facility helped to distribute an anonymous questionnaire to 112 administrators, social workers, nurses, nursing assistants, and other employees involved in direct patient care. The questionnaire consisted of 27 questions about alcohol use and abuse patterns among residents, past support efforts for individuals with alcohol abuse problems, and perceived need for future services.

Data Collection and Analysis: Data was compiled in Microsoft Excel and analyzed using Excel and SPSS software.

Results

Alcohol use patterns:
- 67.6% of respondents reported at least one resident displaying patterns of alcohol use in the last year that they considered unhealthy.
- 24.4% of respondents had, in the past year, felt some level of discomfort providing alcohol to residents.
- 14.1% of respondents felt feeling that the availability of alcohol is associated with falls or accidents in their institution.

Intervention and resources:
- Two-thirds of the respondents who indicated that they are not currently provided with training to identify residents with alcohol problems reported that they would find training to be beneficial.
- Two-thirds of respondents who reported having had requests from residents or family members for alcohol assistance also reported that alcohol counseling sessions would be attended if held at their institution.
- 88.6% of respondents reported that their facility would be willing to provide transportation to off-site alcohol counseling sessions in the future, regardless of whether they had provided transportation in the past.

Discussion

- Over two-thirds of respondents reported witnessing what they considered to be unhealthy alcohol use patterns in the past year. Of those respondents, most reported being concerned about 1-3 residents, indicating that while the number of concerning residents per institution may be low, that there is an ongoing issue of alcohol misuse in need of support.
- Although policies varied, many facilities made efforts to respond to alcohol consumption and access. Despite these efforts some staff members expressed concern about consistently monitoring alcohol use in their facility.
- Most facilities indicated a willingness to provide transportation for members wanting to attend off-site meetings. In addition, many respondents believe that there would be attendance at on-site alcohol counseling sessions were they to be available. These statistics are encouraging, as they signify the possibility for both institutional compliance to facilitate treatment and residential willingness to attend treatment.
- The results demonstrated a potentially important role for training; respondents not currently provided with training indicated a desire for it, and those provided with training were more aware of alcohol misuse resources.

Lessons Learned

- We had difficulty identifying resources available specifically for elders with substance abuse problems, and further investigation of this gap would be beneficial.
- This study indentified a need for facilities to develop programs to indentify and support elders with alcohol misuse problems.
- We found all facilities surveyed to be strongly interested in how they can improve the health and safety of their residents.

References

Referral Patterns between Allopathic Physicians and Complementary and Alternative Medicine Practitioners: A Follow-up Study


Introduction

Despite the high prevalence of Complementary and Alternative Medicine (CAM) usage, several recent surveys suggest that the vast majority of patient visits to CAM practitioners are self-referred and that communication between conventional and CAM practitioners is limited. Therefore, a need for better understanding of factors influencing referral patterns across these two groups. Network analysis provides a useful tool to quantify relationships between members of an interrelated social network. The goal of this follow up study was to quantify the cross-class referral patterns between conventional and CAM classes of practitioners in Chittenden County, Vermont, as well as gather additional information on the basis of referrals for future studies. This study was a preliminary examination of possible reasons for the referral patterns.

Methods

A survey was designed for allopathic physicians in Chittenden County including family medicine physicians and OB/GYNs. A second survey was designed for CAM practitioners in Chittenden County including chiropractors and acupuncturists. The subject list was created from the Vermont State registry for licensed professionals and from a University of Vermont College of Medicine Area Health Education Center (AHEC) program registry of practitioners in Chittenden County. The survey asked each practitioner about the frequency of referral to practitioners (specifically named, “John Doe”) in the opposite class. Referral frequency was categorized into “never”, “1-5”, “6-20”, and “20 or more”. Survey data was de-identified for analysis. Surveys were administered and collected using both facsimile and postal mail.

Results

Table 1. Descriptive statistics: Table 1 represents the distribution of self-reported information from the survey. This data is representative of the 52 respondents (41 of 132 [31%] allopathic and 11 of 82 [13%] CAM). Interesting results have been highlighted in red. Responses were categorized either by CAM or Allopathic respondents as well as combining all referrers and all non-referrers.

