

2018

Addressing Exercise Education in Clinton County, NY

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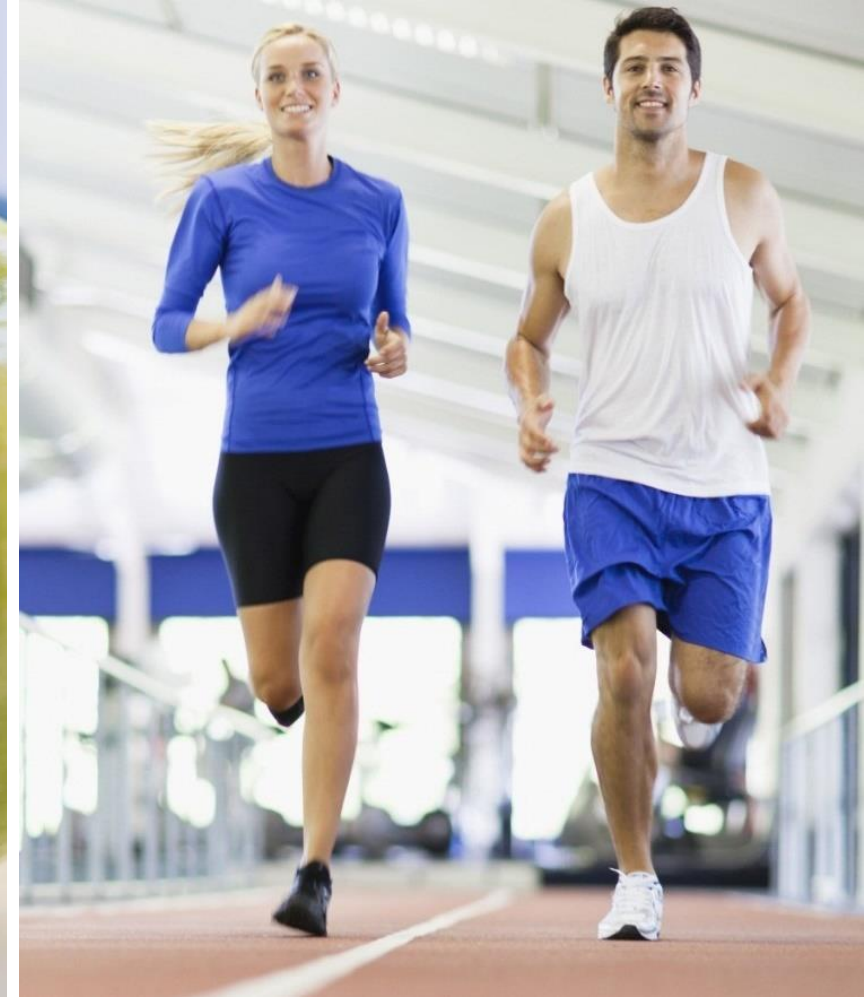


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Kardys, Amanda M., "Addressing Exercise Education in Clinton County, NY" (2018). *Family Medicine Clerkship Student Projects*. 358.
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ADDRESSING EXERCISE EDUCATION IN CLINTON COUNTY, NY

UVM CVPH FAMILY MEDICINE CENTER

FAMILY MEDICINE ROTATION

MARCH 19 – APRIL 26 2018

AMANDA KARDYS, MD CANDIDATE

MENTOR: DR. MAEGAN CABRERA, MD

THE
University of Vermont
HEALTH NETWORK

Champlain Valley Physicians Hospital



The University of Vermont
LARNER COLLEGE OF MEDICINE

PROBLEM IDENTIFICATION

- Forechi et. al states that hypertension, diabetes, and dyslipidemia are associated with high morbidity and mortality which can be prevented or improved via regular aerobic exercise
 - Adherence to exercise programs is influenced by several factors:¹

Positively Associated	Negatively Associated
	Age
Higher Income	Excess Body Weight
Higher Education	Negative Perceived Health
	Regular Smoking
	Lack of Opportunity to Exercise in Neighborhood

- Everson et. al similarly found that obesity is inversely related to socioeconomic status and may be further related to: physical inactivity, diet, alcohol consumption, social support, psychosocial stress, and access to health care²

NEED IN COMMUNITY

- Jansons et. al identified enablers and barriers to ongoing exercise participation:³

Enablers	Barriers
Workout “Contract” with Health Professional	Health Professionals Advising Against Exercise
Encouragement from Significant Other	Family Responsibilities
Self-Efficacy and Belief in Working Out	Fear of Injury/Illness
	Fatigue/Depression

