Confronting Barriers to Exercise in Patients with Chronic Health: Community Health improvement project in the Lewiston/auburn Area Concerns

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Confronting Barriers to Exercise in Patients with Chronic Health Concerns

CHIP: COMMUNITY HEALTH IMPROVEMENT PROJECT IN THE LEWISTON/AUBURN AREA

Marie Lemay MSIII
Rotation 6: Dec 2015- Jan 2016
c/o Dr. Bethany Picker/CMMC Family Medicine Residency
The CDC recommends at least 150 minutes of moderate-intensity aerobic activity every week.

According to 2013 CDC statistics, 53.6% of Mainers meet this benchmark. 

Research has identified physical activity as one intervention that can mitigate progression of chronic disease and can reverse existing disease in certain cases.

Most cancer survivors don’t exercise. Smith et al showed that cancer survivors were significantly more likely than matched healthy individuals with no cancer history to fail meeting the CDC guidelines for physical activity.

According to a 2003 survey of 23,283 US adults, a total of 39% of adults with diabetes were physically active versus 58% of adults without diabetes.

Those with chronic disease are less likely to exercise despite its numerous health benefits.
In the United States, chronic diseases and conditions and the health risk behaviors that cause them account for most health care costs.

- Eighty-six percent of all health care spending in 2010 was for people with one or more chronic medical conditions.\(^6\)
  - Cancer care cost $157 billion in 2010 dollars.\(^6\)
  - The total estimated cost of diagnosed diabetes in 2012 was $245 billion, including $176 billion in direct medical costs and $69 billion in decreased productivity.\(^6\)

- In Maine, $4.3 billion per year is associated with lost productivity due to chronic conditions, many of which are associated with obesity.\(^1\)
Q: What do you see as some of the barriers to exercise/healthy living that those affected by cancer face? Please answer specifically to the Lewiston/Auburn area.

A: The barriers that any individual faces: the discipline required to get up and do it, transportation, but specifically for cancer patients is how they feel. For some patients in the midst of chemo even thinking about exercise makes them sick. And because the Dempsey Center serves Androscoggin County, we see a diverse group of people; most of our members would be able to pay, but others are living day to day off of disability checks.

Q: What about support systems for these patients?

A: Family and friends act as the biggest support system. About ¼ of participants come with a caregiver – a husband, girlfriend, or friend as a means of transportation or exercise partner. And we’ve noticed a big difference since programs have also been made free for caregivers.

Q: What are barriers to exercise specific to diabetes patients and to the Lewiston area?

A: Certainly the weather. The low income population, in terms of access to exercise facilities and lack of growing up in a culture of exercise. Lack of confidence in the ability to exercise and lack of support networks to exercise with.

Q: What support systems would be beneficial to these patients?

A: Involving yourself in a group that had exercise built in – whether that be bird watching or an actual exercise program in the community. Finding a health network is important.
Intervention and Methodology

- **Background:** Research has shown that scheduled exercise programs and exercise partners help individuals to sustain their exercise goals.
- **Intervention:** Identify barriers to exercise in patients with chronic disease and use motivators such as group participation to overcome these barriers.
- **Methodology:** Two communities of patients with chronic disease were targeted in this intervention - CMMMC Diabetes group and participants affected by cancer at the Dempsey Center.

**Diabetes group:** polled individuals about exercise self-efficacy (confidence in one's ability to exercise) + barriers to exercise and invited all group members to join me for a walk prior to their group start.

**Dempsey Center:** Distributed aforementioned poll and joined a scheduled yoga class to present a phone tree in which members could enlist other members to schedule an exercise date.
### Results

<table>
<thead>
<tr>
<th>Survey Q</th>
<th>Thursday Yoga Class Dempsey Center</th>
<th>CMMC Monthly Diabetes Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Self-efficacy Scale from 0-30pts &gt;20 = high</td>
<td>Range = 17 – 28pts Avg 22.8</td>
<td>Range = 19-28 pts Avg 23.2</td>
</tr>
<tr>
<td>Exercises 150min/wk?</td>
<td>17 % yes</td>
<td>Not asked</td>
</tr>
<tr>
<td>More willing to exercise w/ partner?</td>
<td>Not asked</td>
<td>70% yes</td>
</tr>
<tr>
<td>Most desired program</td>
<td>Cardio/strength training</td>
<td>Not asked</td>
</tr>
</tbody>
</table>

- Exercise self-efficacy was high among both cancer patients and diabetic patients, but this was not associated with exercise commitment.
- Nearly everyone endorsed partners/group programs as motivation to exercise.
- Most cancer patients don’t reach the recommended 150min /wk of exercise.
Results Continued…

- Attended the Thursday yoga class at the Dempsey Center. Spoke about the importance of exercise and distributed pamphlets on places to walk in Lewiston/Auburn. Introduced the phone tree and all participants signed up.

- Attended the December CMMC diabetes group. Offered exercise tips and invited everyone to join me 30min prior to the January Diabetes group to walk with me. Three participants walked with me before their January meeting.
Effectiveness and Limitations

- In addition to walking with members of the CMMC Diabetes Group, I also wanted to begin a walking group at the Dempsey Center, but understood that it would not be sustainable without a long-term point person to lead the group. I was not able to provide this, so I opted for an approach that the patients themselves could run – the phone tree.

**Effectiveness**
- Patients readily agreed that they believed in exercise
- Suggested walking as an easy, affordable intervention
- Phone tree offered a conduit to connect with people that they were already familiar with
- Effectiveness can be evaluated by polling participants to see if they utilized the phone tree or if they increased their exercise.

**Limitations**
- Small sample size for both Diabetes Group and Dempsey Center group
- Walking with the Diabetes Group was a one-time event
- Lack of supervision with phone tree requires participants to rely on internal motivation to call up a buddy
- There is no instrument in place to help patients track their exercise and see if they reach 150min/week
Future Interventions

Dempsey Center
- I only involved one Dempsey Center group, but asked Mary Doyle, RN, BSN, MA Program Manager to introduce/distribute the phone tree at additional Dempsey Center classes.
- Increase the Dempsey Center’s offerings to include cardio/strength training classes

Diabetes Group
- Use the phone tree template at the Diabetes Group

Both
- Have a CMMC resident or other community volunteer initiate a walking group with interested individuals at the Dempsey Center and Diabetes Group
References

1. Maine Department of Health and Human Services
   - Maine Center for Disease Control and Prevention
   - Healthy Maine 2020


6. U.S. Department of Health and Human Services
   - Office of Disease Prevention and Health Promotion