<table>
<thead>
<tr>
<th></th>
<th>All respondents (n = 41)</th>
<th>CAM respondents (n = 11)</th>
<th>All referrers (n = 37)</th>
<th>All non-referrers (n = 14)</th>
</tr>
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<tr>
<td></td>
<td>n Mean (SE) or %</td>
<td>n Mean (SE) or %</td>
<td>n Mean (SE) or %</td>
<td>n Mean (SE) or %</td>
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<tr>
<td>Age (years)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>41 49.0 (2)</td>
<td>10 44.0 (2)</td>
<td>37 46 (2)</td>
<td>14 52 (3)</td>
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<td>Years Practicing</td>
<td></td>
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<tr>
<td>Chittenden County</td>
<td>41 14.0 (1.7)</td>
<td>10 12.0 (2)</td>
<td>37 12.3 (1.4)</td>
<td>14 3.6</td>
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</tr>
<tr>
<td>Male</td>
<td>13 31.7%</td>
<td>5 50.0%</td>
<td>11 29.7%</td>
<td>5 50.0%</td>
</tr>
<tr>
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<td>28 68.3%</td>
<td>5 50.0%</td>
<td>26 70.3%</td>
<td>7 50.0%</td>
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<td></td>
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<tr>
<td>yes</td>
<td>9 78.0%</td>
<td>9 96.0%</td>
<td>33 89.2%</td>
<td>8 57.1%</td>
</tr>
<tr>
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<td>32 22.0%</td>
<td>1 14.0%</td>
<td>4 10.8%</td>
<td>6 42.9%</td>
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<td>(CAM/Allopathic) Practitioners</td>
<td></td>
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<tr>
<td>Honor Patient Requests</td>
<td>24 58.4%</td>
<td>3 30.0%</td>
<td>27 73.8%</td>
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<td>for referral</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>The treatment I provided</td>
<td>21 51.2%</td>
<td>6 66.0%</td>
<td>25 67.4%</td>
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<tr>
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<td></td>
<td></td>
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<tr>
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<td>29 70.7%</td>
<td>7 70.0%</td>
<td>32 86.5%</td>
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<td>I feel that combination</td>
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<td>of both allopathic and</td>
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<td></td>
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<tr>
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<td>4 9.8%</td>
<td>1 10.0%</td>
<td>4 28.6%</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Patients refer themselves</td>
<td>13 30.0%</td>
<td>3 30.0%</td>
<td>10 71.4%</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

An earlier study suggested the feasibility of using network analysis to characterize referral patterns between these two groups. Although it would be difficult to use this method in large urban areas, increased sample sizes within areas the size of Chittenden County could be obtained by improving response rates. In this study, efforts were made to increase response rates, however they were unsuccessful. Possible reasons for decreased response include a lack of incentive to complete a similar survey. Perhaps sampling a different population would remediate this issue.

Due to the extremely low response rates, this data is not statistically significant. Several respondents indicated that many patients referred themselves which probably decreased referral rates. One reason for low referrals, as stated by allopathic practitioners, was lack of reimbursement by insurance companies. A CAM practitioner was noted as saying that they find allopathists to have a biased opinion against their work.

Lessons Learned

The high percentage of cross class usage may suggest that cross class exposure is important for increasing referral rates. Regardless of class, the most common reason for referring was that practitioners felt a combination of medical care from both classes would benefit their patient the most, which means both classes of practitioners share a common interest. On subsequent surveying, there was less participation than the previous year, even with the addition of follow-up phone calls. The database of practitioners is not static and needs to be updated yearly by re-contacting all practitioners. Faxing hundreds of surveys was streamlined by utilizing an online fax service.

Suggestions for next year’s study:

• Because of our decreased response rate, we believe that selecting a different demographic may result in a higher response rate.
• Re-developing the database consumed the majority of the time spent working on this project.

References

Background

The Vermont legislature (bill H.435, Sec. 19) has tasked the Vermont Board of Medical Practice (VBMP) with making a formal recommendation on improving Vermont health professionals’ knowledge and practice of Palliative Care and Pain Management (PC/PM) [1]. In collaboration with the VBMP, our group set out to answer the following questions: How confident/competent are VT physicians in the practice of PC/PM? What are the barriers to achieving optimal patient care in PC/PM? Do VT physicians perceive mandatory CME would improve the overall quality of care in PC/PM? What are the best methods of providing Continuing Medical Education (CME)?

