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Barriers to Exercise: Patients with Diabetes in Washington County

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Rotation: Family Medicine, December-January

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Problem Identification & Description of Need

- Washington County, encompassing Montpelier, Barre, and Berlin, has a higher rate of overweight adults than the Vermont statewide average according to the Vermont Department of Health (CVMC Community Needs Assessment 2016).
- The Vermont Department of Health promotes physical activity as an important means of chronic disease prevention and healthy lifestyle (healthvermont.gov).
- Physical inactivity, poor diet, and tobacco use are the three main behaviors which predispose patients to cancer, heart disease/stroke, lung disease, and type 2 diabetes, diseases that result in over 50% of deaths among Vermonters (healthvermont.gov).
- Exercise is thought to be an important factor in lowering health risks such as obesity, heart disease, type 2 diabetes, hypertension and cancer.

Public Health Cost & Unique Considerations In Host Community

- Health Factor Statistics (Washington County):
 - Adult obesity: 23% in 2015
 - Barre has a higher rate of overweight adults than the Vermont statewide average
 - According to the Vermont Department of Health, over 60% of adults in Washington county are overweight
 - Vermont statewide obesity rate: 26% in 2015
 - Access to exercise opportunities: 76%
 - Vermont statewide exercise opportunity rate: 75%; top nationwide performers = 91%
 - Approximately 20% of Vermonters do not participate in leisure-time physical activity
 - Rate of diabetes: 8%
 - Vermont statewide diabetes rate: 9.3%
- Public Health Cost:
 - The nationwide obesity epidemic costs nearly \$200 billion in medical costs
- The 2016 Central Vermont Medical Center Community Needs Assessment states that “the rural nature of Vermont and its poor ‘active transportation’ infrastructure (i.e. incomplete or inadequate sidewalks, bicycle facilities, public transit) results in Vermonters needing to spend additional time sitting in cars to get to where they need or want to go. Busy lifestyles with limited opportunities to be active in ‘everyday lives,’ plus a culture that supports screen time for ‘recreation’ has resulted in low rates of physical activity for all.”

Community Perspective & Support for Project

- Many family practice physicians at CVMC reported that access to exercise resources, especially in winter months, is of great concern among their patient populations
- Physicians surveyed stated that appointment time constraints serve as a large barrier to comprehensive patient education, emphasizing the need for convenient information delivery systems to place patients in contact with resources and health management programs to meet their healthcare needs
- Community Health Team members at CVMC agree that access to information and resources would promote opportunities for healthy lifestyle change for patients

Intervention and Methodology

- Assessment of patient factors related to exercise, along with the creation and distribution of hospital and community resources for exercise and weight loss, were endorsed by many physicians and community health team members
 - Appointment constraints present a major barrier by both physicians and patient educators regarding lack of local resource awareness by patients
- Methodology:
 - A 4-question survey was developed and administered to assess patient motivation, barriers to exercise, resource awareness, and resource desires. The survey questions were designed as follows:
 - 1) From 0 to 10, how motivated are you to increase your level of exercise?
 - 2) What barriers prevent you from being able to exercise more (cost, distance, time, environmental conditions, transportation, other)? Explain
 - 3) Are you aware of local resources in your community? (If so, which ones)
 - 4) What facilities/equipment/programs do you not have access to that you wish you did? Explain
 - Interviews were also conducted with various community health team members regarding opinions on patient exercise and the availability of local resources

Survey Results

- A 4-question survey was administered to volunteer patients (8 total) at CVMC with diabetes and weight issues with the following results:
 - **Motivation** to exercise (average; from 0-10): **5.75**
 - **Barriers** to exercise: **75%**
 - Most notable: Low motivation/interest, pain, weather, transportation, and membership costs
 - Of note: motivation was listed as the primary barrier to exercise in 50% of surveys
 - **Awareness** of local resources: **75%**
 - Patient-listed resources: Sunrise & Another way (free exercise equipment in Montpelier), snap fitness, planet fitness, walking trails
 - Of note: Over 50% of patients surveyed were not aware of any resources other than local gyms
 - **Desired resource access** (Facilities/equipment/programs): gym trials, aquatherapy, acupuncture, transportation, golf simulators, bowling alleys, upper body strength training equipment
 - Of note: only 37.5% of interviewed patients reported they did not need additional resources

Interview Highlights with Community Health Team Members

- **Kathryn Bean** – Registered Dietician & Clinical Nutritionist
 - “Information distribution and patient motivation serve as important primary patient barriers”
 - Topics/resources discussed: Exercise opportunities (e.g. gyms, trails, fitness programs, community facilities), and the need for GMT transportation, insurance coverage, and patient education
- **Jessica Schupp** – Medication Assisted Treatment Team Clinical Care Coordinator
 - “Knowledge regarding hospital & community resources, as well as program requirements, are essential for patients”
 - Topics/resources discussed (hospital & community): Diabetic educators, Fitness for Wellness program, Phoenix community (free cross-fit & yoga), registered dieticians, Veggie van-go project, income-contingent hospital programs, recipe cards, Vermont Youth Conservation Corps
- **Paige Loeven** – Self-Management Regional Program Coordinator
 - “Many free and sponsored community resources remain highly underutilized due to lack of information awareness and time constraints during patient visits”
 - Topics/resources discussed: Healthier living workshops through CVMC (Tobacco cessation, wellness recovery, diabetes prevention, diabetes management, chronic pain management, chronic disease management) and availability of local resources such as exercise programs, fitness facilities, and support groups

Community and Hospital Resource Informational Handout: Effectiveness & Limitations

- Effectiveness:
 - Reduction of patient burden to identify resources for management of chronic disease
 - Expansion of local resource knowledge to promote the incorporation of exercise into patient lifestyle
 - Reduction of time burden for physicians wishing to discuss local resources during patient visits
- Limitations:
 - Motivation was the greatest reported barrier to exercise among those surveyed
 - Transportation and chronic pain may still pose as barriers to exercise
 - Patients may not qualify for certain programs based on specific eligibility, cost requirements or insurance coverage

Recommendations for Future Interventions/Projects

- Assessment of the efficacy of providing educational information sheets in achieving the goal of increasing exercise participation through close follow-up of patients receiving information and encouragement
- Deep dive into transportation programs, resources, and interventions to help Vermonters with transportation limitations
- Low-intensity exercise education/information for patients with equipment, transportation, or physical limitations (e.g. chronic pain, wheel-chair confinement, etc.)
- Additional assessment of primary dietary issues among overweight patients in Washington County, and resources for facilitating healthier eating habits

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