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Community-Based Exercise Education During Colder Months

Newtown, Fairfield County, Connecticut

Cole S. Shapiro

Family Medicine Rotation, March 2019



The University of Vermont
LARNER COLLEGE OF MEDICINE

Problem Identification

- Exercise is an important determinant of health, and the decline of adequate physical activity contributes to the national rise in rates of obesity, diabetes, and heart disease.
- For example, obesity affected 93.3 million American adults in 2015-2016—a prevalence of 39.8% (5). In CT, rates have increased from 16% in 2000 to 26% in 2015 (3).
- The prevalence of childhood obesity has doubled in the past 20 years; the probability of childhood obesity continuing into adulthood increases from 20% at age 4, to 80% by adolescence (2).

Problem Identification

- US Department of Health and Human Services recommends 150 minutes of moderate-intensity aerobic activity or 75 minutes of vigorous-intensity aerobic activity weekly (or an equivalent combination) (8).
- In 2015, approx. 50% of American adults and 75% of American high school students did not meet minimum aerobic physical activity guidelines—about 130 million people (4).
- Despite health care providers recommending regular physical exercise, many patients are nonadherent, ranging from 35% to 86% (6).
- There are several barriers, including the described “monotony and boredom” associated with treadmills, lack of time, feelings of depression and tiredness, social media distractions, the high cost of fitness centers, time commitments, and poor weather.
- Seasonal variation plays a significant role in exercise frequency; children demonstrate lower levels of physical activity and increased sedentary time during autumn and winter seasons (1).
- Subjectively, patients in a Newtown, CT clinic described cold weather as a primary barrier to maintaining their previous level of physical activity.



Public Health Costs

- Sedentary lifestyle is an important contributor to morbidity and mortality; about 10% of premature deaths can be attributed to lack of physical activity, leading to approximately 280,000 deaths in 2014 (4). This is associated with nearly \$117 billion in annual health care costs.
- Compared with adults with diabetes and BMI over 25 who do not exercise, those that exercise 30 minutes for five days weekly showed lower medical care and prescription drug utilization, reducing hospitalizations by 28% and health care expenses by 22.1% (9).



Community Perspective

- There was consensus among the interviewed primary care providers in Newtown, CT, that patients' behaviors toward maintaining their health vary with the changing of seasons.
- One clinician described Thanksgiving and Christmas as major triggers for a shift toward poor diet and exercise habits: she sees patients eating more sweets and starchy food options, and less fresh fruit partly because there are fewer options available as the seasons change.
- Another provider stated that patients will often blame the cold weather as the reason they don't leave the house for exercise, resulting in a greater sedentary lifestyle during the winter. Many don't go to gyms because they don't enjoy the gym environment. Because they are less active, they tend to eat greater volumes and snack more than they normally would.
- Depression is another factor contributing to unhealthy behaviors. One provider said that she has patients with Seasonal Affective Disorder, who are greatly affected by the weather change, and who are made more depressed or anxious by family stress brought out during the holidays. Senior citizens often describe difficulty venturing out of their homes due to mobility or transportation issues, causing further social isolation and depression. This depression fosters a sedentary lifestyle.
- Winter weather causes people to bundle up and wear bigger, heavier clothing, which can cause them to be less aware of their body habitus and mask weight gain.



Intervention and Methodology

- Interviews were conducted with clinical providers at an outpatient primary care office in Newtown, CT.
- Interview questions addressed potential changes in patient health behavior and barriers to maintaining health during colder months. Narrative data were compiled.
- Themes included affordability and accessibility of physical activity resources. These considerations and feedback from exercise education projects targeting different populations were incorporated into the handout (7).

Handout

Stay Active This Spring!

The US Department of Health and Human Services recommends:

- **2 hours and 30 minutes of moderate-intensity aerobic activity each week, OR**
- **1 hour and 15 minutes of vigorous-intensity aerobic activity each week**

What is moderate activity?

A brisk walk, light yard work, snow shoveling, casual biking, playing with children

What is vigorous activity?

Jogging, running, swimming laps, aerobics, cross-country skiing, jumping rope, competitive sports

Do you know the many benefits of exercise?

- Reduces high blood pressure, risk for diabetes, heart attack, some cancers, stroke, arthritis pain, osteoporosis, and symptoms of anxiety and depression

Newtown Parks and Recreation Programs & Special Events – Winter, Spring 2019

- Swimming, Aikido, karate, dance, horseback riding, golf, tennis, adult drop-in sports, "Parent and Me activities"

Go for a hike!

