Cancer Survivorship Care: An Emphasis on Rehabilitation Needs in Maine

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Doctor of Physical Therapy Candidates, 2015 University of New England

August-December 2014
Today’s Presentation

Background and Evidence
- Maine, Community Wellness, Behavioral Change

Needs Assessment
- Community Wellness and State of Maine Cancer Centers

Products and Sustainability
- Algorithm, Logic Model, Budget, Evaluation and Future Recommendations
Background

Facts
- 8,500 people in Maine diagnosed each year
- ¼ of the total deaths in Maine each year
- 2007 Incidence of cancer in Maine was 515 per 100,000 people.

Data source: Maine Cancer Registry and the National Surveillance, Epidemiology, and End Results Program.
Maine Cancer Survivorship Care: An Emphasis on Rehabilitation Logic Model

**Inputs**
- Partners
  - Maine Cancer Consortium
  - 15 Maine Cancer Treating Hospitals
  - Livestrong Program at Freeport YMCA
  - Community Cancer Center in South Portland
  - Dana Farber Cancer Institute
  - Maine Medical Center Cancer Institute
  - Exeter Hospital

**Outputs**
- Activities
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- Participants
  - Cancer survivors
  - Oncologists
  - Primary care physicians
  - Caregivers
  - Rehabilitation professionals
  - Community wellness program staff

**Outcomes**
- Short Term
  - Increased oncologist and primary care physician knowledge of rehabilitation and wellness services
  - Increased awareness of rehabilitation and wellness services

- Medium
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- Long Term
  - Standardized rehabilitation and survivorship services
  - Decreased public healthcare financial burden
  - Increased quality of life of cancer survivors

**Assumptions/External Factors:** Our needs assessment is an accurate portrayal of entire state of Maine, our algorithm is optimal for Maine, Maine healthcare professionals are willing to change their practice, there are appropriate resources for improving oncology rehabilitation.
Evidence of Risk Factors

Cancer and Cancer Treatment Leads To

Fatigue
- 60-96% of survivors
  Wagner, LI & Cella, D 2004

Lymphedema
- 21% of survivors
  Fu, M et al 2013 & Disipio, T et al 2013

Chemotherapy Induced Peripheral Neuropathy
- 68.1% of survivors
  Serenity, M et al 2014

All Lead to Decreased Quality of Life
Evidence for Physical Therapy and Wellness

Cancer-Related Fatigue
- Exercise decreased fatigue during and following cancer treatment
- Palliative effect in patients during treatment
- Recuperative effect post-treatment
  Puetz TW & Herring MP 2012

Lymphedema
- CDT is effective at decreasing pain and swelling and increasing quality of life
- Treatment of lymphedema with CDT is more effective than standard therapy without MLD or compression bandaging alone
  Lasinski BB et al 2011
Chemotherapy-Induced Peripheral Neuropathy
- 87.5% of participants in the intervention group experienced reduced symptoms with sensorimotor, endurance and resistance training while there were no changes in the control group
  Streckmann F et al 2014 and Streckmann F et al 2014

Quality of Life
- Exercise during and after cancer treatment was found to have beneficial effects on quality of life and domains including physical functioning, role function, social function, and fatigue
Community Wellness Needs Assessment

LIVESTRONG at the Freeport YMCA

- 2x/wk for 12 wks
- No Cost
- Low Attendance
- No Transportation
- Limited PT involvement
- Pre/Post assessment

http://www.ymcaofsouthernmaine.org/livestrongattheymca
Cancer Community Center

- Calendar of class offerings
- No Cost
- Varied Attendance
- No Transportation
- Limited PT involvement
- Program assessment

http://cancercommunitycenter.org/
Goal 14: Increase awareness and utilization of rehabilitation and survivorship services throughout Maine.

1. Educational programs for rehab/survivorship
2. Rehabilitation services and relationship with PT
3. Patient navigator
4. Quality of life measures
5. a. Transportation or lodging to access treatment  
   b. Referral to wellness programs
6. Definition of “cancer survivorship”
7. Other services to cancer survivors
8. Services for children and adolescents
9. Patient satisfaction measures
10. Survivorship care plan
11. Maine Cancer Consortium Activity Tracker
## Maine Needs Assessment

### Northern Maine (n=2)
- Aroostook Medical Center, Presque Isle; Cary Medical Center, Caribou

### Central Maine (n=4)
- Franklin Memorial Hospital, Farmington; Blue Hill Memorial Hospital, Blue Hill; Eastern Maine Medical Center*, Bangor; Mayo Regional Hospital, Dover-Foxcroft

### Southern Maine (n=9)
- Maine Medical Center*, Portland; Mercy Hospital*, Portland; Mid Coast Hospital*, Brunswick; Penobscot Bay Medical Center*, Rockport; Stephens Memorial Hospital, Norway; Waldo County Hospital, Belfast; Southern Maine Medical Center*, Biddeford; York Hospital*, York; St. Mary’s Regional Medical Center*, Lewiston

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*ACoS Accredited Cancer Centers
Definition of Cancer Survivorship (Question 6)

- 13 described survivorship as from cancer diagnosis until death
- The 14th said it was life after cancer treatment, returning to baseline health energy and psychological levels
Maine Needs Assessment Results

Patient Navigator Titles (Question 3)