Methods

• We created a survey using a combination of 6-point Likert-like scale, fill-in-the-blank, and multiple-choice items.
• We distributed a total of 1810 surveys by e-mail to physicians licensed in Vermont, using lists from the VBMP and the Vermont Medical Society (VMS).
• The majority of respondents were collected online via SurveyMonkey.com®. Respondents were also given the option of printing out a paper copy of the survey and mailing or faxing it back.
• The total survey collection period was 26 days, with reminder emails sent after 10 and 18 days.
• We verified the data input via 10% random sampling. No errors were found.
• We calculated average scores and performed descriptive and analytical statistics using PASW software and Excel.

Results

(Data reported using 6-point Likert-like scale: 1 = Not at all confident/satisfied, 5 = Very confident/satisfied)

• 303 surveys were returned (16.8% response rate).

• 49.5% of VT physicians strongly disagree that mandatory CME requirements in PM and PC would likely improve quality of care (Figure 2). VT physicians report being satisfied with the quality of care their patients receive in PC (4.9/6) and PM (4.3/6).

• VT physicians generally feel confident in the use of opioids in controlling pain (4.4/6).

• VT physicians report a high level of confidence in discussing PC issues with patients (5.3/6) and patients’ families (5.3/6). There was no difference in these confidence measures between Primary Care and non-Primary Care specialties.

• VT physicians feel confident in managing agitation, dyspnea, and other end-of-life symptoms (4.9/6).

• Over 50% of VT physicians ranked patient adherence, access to services, and patient and family belief systems as barriers to effective PM (4.0/6).

Discussion

Selected Physician Survey Comments

• “Mandatory CME would take time away from CME that I [use to] target my weaknesses.”

• “Mandatory requirements would only discourage more physicians from practicing in PC/PM.”

• “Consistent education over time with easy access to palliative care and pain management services are more likely to help with change of day to day practices than ‘mandatory’ courses.”

• “I have access to [the]…FAHC Palliative Care team by phone and feel I have great support by phone whenever I need it!”

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Discussion

Current Status of PC/PM in Vermont

• Vermont is currently ranked #1 for access to hospital Palliative Care programs [2].

• Although there are currently no CME requirements for physicians to be licensed by the State of Vermont, most specialties have their own requirements for board certification. Hospitals that responded to our inquiries also require CME credits for credentialing. This raises questions about how necessary additional, state-mandated CME guidelines would be.

• None of the average ratings for the potential PC or PM barriers were ranked as substantial (≥ 4.0 on 6-point Likert-like scale with 6 = very significant barrier).

CME in PC/PM: Past, Present, Future

• There is currently less education offered in PC than in other fields of medicine [3]. However, VT physicians do not believe that mandatory CME credits in PC/PM would improve quality of care.

• Our findings suggest that providers may be interested in having access to a PC/PM provider network database (Figure 3). Providing “point-of-care” educational options to physicians while in the clinical setting is the most recent initiative for “practice-based learning” [4]. This option may be the best method to improve education in PC/PM and may solve conflicts in terms of specialty and relevance to practice.

Study Limitations

• Requisite that all survey respondents have an active and valid email address on file with the VMS or the VBMP.

• Only a subset of VT physicians (16.8%) participated in the survey.

Recommendations

• Lack of physician and patient awareness regarding the Patients’ Bill of Rights in PC/PM must be addressed.

• The data do not support mandating PC/PM CME to obtain state licensure at this time.

• The VBMP should offer online educational modules and a Physician Data System to most effectively improve the quality and implementation of PC/PM practices.

• Further research is needed to better understand the relationship between physician competency and patient satisfaction with PC/PM.

* These conclusions will be included in the VBMP’s official recommendations to the VT legislature regarding legal requirements and alternative options for improving PC/PM training and delivery.

References

Bisphenol A and Phthalates: Public Knowledge and Risk Perception

Introduction

Bisphenol A (BPA) and phthalates are chemicals used in the production of many plastics, including food containers, water bottles, and medical tubing. These chemicals can leach from the plastic, especially when heated, and are found in varying concentrations in the human body. There is concern about the widespread exposure to BPA and phthalates since studies indicate they may cause adverse health effects, particularly related to endocrine development and regulation in young children.

The goal of our project was two-fold: to make an updated recommendation to the State of Vermont Health Department for their BPA and phthalate factsheets, and to survey the public about these chemicals. Our survey was designed to:

- Assess public awareness of BPA/Phthalates
- Determine the public’s risk perception of chemicals in plastics
- Identify the source of the public’s information

Methods

For the recommendations to the Department of Health we reviewed literature on the adverse health effects of BPA and phthalates published from August 2008 until present.