Local hikes, ranging 2-3 miles each weekend.
Contact: Sally Cox at (203) 426-9903, email is newtownhikers@gmail.com

Volunteer with Newtown's Victory Garden
and help grow produce for the food pantries of Newton!

Contact: VictGarden17@gmail.com or (203) 270-4340

Join your regional YMCA in Brookfield!

Discounted memberships for teens, young adults, families, and adults 65+.
Call (203) 775-444 extension 110

Newtown Senior Center

- Flex-fit and tone exercise, yoga, chair yoga, line dancing, strength training, ballroom dancing, walking groups, tai chi, qigong, Zumba, chair Pilates
- Diet and nutrition information
- Health screenings, blood pressure checks

Pick up a paddle and play pickleball!

Ages 60+ Mondays at Edmond Town Hall Gym
Contact: www.newtown-ct.gov or call 203-270-4340 for more information (\$5/day)

Are you signed up for the Silver Sneakers program?

It is included with many Medicare Advantage Plans – check your eligibility today!

- Membership and exercise classes at nearby gyms, parks, and community centers!
- Online exercise videos to try at home!



Results

- An educational handout was produced for distribution among patients and their families in the waiting room and treatment rooms at the outpatient primary care clinic in Newtown, CT.
- These clinical providers were also able to reprint the handout as needed.

Effectiveness and Limitations

Effectiveness

- Distribute pre- and post-handout surveys to identify the participant's stage of behavior change for initiating physical activity. The surveys should also identify whether the information was new and interesting to the patient, and whether the patient would like follow-up from a provider with additional information.

Limitations

- Time to implement this project was too short to evaluate its effectiveness. Interviews were conducted among primary care providers, limiting the range of perspectives.
- Handouts were only distributed among one facility, which targets only individuals who see their primary care provider for preventative health care.



Future Interventions

- Research additional barriers to maintaining health and physical activity, and develop subsequent educational handouts.
- Such research could involve data collected from both patient and provider narrative interviews. Additional interviews could be conducted from social workers, physical therapists, and trainers to provide more targeted information to patients.
- Additional handouts can be specific to pediatric and adult populations.

References

1. Atkin, A, Sharp, SJ, Harrison, F, Brage, S, van Sluijs, EMF (2015). Seasonal Variation in Children's Physical Activity and Sedentary Time. *Medicine & Science in Sports & Exercise*. 48.1.10.1249/MSS.0000000000000786.
2. Committee on Nutrition. American Academy of Pediatrics Policy Statement: Prevention of pediatric overweight and obesity. *Pediatrics*. 2003 (reaffirmed 2006); 112(2):424-430.
3. Fairfield County Community Wellbeing Index 2016 (PDF). (n.d.). Retrieved from <https://www.ctdatahaven.org/data-resources/fairfield-county-community-wellbeing-index-2016-pdf>
4. Fulton, JE, Buchner, et al (2018). CDC's Active People, Healthy NationSM: Creating an Active America, Together. *Journal of Physical Activity and Health*, 15(7), 469-473. doi:10.1123/jpah.2018-0249
5. Hales CM, Carroll MD, Fryar CD, Ogden CL. Prevalence of obesity among adults and youth: United States, 2015–2016. NCHS data brief, no 288. Hyattsville, MD: National Center for Health Statistics. 2017.
6. Jenkins, DW, Jenks, A (2017). Exercise and diabetes: a narrative review. *The Journal of Foot and Ankle*, 56(5), 968-974. <https://www.sciencedirect-com.ezp.med.uvm.edu/science/article/pii/S1067251617304180?via%3Dihub#cebib0010>
7. Lin, Benjamin H., "Exercise Education for the Winter Season" (2018). Family Medicine Clerkship Student Projects. 410. <https://scholarworks.uvm.edu/fmclerk/410>
8. U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf. Published November, 2018 (Accessed 13 February 2019).
9. Wu, J, Davis-Ajami, ML, Lu, ZK (2019). Real-world impact of ongoing regular exercise in overweight and obese US adults with diabetes on health care utilization and expenses, *Prim. Care Diab* <https://doi.org/10.1016/j.pcd.2019.02.003>