Use of PICO® to improve clinical and economic outcomes in hard-to-heal wounds

This was a clinical and economic review of 52 stalled wounds, of varied etiology and duration, from multiple centers (10 sites across the UK, Denmark, Sweden and Canada) with application of PICO Single Use Negative Pressure Wound Therapy Dressing. Data was compared to predicted standard of care (non-NPWT) to evaluate healing outcomes, financial costs and required nursing hours.

Evidence

- Level 3 evidence: Prospective cohort study.
- 12-week post-baseline period and a further 26-week predictive outcomes model.
- The aim of this evaluation was to develop a pathway that supports decision-making when using PICO in place of standard care (non-NPWT) to improve healing outcomes with focus on efficient use of healthcare provider resources.

Clinical outcomes

Headline Results

- Application of the decision pathway using PICO to stalled wounds improved healing trajectory compared to standard care. (See figure 1)
- 61.5% of wounds either healed (14/52) or were on a projected healing trajectory after 12 weeks (18/52)

Details

- During PICO treatment, wound areas reduced by a weekly average of 13.4% greater than pre-PICO rates.
  - Statistically significant (p<0.006)
- During the 12 weeks following PICO application wounds reduced on average by 9.6% per week greater than pre-PICO rates.
  - Statistically significant (p=0.001)
- Improved healing was observed across various wound types within 12 weeks.
- Using the decision making pathway for use of PICO treated wounds showed improved healing compared to standard care. (See table 1)

Economic outcomes*

Headline Results

- It is estimated that the use of PICO reduced total costs by 33.1% ($71,320 for 52 wounds) over 26 weeks compared to predicted standard care ($143,996 vs. $215,317). (See figure 2)

Details

- At 26 weeks:
  - Nursing costs were estimated 49.7% lower for PICO versus predicted standard care ($86,285 vs. $171,865).
  - PICO dressing costs were estimated 32.8% more ($57,711 vs. $43,452) than predicted standard care. However, it was also estimated that over a one year period, the use of PICO would result in an 11.2% reduction in dressing cost due to earlier healing.
  - PICO-healed wounds released an estimated 897 nursing hours (119 days) compared to predicted standard care; PICO-healed and projected to heal wounds were estimated to released 1,071 nursing hours (143 days).

Clinician feedback

Clinicians’ reported “good” or “excellent” experience of PICO use with:
- 72.5% for wound progression
- 90.9% for device functionality
- 92% for patient experience
- 80.7% for clinician feedback.

Clinical outcomes

Table 1: Impact of wound duration on healing rate

<table>
<thead>
<tr>
<th>Wound duration</th>
<th>Percentage healed/healing</th>
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<tbody>
<tr>
<td>&lt;3 months</td>
<td>94.1%</td>
</tr>
<tr>
<td>3-6 months</td>
<td>71.4%</td>
</tr>
<tr>
<td>&gt;6-12 months</td>
<td>42.9%</td>
</tr>
<tr>
<td>&gt;1 year</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

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For detailed product information, including indications for use, contraindications, effects, precautions, warnings, and important safety information, please consult product’s Instructions for Use (IFU) prior to use.

*Dollar rates were converted to US dollars by using the nearest dollar using Source of currency conversion British Pounds to USD Wall Street Journal http://wsj.com/mdc/public/page/2_3021-forex.html?mod=mdc_pastcalendar Accessed 1/25/2018

**Figure 1: Weekly area reduction rate (%)**

**Figure 2: Total estimated costs reduction**

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