A seventeen question survey was administered in paper format at three locations in the Burlington area. 112 surveys were completed by random volunteers between October and December 2009. Data was compiled and analyzed using Microsoft Office Excel.

Public Awareness:
- 94.6% of subjects knew that exposure to chemicals in plastics may cause adverse health effects, but only 50% of subjects could identify BPA and/or phthalates as the harmful chemicals in plastics.
- Although 35.7% of all subjects knew that it might be unsafe to use plastic in the microwave, 82.1% of all subjects used plastics in the microwave once a week or more.
- 81.8% of people with college graduate degrees had knowledge of health risks associated with BPA/phthalates in contrast to 30.9% of people with a high school education only.
- Of the subjects caring for a child under the age of six, 85.7% used plastic in the microwave once a week or more.

Risk Perception:

- Participants were asked how much risk they perceive from BPA/phthalates.
- The average perceived risk was 4.0 (out of 5).

Source of Information:

- Word of Mouth: 50.9%
- Newspaper: 33.7%
- TV: 26.6%
- Google: 17.9%
- Scientific Journals: 9.8%
- VT Dept. Health: 5.4%
- Other: 5.4%
- Doctor: 4.5%
- Daycare: 0.9%

Discussion

Many studies show that BPA and phthalates build up in the human body following exposure.
- Some studies have linked BPA and phthalates to negative neuroendocrine and developmental effects. This study shows that individual perceived health risk is low and attempts to decrease exposure seem to be minimal.
- There is a deficit in the public’s knowledge of the health risks of BPA/phthalates as indicated by:
  1. A lack of public awareness of BPA and/or phthalates.
  2. A tendency to microwave plastics despite knowing about associated health hazards.

Further Education Level is heavily correlated with information and awareness on this topic.
- Parents with young children are not any more knowledgeable about BPA and/or phthalates or the health risks of plastics.
- People in Vermont are not using the Vermont Department of Health Website for information regarding plastic products.

Recommendations

- Increase the visibility of environmental health on the Vermont Department of Health website.
- Additional means of communicating environmental health information to the public are needed.

Public education should raise awareness of health concerns related to BPA/phthalates and available steps to reduce personal exposure.
- Parents and caretakers of young children can decrease exposure to BPA/phthalates by limiting their use of plastic containers and decreasing usage of plastics in the microwave.
Background: As the population of elderly citizens in the U.S. continues to expand, paralleled by an increase in the prevalence of dementia, the role of respite care within the healthcare system will increase in importance. Respite care is defined as providing the primary caregiver with relief, or a reprise, from care commitments on a short-term or emergency basis. The need for caregiver respite is well-documented; however, to date, it has been shown to decrease emotional stress, burnout, anxiety and depression; and is considered vital to the overall well-being of the caregiver. While studies have shown that respite care is effective, there is an unmet need for more flexibility in existing programs to improve utilization rates and availability. We attempted to address this issue by adapting an existing model to increase respite care options available to caregivers in our region.

Methods: We began with a literature review on the topics of dementia and respite care. We then collected data using a four-pronged approach. In order to assess the demand, existing resources, and cost for emergency and scheduled respite care, two telephone surveys and one written survey were administered. One telephone survey was utilized to consult the site director of fourteen adult day centers in Vermont; and the other was utilized to consult four nursing homes in the greater Burlington area. The written survey was distributed to all caregivers who visited the Memory Center at FAHC, and also all caregivers of clients at the three VNA adult day program sites, between October 15 and December 4, 2009. There were a total of 45 surveys collected from the Memory Center and the VNA adult day programs. Lastly, in order to better understand the needs of caregivers and obtain feedback regarding a proposed emergency and scheduled respite care program, a focus group was conducted with seven participants, all of whom were caregivers of clients of the Memory Center. The results are tabulated in the following tables and figures.