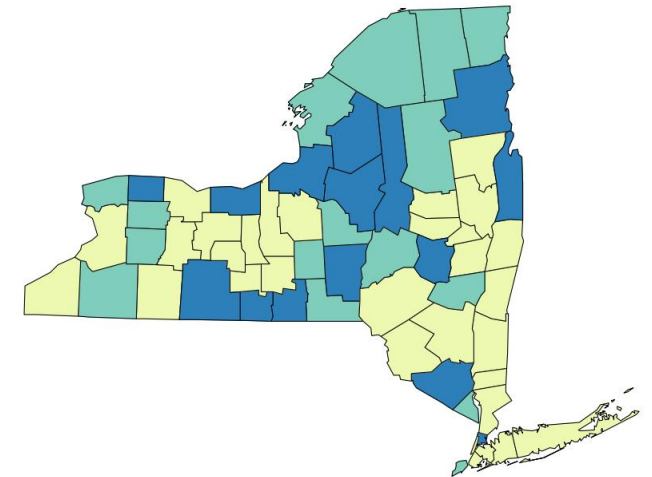
- In Clinton County, NY residents in 2016 voiced concerns about these problems:⁴
 - The top 2 health issues individuals cited were overweight/obesity and chronic disease
 - 1 in 3 respondents felt physical inactivity was a community issue
 - Unemployment and low wages is a top social concern in relation to health care

PUBLIC HEALTH COSTS AND UNIQUE COST CONSIDERATION IN CLINTON COUNTY, NY

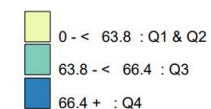
- In summation, obesity, chronic diseases such as diabetes, education and poverty are all integrally related globally, in the United States and New York State
- In 2008 medical costs due to obesity in the United States were estimated to be \$147 billion⁵
 - In addition, in 2012 New York State annual cost for diabetes care is estimated at \$21 billion⁶
- In Clinton County, combined age-adjusted hospitalization rates for cardiovascular disease, cerebrovascular disease, and diabetes for 2012-2014 were 162.7 per 100,000
 - In comparison to the rest of New York State, this puts Clinton County in the 25-50th quartile for CVD and diabetes hospitalization⁷
- Demographically, only 22% of individuals in Clinton County have a bachelor's degree or higher, while 14.4% of residents live in poverty⁸

Age-adjusted percentage of adults overweight or obese (BMI 25 or higher) 2013-2014

Clinton County
64% Obesity
Rate



Age-adjusted percentage of adults
Counties Are Shaded Based On Quartile Distribution



Source: 2013-2014 NYS Expanded Behavioral Risk Factor Surveillance System (NYS Counties outside NYC); 2013 NYS Behavioral Risk Factor Surveillance System (NYC counties); data as of 2015

COMMUNITY PERSPECTIVE - INTERVIEWS

Anita Moore, PT, DPT, ATC

“Patients in our community are afraid to exercise which leads to avoidance. It is often related to low socioeconomic status and not having education about their ability to exercise with a chronic disease.”

“When patients do begin exercising they have a lack understanding of how to exercise because they did not grow up being active. Patients need to be educated about frequency, intensity, and duration as well as their relationship to each other.”

