

# Achieving Accelerated Healing in a Community Setting

An Interview with Jane Hampton, MSc, RN



The treatment of non-healing wounds accounts for a high proportion of wound care costs. Advanced technologies, such as negative pressure wound therapy (NPWT), could be cost-effective if they result in faster healing. We asked Jane Hampton about her recently published study on the cost-effectiveness of PICO® NPWT in treating hard-to-heal wounds.

**Q** Your article entitled “Providing cost-effective treatment of hard-to-heal wounds in the community through use of NPWT” in the *British Journal of Community Nursing*, (Vol 20, No 6, Suppl *Community Wound Care*, June 2015) suggests healing times can be shortened with NPWT. Can you tell us a little about that?

**A** PICO was used on 9 chronic wounds that were slow-healing or non-healing. The wounds had been present for on average 6 months, with an average weekly healing rate of only 3.5%. The use of NPWT achieved an accelerated average weekly healing rate of 21%. Using NPWT for two weeks appeared to kick-start the healing process, resulting in a reduced wound size that would have taken an estimated 10 weeks to achieve with standard treatment. Six wounds went on to heal during the study. The time taken to complete healing was between 10 and 23 weeks faster than expected when based on the healing rates prior to the use of NPWT.

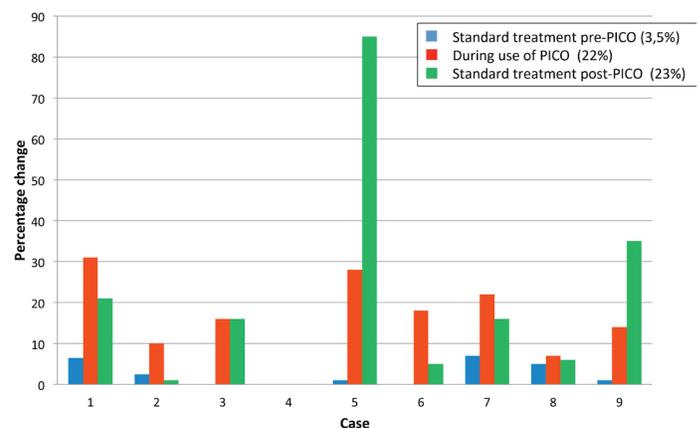
**Q** What happened when the NPWT was stopped? Did the wounds continue to heal? At what rate?

**A** After NPWT was stopped 7 wounds continued to heal at a faster rate than prior to the use of NPWT, with an overall average weekly size reduction of 23%. This is a high weekly rate and, 4 weeks after NPWT was stopped, one wound had healed and a second was almost healed. The average weekly healing rate for the remaining wounds was 11%—still considerably faster than the rate prior to the use of NPWT.

Three wounds did not heal during the study. These patients had had their wounds longer than 12 months and there were multiple co-morbidities that impacted on the potential to heal. While NPWT was in use these three wounds reduced in size more quickly than under standard treatment, but the weekly reduction was less than 10%. After NPWT was stopped the healing rate reverted to that seen prior to NPWT.

## Weekly reduction in wound size (%)

Standard treatment vs. PICO



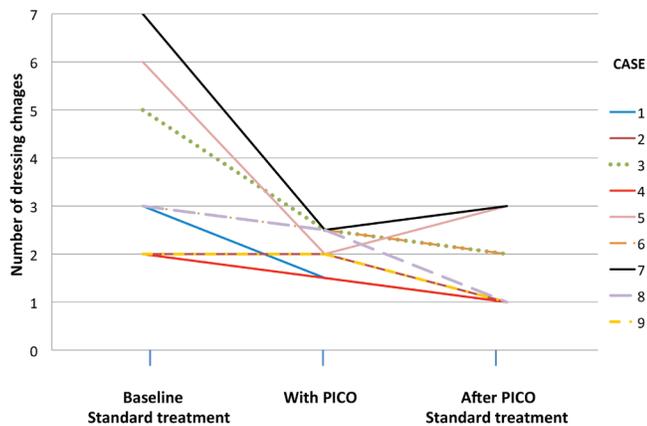
**Q** NPWT is relatively expensive. How can clinicians justify the use of such a treatment vs. standard treatment?

**A** The weekly treatment costs associated with using NPWT were on average 1.6 times higher than the expenses associated with standard treatment when comparing the nursing time and wound care products used at each dressing change. This means that 2 weeks of using NPWT cost the equivalent of 3.2 weeks of standard treatment, an additional expense equivalent to 1.2 weeks. This was shown to be cost effective due to both the short-term and long-term effects on healing rate.

The highest proportion of wound care costs are associated with nurse time, so **a change in the frequency of dressing changes can have a greater impact on overall expenses than which products are used.** After NPWT was stopped the resultant smaller wounds and reduced exudate required fewer dressing changes each week. Therefore, **dressings were now changed on average 1.8 times a week as opposed to an average of 4 times a week prior to using NPWT.**

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### Frequency of dressing changes (week)



The ongoing weekly treatment costs after stopping NPWT were a third cheaper than costs prior to using NPWT. That is, the expenses associated with one week of pre-NPWT treatment was now providing 3 weeks of treatment post-NPWT. This actually means that **the first 5 weeks of treatment in the study**—2 weeks with NPWT plus the following 3 weeks post-NPWT—**cost the equivalent of 4 weeks of standard treatment** at pre-NPWT costs. This demonstrates a cost saving in the immediate course of treatment.

**In the long term the wounds treated with NPWT healed on average 13 weeks earlier than predicted.** The faster healing and resultant shortened total treatment period gave considerable cost savings in both nursing time and wound care products and demonstrates that NPWT can be cost effective.

Previous studies have shown that the wounds that cost the most to treat are those that have existed longer than 6 months, irrespective of their size. If we can heal wounds faster and reduce total treatment periods, health-care providers could achieve considerable savings.

**Q What recommendations would you make to clinicians and other decisions makers about the use of NPWT? Is NPWT for everyone?**

**A** Just as with all wound care products NPWT is probably not appropriate for all patients. In this study the effect of NPWT was less dramatic on wounds that had been present longer than 1 year.

My recommendations would be:

- Short-term (2–3 weeks) targeted use of NPWT on slow-healing wounds. Further research is required to investigate whether longer term use of NPWT remains cost effective and clinically effective on wounds that are initially less responsive to NPWT.
- The early identification of wounds at risk of becoming slow-healing with a resultant use of NPWT early on in the course of treatment in order to prevent delayed healing.
- The availability of NPWT as a standard wound care product in the community setting.

**Q How would you summarize the results of your study?**

**A** The use of NPWT appeared to kick-start the healing process in slow/non-healing wounds. There was a quicker reduction in wound size than that achieved with standard treatments while NPWT was in use, and this accelerated healing continued after NPWT was stopped. The wounds that went on to heal did so considerably quicker than expected. **The reduced frequency of dressing changes and the shortened total treatment periods resulted in considerable cost savings, demonstrating that NPWT can be a cost-effective treatment choice for slow/non-healing wounds.**

**Photos:** Pressure ulcer on hip. Cared for in the community for two months prior to start of PICO.



PICO start: 37.5 cm<sup>2</sup>



After 14 days: 20.5 cm<sup>2</sup>



Four weeks post-PICO: 10.1 cm<sup>2</sup>

At Smith & Nephew, we are passionate about reducing both the human and economic costs of chronic wounds. For more on wounds and to view a presentation by Jane Hampton, please visit [www.smith-nephew.com/education/categories/wound-management/](http://www.smith-nephew.com/education/categories/wound-management/), a free resource for wound care clinicians, doctors and administrators.

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