**References:**

- 1University of Vermont College of Medicine, Burlington, VT
- 2Visiting Nurse Association of Chittenden and Grand Isle Counties, VT

**The Proposed Model:**

The UVM Respite Care Model serves to fill a perceived gap in availability of care for persons with dementia by providing respite to caregivers in the following ways:

- **Offers temporary care to persons with dementia by coordinating trained volunteers.**
- **Provides flexible care on an emergency or scheduled basis with Host Families for up to 66 hrs (e.g. weekends and nighttime) to allow caregiver respite.**
- **Promotes community involvement in the spirit of volunteerism to encourage the best care for persons with dementia, and the well-being of those caring for persons with dementia.**
- **Makes available affordable care with payment based on a sliding scale for expenses accrued.**
- **Host Family matched to client’s physical, medical and cognitive needs; and with regard to socioeconomic status, occupation, location and Host Family setting.**
- **Care may take place either in the Host Family or client environment.**
- **Program coordination will be done through appropriate organizations such as the VNA and UVM’s Center for Aging.**
- **Host Families will complete a Dementia Care Course and state required background checks.**

**Discussion:**

Overall, our findings support the notion that there is a need for additional opportunities and flexibility for respite care. The survey of caregivers showed that 63% were interested in using a respite care program as described in the proposed model. The phone interviews of nursing homes and adult day centers demonstrated that there is an unmet need for affordable, emergency and scheduled respite care. The main concern regarding the development or use of such respite care is the cost. The focus group further highlighted the burn out experience by caregivers, and the need for emergency and scheduled respite care. Our proposed model aims to satisfy this gap in respite care while making it affordable. To conclude, further evidence that the program advocated by our poster is needed is emphasized by the following direct quotes from caregivers:

"This program would be a lifesaver!"  
"For working individuals who are also caregivers, this overnight program would be a godsend."  
"I do not know why a program [like this] is not in place."

**Acknowledgements:**

Raj Chawla, Dr. Tom Delaney, Dr. Jan Carney, and the members of the Memory Center Focus Group.
Assessing Barriers to Utilization of Adult Day Care Centers in a Rural County

William Ares 1, Michael Hart 1, Derek Huang 1, Laurel Karian 1, Maria Michael 1, Auna Otts 1, Donna LaFramboise-Perretta 2, Jill Jemison 1

1 University of Vermont College of Medicine, 2 Visiting Nurses Association, Colchester, VT

Introduction

Adult Day Care programs provide cognitively or functionally impaired adults with medical, social, and therapeutic services as well as offer valuable respite and education to family caregivers. The Visiting Nurse Association’s Adult Day program manages three centers that offer these services and are located in Colchester, Williston, and South Burlington. We have explored the underutilization of these centers by comparing variables such as demographics, services provided, referrals, transportation constraints, and satisfaction surveys between centers and to national success guidelines for adult day services.

Methods

Three different analytical methods have been used to collect the data for this project:

- A survey assessing satisfaction was distributed to clients at each of the three sites of the VNA. The survey included questions regarding transportation, health care services, and socialization services. Surveys were completed by the VNA client or their caregiver.
- A standardized telephone interview was conducted with community referral services to assess referral rates to each VNA site and factors that influence which site a patient is referred to.
- A structured interview was completed with each site director inquiring about their perspectives regarding client medical needs, transportation needs, and socialization needs. Interviews also determined each center’s utilization statistics and rates.

Surveys Distributed to VNA Clients (Figure 3)

The results of the survey (n=29) indicate client satisfaction especially in the areas of socialization, caregiver respite, quality of activities, and management of medical needs.

Transportation questions indicate a substantial difference between the sites. 50% of South Burlington clients, 36% of Falcon Manor clients, and 50% of Prim Rd. clients agreed that transportation complications influence their attendance to the program.

Respondents at all sites have difficulty arranging transportation, and would appreciate a low cost option. They account for 40% of all question respondents. However, only 30% of question respondents agreed that a low cost option would help them attend more regularly.

When asked why clients chose to attend VNA adult day program, 60% cited that the particular site they attended was close to home. Significantly, 75% cited referral from friends, family, and/or their healthcare provider.

Interview with Referrers (Figure 5)

On average, each of twelve referral services we interviewed referred 10 to 20 clients to the VNA for Adult Day Care in the past year. Location is the most common factor considered by referrers when deciding between the various VNA sites. Two referrers feel that the Prim Road site is inconveniently located. Client medical needs is the second most common factor considered by referrers. Referrers commented that the Prim Road site “is more for medical needs than social needs” and “tends to have an older, frazier population.” Three out of twelve referrers are less likely to refer clients to the Prim Road site, citing inconvenient location and lack of socialization.

Discussion

A national study of adult day services conducted by the Robert Wood Johnson foundation, Partners in Caregiving, determined that adult day programs in Chittenden County appear to be in excess capacity of the population in need of them.