<table>
<thead>
<tr>
<th>Role</th>
<th>Rating</th>
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<tbody>
<tr>
<td>RN</td>
<td>++++++</td>
</tr>
<tr>
<td>Breast Patient Navigator</td>
<td>++++++</td>
</tr>
<tr>
<td>All Sites Navigator</td>
<td>++</td>
</tr>
<tr>
<td>Navigator Team</td>
<td>+</td>
</tr>
<tr>
<td>Social Worker</td>
<td>++</td>
</tr>
<tr>
<td>Health Center Coordinator</td>
<td>+</td>
</tr>
<tr>
<td>Patient Navigator</td>
<td>+</td>
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</tbody>
</table>

Survivorship Care Plans (Question 10)

- Overall 6 said yes and 8 said no, 4 said they had plans to implement by 2015
- Out of the 6 that said yes, 5 are in the **Southern Maine Region**
- Out of the 4 that said they have plans to by 2015, 3 were from the **Southern Maine Region**
Maine Needs Assessment Results

Estimated Percentage of Patients Referred to Physical Therapy (Question 2):
- Northern Maine: ranged from very rare to “good relationship”
- Central Maine: 2-25%
- Southern Maine: 10%-100%

Percentage of Hospitals Participating in Educational Seminars by Region

Question 1
Maine Needs Assessment Results

Question 5

Percentage of Hospitals Referring to Community Wellness by Region

<table>
<thead>
<tr>
<th></th>
<th>Central</th>
<th>Southern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Percentage of Hospitals Offering Transportation or Lodging by Region

<table>
<thead>
<tr>
<th></th>
<th>Central</th>
<th>Southern</th>
</tr>
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<tbody>
<tr>
<td>Yes</td>
<td>80</td>
<td>80</td>
</tr>
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<td>No</td>
<td>20</td>
<td>20</td>
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</tbody>
</table>
Maine Needs Assessment Results

Patient Satisfaction Measure Use (Question 9)
- Yes (9)
- No (5)

Activity Tracker Use (Question 11)
- Yes (4)
- No (10)
Maine Needs Assessment Results

Quality of Life Measures (Question 4)

- Quality of Life = Psychosocial issues
- PHQ-9 standardized tool used

- Unmet needs Hansen et al, 2013
  - 60.1% of patients reported unmet rehabilitation needs

Pediatric Services (Question 8)

- Supportive care for families vs pediatric oncology services
ICF Model
The branches off curative and palliative show that there are 3 distinct points in which rehabilitation is appropriate for a cancer survivor. It is important to acknowledge which stage a patient is in to understand what their impairments may be.
Implementing Behavioral Change

Algorithm

Behavioral Change

Implementation
Implementing Behavioral Change

Creation of Algorithm
- Determine whether or not the cancer survivor requires a rehabilitation screen by a physical therapist

Behavioral Change Theory
- Determine which method would be most beneficial for prompting providers to make appropriate referrals
  Smith WR 2000

Implementation of Algorithm
- Determine which method would be most effective to deliver the algorithm and promote referrals to physical therapy within the realm of cancer survivorship
Value Proposition

- Decrease financial burden through utilizing our algorithm as a guideline to improve a patient’s quality of life

- There needs to be more of an emphasis on preventative care and tailoring treatments to meet the unique needs of every survivor
Budget of Physical Therapy In Oncology Team for One Year

**Fixed Expenses**

Salaries:
- Senior PT - $71,040
- PT - $57,600
- PTA - $42,240
- Personnel - $34,560

= $205,440

**Variable Expenses**

Supplies:
- EMR System
- Exercise and Other Equipment
- Utilities

= $23,780

Total = $229,220
## Budget of Physical Therapy In Oncology Team for One Year

<table>
<thead>
<tr>
<th>Income</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billable Hours As PT:</td>
<td>Total Income: $309,600</td>
</tr>
<tr>
<td>- Patients Per Year</td>
<td>Total Expenses: $229,220</td>
</tr>
<tr>
<td>- Frequency of Visits</td>
<td>Revenue = $80,380</td>
</tr>
<tr>
<td>- Services Provided</td>
<td></td>
</tr>
<tr>
<td>= $309,600</td>
<td></td>
</tr>
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</table>
### Comparing a prospective surveillance model to traditional therapy model

**Prospective Surveillance**
- Preoperative Baseline and follow-up 1, 3, 6, 9, and 12 months **$255.04**
- If lymphedema is dx (>3-5% volume increase) pt is issued with ready-made garments **$344.00**
- No compression bandages req’d

**Prospective surveillance =**$636.19

**Traditional Therapy**
- Pt referred to PT, eval **$69.29**
- Eval then CDT 5 visits/week for 2 weeks, 3 visits/ for 1 week **$1,388.48**
- Custom made garments **$1400.00**
- Bandages **$230.00**
- Follow up **$37.15**

**Traditional model =**$3,124.92
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## Evaluation

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<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Research supports rehabilitation</td>
<td>- Limited professional representation</td>
<td>- Interprofessional incorporation</td>
<td>- Sustainability</td>
</tr>
<tr>
<td>- Low developmental cost</td>
<td>- Great level of time and effort for 9 students</td>
<td>- Create gold standard</td>
<td>- Behavioral changes required</td>
</tr>
<tr>
<td>- Strengthens scope of practice for PT</td>
<td></td>
<td></td>
<td>- No set baseline</td>
</tr>
</tbody>
</table>
Recommendations
Questions?

TO DO LIST:

☐ BEAT CANCER
☐ LIVE MY LIFE
References


References


- Smith WR. Evidence for The Effectiveness of Techniques To Change Physician Behavior. CHEST Journal. 2000: 11(8): 8S-17S.

