A Prudent Pressure Ulcer Prevention Approach within Care Homes through a Co-production relationship between Direct Healthcare Services and Welsh Wound Innovation Centre

Nicola Ivins RGN, Wendy Davies RGN, Sue Hagelstein RGN, Nia Jones RGN, Neal Walkley PhD, Keith Harding CBE

**Aim:** To establish whether a 5-phased structured approach including audit, education and deployment of a new hybrid mattress has an impact on the overall care received by residents in 4 care home settings across South Wales.

### Audit
- Determine the current prevalence of pressure ulcers, by skin inspection.
- Determine the risk status of the patients using a recognised risk assessment tool (Waterlow score 2007).
- Review the equipment including its appropriateness use and overall condition of the equipment.
- Identify the level of staff knowledge in relation to pressure ulcer prevention.
- Identify staff attitudes to pressure ulcer prevention.

### Education
- An education programme was delivered to all registered and non-registered carers including:
  - Identification of patients at risk, Management and documentation of risk
  - Categorising skin damage and differential diagnosis
  - Use of pressure ulcer prevention equipment (Dyna-Form Static™ Air HZ mattress)

### Deployment of new equipment and support
- Replacement of existing mattresses with Dyna-Form™ Static HZ mattress by Direct Healthcare Services
  - Dyna-Form™ Static Air HZ is a mattress replacement system that combines the benefits of effective air displacement technology with the best of modern foams for a new standard of innovative pressure ulcer prevention and management.

### Re-audit 3 months after deployment of Dyna-Form™ Static HZ mattress
- Re-check of current risk status
- Skin inspection of all residents on the new mattress
- Knowledge and attitudes of carers post education programme

### Development of an e-learning digital platform
- Deployment of evidence based e-learning modules. These 4 modules include skin assessment, risk assessment. Pressure ulcer categorising, equipment usage and maintenance.
- Ongoing learning through interactive platforms delivered via hand held technology.

### Results:
This is part of an ongoing project. One nursing home has completed the first four phases of the project. The tables below display the baseline and re-audit demographics of the residents and the results of the mattress check at the baseline audit.

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Re-audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Average age</td>
<td>90</td>
<td>89</td>
</tr>
<tr>
<td>Risk score (Waterlow)</td>
<td>19</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audit</th>
<th>Pass</th>
<th>Fail</th>
<th>N/A</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mattresses (n=)</td>
<td>9</td>
<td>17</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>%</td>
<td>25.7</td>
<td>48.6</td>
<td>17.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Discussion:
- Prevalence of pressure ulcers was low across all homes.
- Equipment and mattress protocols on quality checks to be reviewed by nursing homes.
- Education well received at all homes.
- High attendance at teaching sessions - >90% of staff attended the training.
- High return of knowledge and attitude questionnaires - >90% of staff completed the questionnaires.
- No pressure damage recorded for any patients on the Dyna-Form Static HZ mattress on patients upon the re-audit.
- No Dyna-Form Static HZ mattresses failed the re-audit.

**Contact Details:**
- +44 1443 443870, www.wwic.wales, nicky.ivins@wwic.wales