These circumstances reflect the overall underutilization of the Visiting Nurses’ Association three adult day programs (Figure 2). According to client surveys, satisfaction is high among those who attend. Clients across all three programs are happy with the quality of activities, improvement in mood, and respite for caregivers. However, a portion of the clients, especially those at Prim Road, have difficulty arranging transportation. Prim Road currently allocates resources providing transportation for clients who may be able to attend other sites at less cost. Transportation is one factor among many that influences attendance. Our survey also shows that clients choose to attend the program based upon recommendations by family, friends, and healthcare providers. Reputation and community perceptions, especially of referrers, strongly influence the site that clients choose to attend. Healthcare providers who were interviewed considered location and medical needs foremost in recommending a program. However, referrers perceive the three VNA sites differently in the activities and opportunities for socialization provided.

Despite the overall quality of the program, all three adult day centers are not operating at capacity. This appears to be due to several factors including transportation complications and referrer perceptions.

Recommendations

- Increase hours of operation from 7 am to 6 pm (RWJ)
- Pursue more aggressive marketing to caregivers, formal referral sources, and community organizations to make enrollment twice that of capacity (RWJ)
- Prim Road clients with transportation problems due to financial constraints could attend a center currently accessible via public transportation

Works Cited


Physician Screening for Intimate Partner Violence in Vermont
Androsov, A.1, Chao, J.1, Fiset, K.1, Hickman, E.1, Huckins-Noss, A.2, Kim, D.1, Kravetz, A.1, Semma, M.1, Warhit, S1.
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Introduction

The term intimate partner violence (or IPV) refers to a threat of abuse or actual psychological, physical, and/or sexual abuse perpetrated by a former or current intimate partner. IPV is an important public health issue that crosses socioeconomic lines. Approximately 4.8 million women experience physical or sexual assault perpetrated by their intimate partner each year in the US.1 There are no reliable statistics for how many women suffer psychological abuse, but the numbers are likely much higher. Physical, psychological, or sexual injuries can have wide ranging effects, including increased mortality. Although it has been firmly established that the prevalence of IPV is high, physician involvement in screening and diagnosing IPV has historically been very low.

Previous studies have addressed IPV screening in other parts of the country. In one study, less than 15% of female patients reported being asked by a health professional about IPV, even though studies have shown that the majority of female patients would reveal their abuse if asked. Also, most physicians screened for IPV when the patient presented with physical trauma, but few screened all patients regularly. The more aware physicians were about IPV, the more likely they were to screen in all clinical settings.2 While both men and women are victims of IPV, and IPV can have a large effect on the children of the abused, only the screening and treatment of women was explored here. The purpose of this study was to examine the state of IPV screening in Vermont. The objectives were as follows:

- Estimate the IPV screening, intervention, and policy practices of Vermont physicians
- Examine the role of physicians in screening and intervention
- Explore physicians’ knowledge of IPV resources

Methods

The study was administered through SurveyMonkey.com. It included multiple-choice and open-ended questions about IPV. Questions were based on background research and consultation with Women Helping Battered Women. We consulted a statistician to verify our questioning format and design. An invitation to take the survey was sent out to physicians in Vermont hospital networks including Fletcher Allen, Porter Hospital, Southwestern Vermont Medical Center and UVM College of Medicine affiliates. Recipients were targeted in the following specialties: family medicine, internal medicine, psychiatry and gynecology. Those specialties were chosen because they provide primary care services to women. In total we received 67 responses. Given the sensitive content of the survey and the narrow target demographic, it was not possible to obtain a larger sample size.

Results

Respondents included 67 Vermont physicians. Females outnumbered males by 23%. The majority (71%) practice in Chittenden County, with the remainder coming from Addison, Bennington, Windham, Franklin, Washington, and Orange counties. The majority of the physicians were between the ages of 35 and 50. Practice settings of respondents were split almost equally between Clinic/Community Health Centers, Private Practices and hospitals.

Demographics

Our results demonstrated that IPV screening is prevalent, although lack of written policies within practices implies that settings, incidence and methodology of screening are inconsistent. Together with WHBW, we suggest implementation of more rigorous IPV screening protocols.

Discussion

The reason for sporadic may be related to the circumstances prompting physicians to ask about IPV. The majority (60.7%) inquired only when suspicious findings arose. About half of physicians would screen if the patient brought up violence themselves. Few physicians screened in other specific situations such as first visits (12.5%) or in patients with psychiatric conditions (34.4%). Screening as part of a women’s annual exam, however, was more common (52.5%).

