Movement Matters:
Encouraging Activity in Preventive Medicine

Clinical Site: Evergreen Family Health and Sports Medicine, Williston, VT

Stefanie Geiger Kelsey

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Project Mentor: Scott Paluska, MD.

The University of Vermont

LARNER COLLEGE OF MEDICINE

Problem Identification and AHEC Focus Area

- Many patients are provided home-based strength and mobility exercises during sports medicine visits for management of acute and chronic injuries; however, home exercises are not as frequently used in a preventive manner in family medicine wellness visits.
- At annual wellness visits at Evergreen Family Health, many patients cite personal health goals such as **“exercise more”, “prevent loss of function”**, and **“prevent decline”,** and identify barriers such as lack of time, motivation, knowledge, and access.
- Some patients in clinic reported winter as a barrier to exercise due to cold weather, risky conditions, and decreased motivation.
- **AHEC focus area:** social determinants of health

- “All healthy adults aged 18–65 years should participate in moderate intensity aerobic physical activity for a minimum of 30 minutes on five days per week, or vigorous intensity aerobic activity for a minimum of 20 minutes on three days per week.
- Every adult should perform activities that maintain or increase muscular strength and endurance for a minimum of two days per week.”

– American College of Sports Medicine and Centers for Disease Control physical activity recommendations

Public Health Cost and Community Considerations

- Physical activity is associated with decreased risk of chronic disease and lessened severity and progression of existing chronic disease, improved quality of live, emotional well-being, and positive mental health, and delayed cognitive decline.[1]
- In the US, $117 billion annually in healthcare expenditure were associated with physical inactivity.[4]
- According to Vermont Department of Health's "3-4-50: Prevent Chronic Disease" campaign: 3 behaviors (lack of physical activity, poor nutrition, and tobacco use) lead to the four chronic disease (lung disease, diabetes, cancer, and cardiovascular disease), which results in more than 50% of deaths in Vermont and cost Vermonters $2.29 billion in 2017.[5]
- As of 2020, 46.3% of American adults aged 18 and over **did not meet** the recommended aerobic and strength exercise guidelines.[2]
- According to Healthy Vermonters 2020, in Chittenden county, 63% of adults reported meeting physical activity guidelines, with 14% reporting no leisure-time physical activity, both measures will be included as indicators in Healthy Vermonters 2030.[6]

Community Perspectives

"We're one of the oldest states, citizen-wise, in the nation…Balance is a big issue. In Striders we do tandem walking … and we'll hold the wall and balance on one leg, and I'll do some wide squats with them... and you could see the difference in two to three weeks in how much better people were; and a lot of is emotional- they get to see their friends, and longevity has a lot to do with that- it's diet and exercise and social interaction.
Just show up! Once people come once or twice, they are hooked."

- Fran Tougas, DC, Leader of VT AgeWell's MVP Striders, Strength and Striders and Tai Chi for Falls Prevention programs

"Mobility is the body's ability to move functionally through a full range of motion. Lack of mobility leads to injuries throughout the kinetic chain whereas an increase in mobility helps to decrease instance of injury. Everyone can [benefit from improved strength and mobility], because it allows for better movement, decreases risk of injury, and improves quality of life."

- Burlington, VT – based certified Athletic Trainer

"The number one barrier people cite [to exercising] is always time, and I try to re-write that narrative with them and say, it depends on what your goal is- if your goal is to be healthier, then any one minute when you raise your heart rate to moderate intensity counts towards getting healthier... when you go from zero exercise, the first minute [of exercise] your mortality rate goes down, and it keeps going down and starts to level out at 150 minutes- and it doesn't have to be all continuous, it just has to be a total, in 7 days, of 150 minutes of moderate intensity movement; and from 150-300 [minutes] it's just a little bit better reduction in all-cause mortality- the more you do it keeps getting better but the first 150 means so much…every one of the minutes you do at that level is improving your health – that's the sweet spot for cardiovascular disease and diabetes and prevention of diabetes and reduction of your risk of cancer and heart attacks and strokes and reducing hypertension and I think it's really important that we have that conversation.

I try not to use the word exercise but ask people to move their body- keep moving, keep moving."

- Whitney Calkins, MD, Family Medicine and Lifestyle Medicine Physician, UVMMC

Intervention and Methodology

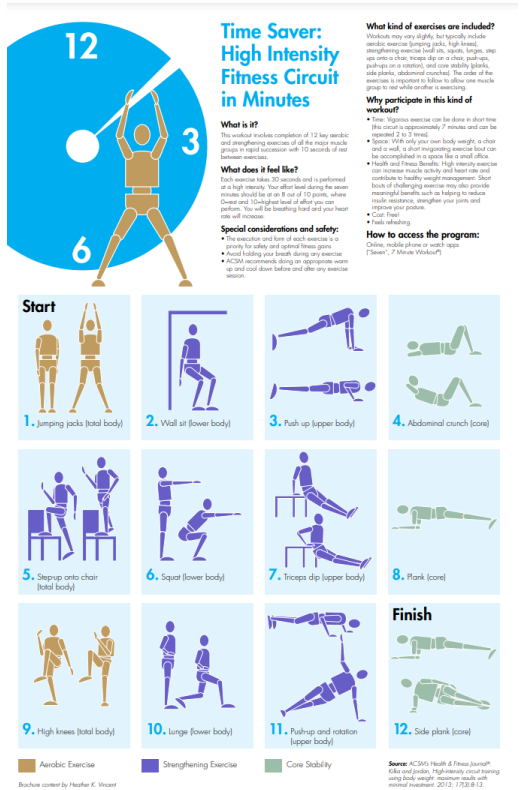
- A handout was created featuring information and a QR code, which linked to an online version featuring additional information and live links to resources.
- Handout was distributed to patients during office visits.
- Laminated versions for display on office bulletin boards were also created for potential continued use.

Printout with QR code

QR code-accessible web page with live links

Response to Intervention

- Patient feedback:
  - Most patients responded positively
    - Some reported this would be helpful for their mental health as well as encouraging movement
    - One reported that another person in their household could also benefit
  - One patient chose not to take the handout home



Examples of resources linked in the handout. Sources: Burlington Parks Recreation and Waterfront; American College of Sports Medicine Resource Library.

Evaluation of Effectiveness and Limitations

Proposed evaluation of effectiveness:

- Survey of patients to whom the intervention was provided, to assess for perceived quality and helpfulness, of the resource and change in activity level
  - Could potentially enable click tracking to identify how many times the QR code is being accessed
- Survey of Evergreen Family Health providers to assess utilization of the resource and response from patients

Limitations:

- Inclusivity: the provided resources were geared towards a general audience and may not meet the accessibility or mobility needs of all patients
- The intervention saught to provide a starting point for more healthy movement habits but ideally, exercise, strength and mobility programs would be offered in a more personalized and structured manner with tailoring to individuals abilities and limitations
- Timeline: due to the short time frame of this project and development of the resource, time to distribute resource and assess response was limited

Recommendations for future interventions

- Maintaining a practice “resource library” on the clinic website or social media
  - There are countless resources available online, but having to sort through and identify credible sources may create barriers to activity; having an “approved”, or even practitioner-designed set of resources would decrease that barrier
- Consent patients for follow-up to gather feedback on the intervention and provide improvement ideas, with potential for continuation and refinement of this project
- Expanding on home-based mobility and strength by designing a handout that could be given preventively for patients
- Create more focused resources for more specific patient populations such as elderly patients, those with unique mobility challenges, or those experiencing chronic pain

References

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