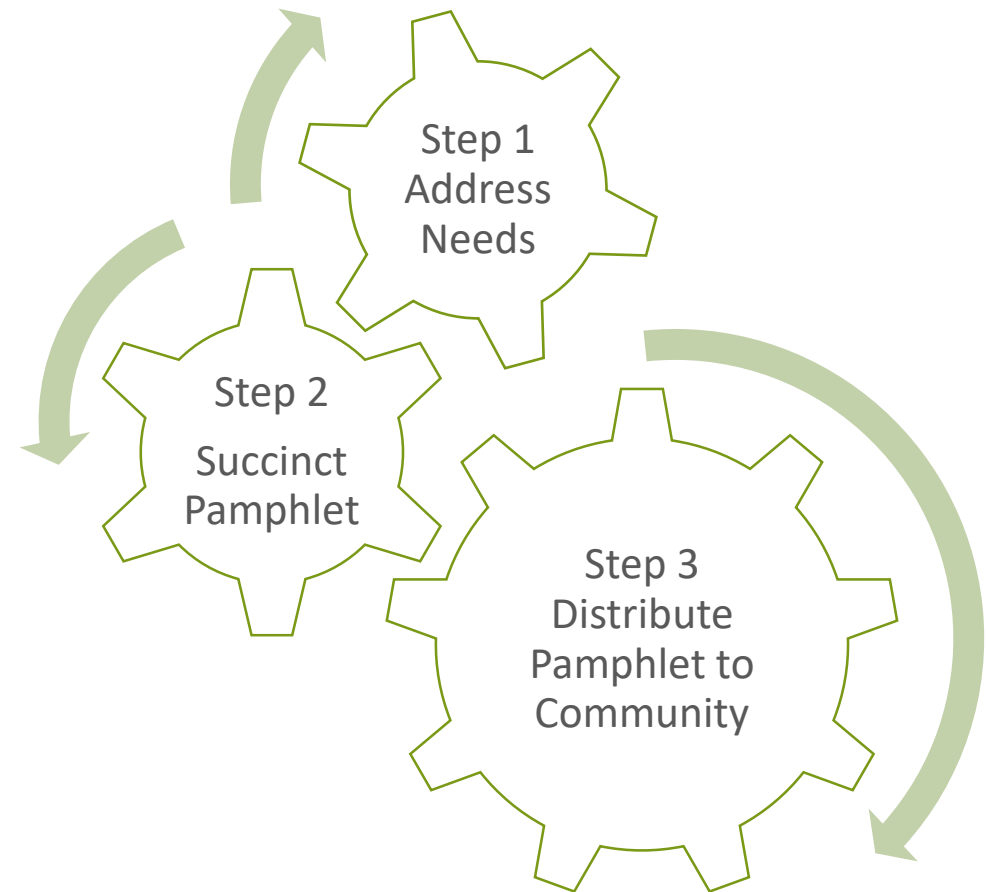
Ted Santaniello, City Recreation Center Director

“The biggest perceived barriers we see in our population is time, work and children. Most of the people in our community work two to three jobs to provide for their family.”

“It is important when developing an exercise plan to have individuals undergo risk stratification by physical trainers or physicians based on their chronic diseases and limitations, therefore being given a work out plan that is attainable and beneficial to the individual.”

INTERVENTION AND METHODOLOGY

- Intervention: Provide a pamphlet addressing the major barriers and concerns individuals in the community have about exercise and barriers
 - Address myth that chronic disease means an individual is too sick to exercise
 - Validate concern about time constraints
 - Define terms such as frequency, intensity, and provide low-cost options for physical activity for low SES individuals
 - Provide national guidelines to community on exercise recommendations
 - Provide strategies to reduce injury to address fear of injury barrier



RESULTS/RESPONSE

- Handout was provided to providers at the CVPH Family Medicine Center and was positively received
- Handout will be distributed to the City of Plattsburgh Recreation Center and CVPH Physical Therapy division, to the community members interviewed. At the time of interview community members were enthusiastic about pamphlet and possible further cooperative interventions in the future
- Handout will be provided to patients who are interested in learning more about exercise and how it can help their overall well being





Exercise for Everyone



How to exercise safely regardless of age, disease, or barriers

Amanda Hardy, MD Candidate 2020
Supervisor: Dr. Maegan Cabrera, MD

"I'm Too Sick To Exercise"	"Time is Precious"
<p style="text-align: center;"><i>"I have a chronic disease and therefore cannot work out"</i> THIS IS A MYTH!</p> <p>Exercise can improve your health by: Decreasing Heart Disease Increasing Muscle Strength in COPD Battling Obesity Lowering your Bad Cholesterol Increasing your Confidence</p> <p>To begin working out, you can assess your level of fitness with: Knowing Your Own Comfort Level Speaking with Your Doctor Being Assessed by a Certified Physical Trainer Assessing Abilities with a Physical Therapist</p>	<p style="text-align: center;"><i>You are not alone if you feel that time is the biggest barrier to working out!</i></p> <p>Time, finances, and family commitments can feel like barriers to exercising. However, without exercise you can suffer from obesity, heart disease, fatigue and many other disease processes that can block your ability to work, take care of your family, and enjoy your life.</p>
	