Standardized screening protocols should incorporate the actions that our respondents emphasized. The vast majority would recommend resources if a woman screened positive for IPV and would encourage physicians to screen for IPV. Protocols should also cover legal intervention, and treatment of acute and chronic consequences.

Physician education is integral to successful IPV screening, especially since…”

Lessons Learned

- Some providers had very strong opinions regarding our topic. It would be helpful for groups in the future that have controversial topics to try to find topic experts, and invite them to provide critiques, prior to surveying the population as a whole.
- Accessing physician email lists and survey distribution was challenging. We would recommend that groups in the future start very early and try to find ways to send the surveys directly to physicians.
- Because Women Helping Battered Women did not have a specific project that they wanted us to accomplish, we had a lot of freedom in designing the study. This meant that a lot of time needed to be spent in study design. In that situation, we think that it is very important to involve the community agency as much as possible in brainstorming sessions and to ask for feedback regularly.

References

1. CDC Factsheet. Understanding Intimate Partner Violence. 2006
Tough Cookies: Hands On Nutrition at Woodside Juvenile Rehabilitation Center

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Background

Woodside Juvenile Rehabilitation Center provides a safe and secure environment to teenagers who have been remanded there by the court system for either short or long term care. We focused on nutrition at the center, particularly the evening snacks provided. The foods teens choose to eat are extremely important as total nutrient needs are higher in adolescence than during any other time in the life cycle (1). Little prior research on the nutritional beliefs or habits of institutionalized youth has been done.

Our goal was to improve the provided snacks, as some staff members were concerned that these were not healthy. Nutritional value of food is not a priority for many teens (1), despite the fact that they are usually well informed about good nutrition (2). Rather than simply dictate a menu change, we also attempted to assess and possibly modify resident attitudes regarding healthy food. We hoped to both provide a more nutritionally healthy environment and to teach knowledge and skills that would lead to long-term physical and emotional benefits in an at-risk population.

Methods

Data was obtained from baseline, interim, and post-intervention surveys administered to 15 teenagers residing at the Woodside Juvenile Detention Center in Colchester, Vermont. Surveys were designed to gain understanding of the residents’ baseline level of nutrition knowledge and values and to compare these with their knowledge and values following three sequential nutritional education interventions.

We presented three sessions to the residents. Each contained a short nutrition lesson followed by instruction and participation in a cooking activity. The cooking activities included a fruit smoothie making session, a nutritional snack bar making session, and a vegetable snack making session. Small surveys assessed learning before and after each session.

Data analysis was performed by evaluating changes between early and later surveys. Subjective open-ended comments were also used to evaluate resident opinions about our sessions.

Results

Fig. 1 Number of nights that residents cooked food for themselves before entering Woodside:

Fig. 2 Average percentage of correct answers on a multiple question survey about nutrition and the dietary needs of teenagers.

Fig. 3 Percentage of respondents who agreed that healthy snacks are boring before and after three snack making sessions.

Fig. 4 Percentage of respondents who agreed that they felt knowledgeable about nutrition before and after three snack making sessions.

Conclusions

The initial survey revealed that the majority of residents reported that they wished they had more healthy snacks and thought that knowing how to prepare food would help them eat healthier.

Two thirds of the residents wanted regular programs where they could learn to prepare healthy snacks. Sixty four percent of respondents reported they did not always have a parent to cook for them at home, suggesting that food preparation skills are a vital skill set for this population. It has previously been demonstrated that simply teaching food preparation to young adults can also improve their diet (3).

This program encouraged healthy food choices by Woodside residents. Following the three sessions, residents reported an increase in the importance of eating healthy, considering healthy snack alternatives and acceptance of healthy snacks. They also reported feeling more knowledgeable about nutrition in general. A majority reported they enjoyed both the nutrition teaching sessions and the healthy snacks. Most reported learning from the session.

The intervention appeared to succeed in acclimating the residents to healthy snacks, removing the misconception that healthy snacks have to taste bad, improving nutrition knowledge and teaching skills in food preparation. We recommend that Woodside find ways to institute regular food preparation sessions for residents. Also, snack offerings should be modified in favor of more nutritional options.

Lessons Learned

• At-risk teenagers in an institutionalized setting are eager to learn about health and to develop life skills involving food, cooking, and nutrition.
• High turn-over in this setting makes accurate pre/post surveying difficult.
• Hands on lessons got very positive feedback from participants.

References