Implementation of a Lymphoedema Surveillance program (LSP) in the Ballarat Health Services Breast Clinic

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Ballarat—Where is it?
Grampians Health Region:

- Population 230,000
- 48,000 Square km’s
- 4.4% of Victoria’s population
A Population at risk:

**We Are At Risk!**

- **Overweight/Obese**
  - 60%
  - Overweight: Being overweight or obese increases risk of developing cancer.

- **Current Smokers 18 Years or older**
  - 15%
  - Smoking: Smoking is a leading cause of cancer and death from cancer.

- **Alcohol Intake per day (Average)**
  - 54%
  - Alcohol Intake: Drinking alcohol can increase your risk of cancer of the mouth, throat, esophagus, larynx (voice box), liver, and breast. The more you drink, the higher your risk.

- **Inadequate Fruit & Veg Intake**
  - 45%
  - Inadequate Fruit & Veg Intake: Lack of adequate fruit & vegetable consumption increases cancer risk.

- **No or Low Exercise**
  - 56%
  - Inadequate Exercise: Lack of adequate exercise increases cancer risk.

**State averages:**
- 50%
- 13%
- 50%
- 49%
- 52%
Ballarat Health Services:

- 294 acute and sub-acute beds
- 80-100 new breast cancer patients annually
- Ballarat Regional Integrated Cancer Service with radiotherapy and chemotherapy on site
Lymphoedema Models of Care:

• Traditional Vs Surveillance Model Of Care
• Traditional-referred in when swelling evident
• Growing body of evidence to support early surveillance model
  - Development of sensitive measurement tools
  - Early intervention leads to improved results
  - Reduced cost to patient and health services
• Endorsement by peak professional bodies such as ALA(2012) and NLN(2011)
Ballarat Health Services
Lymphoedema Program:

• Established in 2003 as a traditional model promoting self management and following chronic disease management principles

• Desire to establish an early surveillance model of care however breast cancer patients seen throughout the week in general surgery clinics

• Surgical breast clinic established in 2015 = opportunity

• GICS cancer conversations grants
Aims of the Lymphoedema Surveillance Program Project:

- Design and implement a LSP within the Breast Clinic
- Train an Allied Health Assistant to conduct the assessment
- Assess the patients acceptance of the LSP
- Assess the staff support for the LSP
- Review clinical application of the measurements obtained
Method:

- Literature review and design the program
- Data collection for 6/12
  Pre-operatively assess every new breast cancer patient,
  collect baseline measures including:
  bio-impedance analysis and
  circumferential measures
  And provide education
- All patients and staff to be surveyed
- Review of data
Results:

Patient Related Data:

• 41 new breast cancer patients
  2 had neo-adjuvant chemo = excluded

• 35/39 patients were included in the project.
  6 patients were seen in general surgical clinics due to surgeons being unavailable for breast clinic.
  2/6 patients were offered appointments and both elected to attend for the pre-operative assessment in BRICC.
## Patient Characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Patients (N=35)</th>
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<tbody>
<tr>
<td>Age (years), mean (SD)</td>
<td>60.9 (22-85)</td>
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<tr>
<td>Female (Gender)</td>
<td>35/35 (100%)</td>
</tr>
<tr>
<td>BMI &lt;25</td>
<td>6/28 (21%)</td>
</tr>
<tr>
<td>&gt;25</td>
<td>22/28 (79%)</td>
</tr>
<tr>
<td>Dominant limb</td>
<td>20/35 (57%)</td>
</tr>
<tr>
<td>WLE and SNB</td>
<td>18/35 (51%)</td>
</tr>
<tr>
<td>Mastectomy and SNB</td>
<td>8/35 (23%)</td>
</tr>
<tr>
<td>WLE and A/C</td>
<td>2/35 (6%)</td>
</tr>
<tr>
<td>Mastectomy and A/C</td>
<td>6/35 (17%)</td>
</tr>
<tr>
<td>A/C only(recurrent disease)</td>
<td>1/35 (3%)</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>28/35 (80%)</td>
</tr>
<tr>
<td>Taxane chemotherapy</td>
<td>17/35 (48%)</td>
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Results:

Patient Survey Results
• 30/32 (94%) indicated they preferred to have their assessment completed on the day
• 29/31 (94%) rated the overall experience as 5/5 being very good

Staff Survey Results
• 8/9 (89%) strongly agreed with the statement “I support the implementation of the LSP”
• 7/9 (78%) rated the overall experience of having the LSP conducted in the Breast Clinic as 5/5
Results:

- **Bio-impedance Analysis:**
  
  16/35 (45.7%) returned a negative bio-impedance score.

- **Circumferential Measure Differences:**
  
  -4.6cm to +2.9cm
  
  3/35 had a >2cm difference.

- **Anecdotal Results:**
  
  2 patients referred into the Lymphoedema Program prior to their scheduled review and within 6/52 post-surgery.

  *This early referral has NEVER occurred in the past*
18 Month Data:

34/35 ongoing follow-up – excellent adherence
- 13/34 (34%) have or have had lymphoedema
- 4/13 have resolved
- 2/13 continue to have significant lymphoedema

<table>
<thead>
<tr>
<th>Region</th>
<th>Arm</th>
<th>Breast</th>
<th>Chest</th>
<th>Hand</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Resolved</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
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</tbody>
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Time To First Review:
- 3 months: 11.8%
- 4 months: 41%
- 6 months: 88%
Future Considerations:

• Improve our first review timing
• Ongoing review of the data to ensure the right patients are seen at the right time/s
• Continue to review appropriateness of 10 unit Ldex change
• Continue to review appropriateness of management options
How we did it:

• Be prepared—grant applications often have short lead times
• Engage consumers early and consistently
• Network with key stakeholders-GICS, Surgeons, BCN, management
• Utilized appropriately trained AHA
• Be persistent
Conclusion:

- The LSP was found to be feasible to operate
- Acceptable to patients and staff
- Data collected has proven to be very useful in the ongoing management of the patients
Thank you:

TO OUR PATIENTS FOR THEIR VALUABLE CONTRIBUTION AND PARTICIPATION
TO GICS FOR THE FUNDING
TO KAREN SIMPKIN (AHA), THE PHYSIOTHERAPY TEAM AND THE BREAST CLINIC
STAFF FOR ALL THEIR HARD WORK AND SUPPORT