Client outcomes of a health promotion program for older people with venous leg ulcers

Suzanne Kapp Clinical Nurse Consultant Wound Management and Research
Charne Miller Researcher
Lisa Donohue Researcher
Acknowledgements

- Sidney Myer Foundation
- Angior Family Foundation
- Department of Veteran Affairs
- RDNS clients
- RDNS nurses

Home and Community Care (HACC) services provided by RDNS are jointly funded by the Victorian and Australian Governments
Background

- Chronic disease
- Venous leg ulcers
- Health promotion
- The Leg Ulcer Prevention Program (LUPP)
The Leg Ulcer Prevention Program

Components:

• Multimedia Package
• LUPP Folder
• Summary Sheets
• Activities

Session Topics:

1. What is a leg ulcer?
2. Leg ulcer treatment
3. Getting active
4. Nutrition & hydration
5. Looking after your skin
6. Compression stockings & keeping your ulcer healed
LUPP Evaluation

- Client knowledge and behaviour
- Client satisfaction

- Nurse satisfaction
- Compression stocking adherence and ulcer recurrence
Study Design

Pre and Post intervention study of client knowledge and behaviour

Eligibility:

• Has a venous leg ulcer
• Spoke English
• Receiving care at participating RDNS Sites

Recruitment: 31<sup>st</sup> March 2009 – 17<sup>th</sup> March 2010

Data collection: Matched client Pre and Post LUPP Questionnaire

(Client Satisfaction Survey included in Post LUPP Questionnaire)
Client Knowledge Results
## Multi-choice questions

<table>
<thead>
<tr>
<th>Statement</th>
<th>Pre-test (% correct)</th>
<th>Post-test (% correct)</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem with skin / legs … contact doctor/ nurse immediately</td>
<td>n=154</td>
<td>74.0</td>
<td>91.6</td>
</tr>
<tr>
<td>Leg ulcer is … a skin break taking &gt; 6 weeks to heal</td>
<td>n=152</td>
<td>67.1</td>
<td>77.6</td>
</tr>
<tr>
<td>Best way to avoid another leg ulcer is … wear stockings</td>
<td>n=154</td>
<td>65.6</td>
<td>94.8</td>
</tr>
<tr>
<td>Most important treatment … compression bandaging</td>
<td>n=152</td>
<td>63.8</td>
<td>88.8</td>
</tr>
<tr>
<td>Most common cause of leg ulcers … poor veins</td>
<td>n=152</td>
<td>63.2</td>
<td>80.9</td>
</tr>
</tbody>
</table>

✅ All demonstrated statistically significant improvement in knowledge
### Multi-choice questions (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Pre-test (% correct)</th>
<th>Post-test (% correct)</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>I should check the skin on my legs … every day</td>
<td>n=154</td>
<td>58.4</td>
<td>77.3</td>
</tr>
<tr>
<td>I should elevate my legs … 3-4 times a day</td>
<td>n=155</td>
<td>57.4</td>
<td>76.1</td>
</tr>
<tr>
<td>The most important activity is… walking</td>
<td>n=153</td>
<td>54.2</td>
<td>80.4</td>
</tr>
<tr>
<td>An optimal diet … includes all major food groups</td>
<td>n=152</td>
<td>54.6</td>
<td>68.4</td>
</tr>
<tr>
<td>Most people should drink … 8 or &gt; glasses water daily</td>
<td>n=155</td>
<td>48.4</td>
<td>72.3</td>
</tr>
<tr>
<td>A dressing should … keep the ulcer moist</td>
<td>n=152</td>
<td>28.9</td>
<td>51.3</td>
</tr>
</tbody>
</table>

All demonstrated statistically significant improvement in knowledge
**True / false questions**

- **Significant:** questions regarding nutrition, activity and exercise, skin care, treatment of venous ulcer

- **Not significant:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-test (% correct)</th>
<th>Post-test (% correct)</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression will fix the problem with my veins (false)</td>
<td>n=154 24.7</td>
<td>18.8</td>
<td>.188</td>
</tr>
<tr>
<td>Wounds should be cleansed at every dressing (false)</td>
<td>n=155 1.9</td>
<td>6.5</td>
<td>n/a*</td>
</tr>
</tbody>
</table>
Client Behaviour Results
## Activity and Exercise

### Significant:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Pre-test (%)</th>
<th>Post-test (%)</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client usually elevate legs when sitting / resting</td>
<td>n=154</td>
<td>72.1</td>
<td>83.1</td>
</tr>
<tr>
<td>Client believes has been keeping active</td>
<td>n=155</td>
<td>69.0</td>
<td>79.4</td>
</tr>
<tr>
<td>Client recommended to do heel raises and squats</td>
<td>n=155</td>
<td>26.5</td>
<td>95.5</td>
</tr>
<tr>
<td>Client regularly does heel raises and squats</td>
<td>n=154</td>
<td>14.9</td>
<td>66.2</td>
</tr>
</tbody>
</table>

### Not significant:
- Degree of physical activity – walks frequently
- Client usually crosses legs when sitting
- Client recommended to elevate legs when sitting / resting
Nutrition

Not significant: all behaviours in the area of nutrition
• Usual food intake
• Fluid intake
• Supplementation recommendation and use
• Multivitamins recommendation and use
• Client believes eating and drinking well
### Skin Care

<table>
<thead>
<tr>
<th></th>
<th>Pre-test (%)</th>
<th>Post-test (%)</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care plan includes use of a soap substitute</td>
<td>24.5</td>
<td>70.3</td>
<td>.000</td>
</tr>
<tr>
<td>Soap substitute is being used</td>
<td>30.3</td>
<td>67.7</td>
<td>.000</td>
</tr>
<tr>
<td>Care plan includes use of a moisturiser</td>
<td>73.1</td>
<td>92.9</td>
<td>.000</td>
</tr>
<tr>
<td>Moisturiser is being used</td>
<td>83.1</td>
<td>92.9</td>
<td>.004</td>
</tr>
</tbody>
</table>

> All areas demonstrated significant improvement in behaviour
Compression Use

<table>
<thead>
<tr>
<th></th>
<th>Pre-LUPP</th>
<th>After-LUPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>No compression</td>
<td>33.2%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Best practice 4 layer system</td>
<td>13.5%</td>
<td>41.5%</td>
</tr>
</tbody>
</table>

Changes to compression:

54.9% - due to LUPP
- 67.9% - led to 4 layer system

30.7% - unrelated to LUPP
- 27.7% - led to 4 layer system

**Significant**: Type of compression that was changed to and whether change was a result of LUPP ($\chi^2 (2)=41.291$, $p<0.000$)
Client Satisfaction
Satisfaction with LUPP

95% or more clients responded that LUPP:

- Improved understanding
- Increased knowledge
- Received information not known beforehand
- Computer was excellent

100% - Valuable to have the nurse during LUPP

“This program [LUPP] could be a life saver to all ulcer victims.”

“This program [LUPP] is an excellent way to help people to understand the problem and help themselves.”
Discussion

• LUPP changed:
  ✓ Client knowledge in all areas targeted
  ✓ Behaviours in the areas of activity and exercise, skin care
    and compression bandaging use

• Older people engaged with multimedia

• Clients were highly satisfied with LUPP

• Favourable results from nurses perspective
Suzanne Kapp
skapp@rdns.com.au
95365336