PRESSURE INJURY PREVENTION IS PARAMOUNT AT BHS
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Health Service: Ballarat Health Services
KEY PROBLEM

Pressure ulcers in particular are a national (and international) patient safety problem and are considered a leading indicator to the quality of wound care provision by a facility.

Ballarat Health Services recognises wound care as a critically important concern that presents broad opportunities for clinical, operational and financial improvement.
AIM OF THIS INNOVATION

- Improve patient outcomes by implementing best practices in wound care;
  - Early identification of patients at risk of Pressure Injury
  - Reduce Pressure Injury Point Prevalence
  - Reduce severity of Pressure Injuries
  - Reduce frequency of dressing changes
  - Improve wound healing time

- Standardise wound care practices among health care providers;

- Reduce the cost of wound care services including reductions in costs of supplies and nursing time;

- Improve patient quality of life by reducing the number of wounds and increasing evidence based wound care practice;

- Improve internal business processes related to wound care.
BASELINE DATA

In order to collect baseline data a data collection form was developed. Independent Consultants together with BHS staff performed a head to toe assessment on each inpatient, reviewed documentation (including patient wound charts) and assessed nurses on knowledge.

The data collection form captures data on specific clinical indicators, for example:

- Different types of wounds and distribution across BHS
- Prevalence of pressure ulcers
- Other patient safety initiatives
- Frequency of dressings changes
- Type of dressings used
- Prevalence of wound infections
- Documentation

<table>
<thead>
<tr>
<th>Pressure Injury:</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>16</td>
<td>47%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>12</td>
<td>35%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Unstageable</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100%</td>
</tr>
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</table>

Demographics -2009

<table>
<thead>
<tr>
<th></th>
<th>Acute n=186</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean years)</td>
<td>50</td>
</tr>
<tr>
<td>Gender % female</td>
<td>55%</td>
</tr>
<tr>
<td>Diabetic</td>
<td>16%</td>
</tr>
<tr>
<td>Pressure risk assessment done</td>
<td>61%</td>
</tr>
<tr>
<td>Prevention care for high pressure risk</td>
<td>15%</td>
</tr>
<tr>
<td>Incontinent (any)</td>
<td>5%</td>
</tr>
<tr>
<td>Falls risk</td>
<td>42%</td>
</tr>
</tbody>
</table>

Prevalence of Pressure Injury by location: Acute Care
KEY CHANGES IMPLEMENTED

A partnership was developed involving BHS and third party partners Smith & Nephew and Nursing Practice Solutions Inc. enabling the on-going implementation of a comprehensive Wound Prevention and Healing System, incorporating all of the essential components of best-practice, evidence-based wound management. Including:

- **Leadership**
  - Clear leadership and commitment to pressure ulcer reduction as a clinical priority at the senior executive level
  - Clear definition of roles and responsibilities

- **Planning**
  - Detailed project planning, involving participation from all organisational levels and clinical disciplines

- **Measurement/ Monitoring**
  - Systems in place for data collection, measurement and monitoring of all key indicators
  - Assessment of pressure ulcer prevalence and current practices prior to program implementation to provide data benchmarks

- **Best Practice Clinical Protocols**
  - Evidence-based best-practice pathways and protocols for all aspects of pressure ulcer prevention and management
  - Clinical resources developed locally or drawn from available sources and changed to meet local requirements as appropriate

- **Education and Training**
  - Education/training programs and support materials
  - Application of advanced adult learning method

- **Product Formulary**
  - Detailed specification of all wound care products and appropriate use to streamline purchasing and ensuring consistency across the organisation

- **Reporting and Communication**
  - Regular reporting on clinical indicators to all clinical staff
  - Staff meetings, ongoing communications to support program objectives and continuous improvement

- **Engage of Patients and Families**
  - Education of patients and family on pressure ulcers and pressure ulcer prevention
  - Tools such as posters, pamphlets, turning clocks to engage family members
OUTCOMES SO FAR

Implementation of the pressure ulcer reduction program has proved to be highly effective, showing measurable results. Table 1 provides a comparative summary of key indicators before and after program implementation. The results are highlighted by significant reductions in overall pressure ulcer prevalence rates, reflecting both faster healing rates and improved pressure ulcer prevention.

The data also confirm major changes in wound management practices. One of the most important changes was the shift away from dry gauze dressings, which are typically changed at least once daily, to advanced wound dressings, which are based on moist wound healing principles and require far less frequent changes. Significant reductions in daily dressing changes and corresponding increases in advanced dressing utilisation were achieved.

Table 1.

<table>
<thead>
<tr>
<th></th>
<th>August 2009</th>
<th>March 2011</th>
<th>June 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PU Prevalence</td>
<td>11%</td>
<td>6%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Acute</td>
<td>11%</td>
<td>9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Sub Acute</td>
<td>26%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>Residential</td>
<td>9%</td>
<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Daily dressing changes decreased from 1364 per week to 77!

Nursing time decreased from 228hrs/week to 12.8hrs!

<table>
<thead>
<tr>
<th></th>
<th>Beginning Dates</th>
<th>End Dates</th>
<th>Months</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Program</td>
<td>1/12/2008</td>
<td>31/07/2010</td>
<td>19</td>
<td>399,999.54</td>
</tr>
<tr>
<td>Post Program</td>
<td>1/08/2010</td>
<td>31/03/2012</td>
<td>19</td>
<td>333,196.07</td>
</tr>
</tbody>
</table>

Saving: 66,803.47

The Health Roundtable
LESSONS LEARNT

A number of practical recommendations for health care organisations evaluating pressure ulcer reduction options can be drawn from this program. These include:

- Understand the scope and nature of the pressure ulcer problem. Implement data collection and measurement systems. Conduct a prevalence survey and an assessment of clinical practices to benchmark key indicators prior to program launch.

- Identify clear leadership at the executive level. Pressure ulcer prevalence reduction must be established and maintained as an organisational priority.

- Select clinical and administrative leaders with experience in program implementation and organisational change. These leaders will be required to identify and navigate barriers to change.

- Build a multi-disciplinary team that includes specialists such as physiotherapists, nutritionists, podiatrists, etc. Involve these disciplines in all stages of planning and implementation.

- Promote the central role of nurses in pressure ulcer prevention and management. Appeal to the fundamental desire of nurses to provide for the health, comfort and well-being of patients.

- Help build broad organisational support by linking pressure ulcer prevalence to resource management issues such as length-of-stay in acute care and alternative level of care (ALC) beds. Pressure ulcers are an important cause of preventable acute care stays.

- Recognise and build upon the role of pressure ulcer reduction as an important part of the organisation’s overall patient safety agenda. The program can serve to reduce pressure ulcers, which are a major patient safety risk, while also establishing basic clinical and organisational practices that contribute to a patient safety culture.

- Report regularly on clinical and practice indicators such as pressure ulcer prevalence, infection rates, healing times and use of best-practices. Evaluate progress. Identify gaps and opportunities for continuous improvement.