Be Active!	How Often?	Reduce Injury	Stretching to Reduce Injury
<p>When starting a workout routine, focus on 2 out of 3 of the following areas: Frequency: How often you work out Intensity: How hard you work out Duration: How long you work out</p> <p>Switch up which areas you work on weekly to keep your muscles conditioned!</p> <p>Exercise should be fun and can include the whole family, while also give you an opportunity to focus on your well-being. Some recommended low-cost activities include:</p> <ul style="list-style-type: none"> Walks in Nature Hiking Swimming <p>The City of Plattsburgh Recreation Department also offers a number of fitness options:</p> <ul style="list-style-type: none"> Sports Leagues Indoor Track Fit Over 50 Fitness Class Biggest Loser Program <p><i>Still not sure? Make an appointment with your doctor who can help you assess your level of fitness!</i></p> 	<p>National Guidelines</p> <p>The US Department of Health and Human Services states that adults should aim to perform aerobic activity and strength training weekly.</p> <p>Aerobic: At least <u>30 minutes per day, 5 days per week</u> (totaling 150 minutes weekly) of moderate activity such as:</p> <ul style="list-style-type: none"> Brisk Walking Swimming Mowing the Lawn <p>OR at least <u>25 minutes per day, 3 days per week</u> (totaling 75 minutes weekly) of vigorous activity such as:</p> <ul style="list-style-type: none"> Running Aerobic dancing <p>Strength Training: At least <u>two times</u> a week perform a single set of exercises with 12 to 15 repetitions for each muscle group (biceps, quads, back muscles, etc.) such as:</p> <ul style="list-style-type: none"> Weight Machines Body Weight - Yoga Lifting Cans of Soup or Water Bottles Squats Planks 	<p>How to Avoid Injury</p> <p>There are <u>two</u> types of major overuse injuries to be aware of when exercising:</p> <p>Training errors: Performing too much physical activity too quickly at infrequent time intervals—a common injury in "Weekend Warriors"</p> <p>Technique errors: Wrong technique - how you perform an exercise - can put too much pressure and tension on certain muscles.</p> <p>Recommendations</p> <p>Knowing your body and learning the difference between sore muscles and strained muscles is important!</p> <p><i>Acting pain with stiffness often means you are having normal delayed onset muscle soreness</i> VS <i>Stabbing pain with swelling may mean you have an injury</i></p> <p>***If you are unsure of your injury type, rest and contact your physician if the pain persists.***</p> <p>Other Strategies to Reduce Injury</p> <ul style="list-style-type: none"> Appropriate Gear -- Helmets, Knee Pads Drink Plenty of Water -- Half Gallon Daily Avoiding Sugary Sports Drinks 	<p>Stretching to Reduce Injury</p> <p>Stretching: Increases flexibility and joint range of motion</p> <p>Flexibility: Being able to bend or move without breaking</p> <p>Range of Motion: The ability to flex and extend a joint (like a knee) fully without pain</p>  <p>Guidelines to Stretching</p> <ul style="list-style-type: none"> Hold Each Stretch 10-30 Seconds, 2-4 times Stretch Both Sides Equally Warm Up 5-10 Minutes Before Stretching Stretch After Working Out Don't Bounce While Stretching Breathe Through Stretches <p>Examples of Stretches to Perform with Photos</p> <p>Shoulder Stretch: place arm across body and hold in place with opposite arm</p> <p>Quadriceps Stretch: Bend knee to buttocks and grab foot with same-sided hand</p> 

EVALUATION OF EFFECTIVENESS AND LIMITATIONS

- Due to time constraint, effectiveness of handout with patients and community members was not elicited or monitored
- Attempting to tackle low income, obesity, chronic disease, and exercise education in one pamphlet is a high task
 - Yet, they are intertwined and their relationship to one another is what makes this problem so complex
- The pamphlet does not give specific daily workout routines for individuals to follow, which may be easier than general recommendations
- Community members may not be able to afford the City Recreation Center membership or classes, making it harder to work out in the winter in Clinton County, NY
- Time will always be a constraint for individuals attempting to work out – trying to combine family responsibilities with exercise is a key strategy for individuals which may be difficult to implement
- People who seek out a pamphlet may be more likely to follow advice from physicians and other specialists

- Follow effectiveness of pamphlets with community members
 - Perform focus groups of how individuals perceive the pamphlet
 - Find disconnects between pamphlet and patient understanding
 - Provide improved pamphlet

- Perform focus group with obese and/or chronically ill patients at UVM CVPH Family Medicine Center focused on exercise
 - Provide a better understanding of education level in patients
 - Ask ways we can better help them begin exercising
 - Ask what resources they believe would be helpful

- Implement exercise program for volunteer focus-group
 - Assess barriers to following workout program
 - Assess enablers to following workout program
 - Better understand community individuals ability to follow exercise program prescribed by physician office

- Provide seminars to patients on exercise
 - Work cooperatively with PT, Recreation Center, and other specialties to provide educational seminar on exercise and obesity to community
 - Allow for each specialty to focus on resources available to patient to help them succeed.

RECOMMENDATIONS FOR FUTURE PROJECTS

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