

+ Evidence in focus

Publication summary: Nherera LM, et al. *Wound Repair Regen* (2017)*

Reductions in dressing changes, surgical site complications (SSCs) and length of stay (LoS) with PICO[◇] Single Use Negative Pressure Wound Therapy System (sNPWT) demonstrated estimated cost savings compared with standard dressings for primary hip and knee replacement

+ Plus points



Estimated cost savings of **£1,049 (\$1,490)** per patient with PICO sNPWT versus standard dressings



Estimated savings up to **£7,955 (\$11,296)** per patient with PICO sNPWT in high-risk patients

Overview

- An economic analysis comparing the expected costs and benefits of PICO sNPWT with standard dressings, from the UK healthcare payer perspective
- The model used data from a single-center randomized controlled trial (220 patients),¹ which demonstrated that PICO sNPWT helped to reduce dressing changes, LoS and SSCs over 6 weeks following routine primary total hip and knee replacement

Results

- PICO sNPWT was cost-saving when compared with standard dressings (Figure)
 - Use of PICO sNPWT was estimated to result in 0.97 avoided complications and a gain of 0.117 quality-adjusted life years (QALYs), compared with 0.92 avoided complications and 0.116 QALYs for standard dressings
- Use of PICO sNPWT was estimated to result in greater cost savings in high-risk patients, compared with standard dressings:
 - £7,955 (\$11,296) per patient with a BMI $\geq 35\text{kg/m}^2$
 - £7,248 (\$10,293) per patient with an American Society of Anaesthesiologists (ASA) score ≥ 3

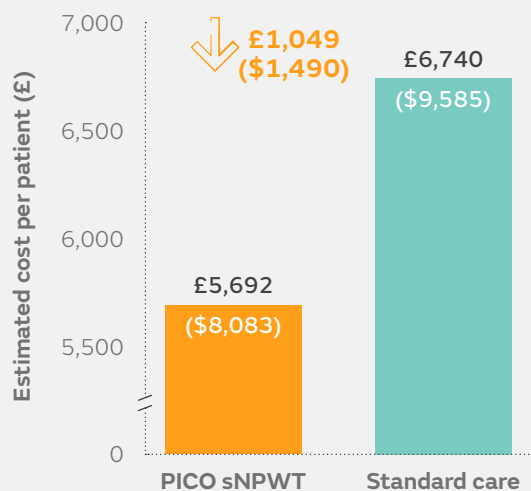


Figure. Estimated total mean costs per patient associated with PICO sNPWT and standard dressings

Conclusions

PICO sNPWT is estimated to be a cost-effective intervention for helping to reduce SSCs following primary total hip and knee replacements. Estimated savings of £1,049 (\$1,490) per patient were associated with using PICO sNPWT compared with standard care, with greater savings in high-risk patients.

Citation

*Nherera LM, Trueman P, Karlakki SL. Cost-effectiveness analysis of single-use negative pressure wound therapy dressings (sNPWT) to reduce surgical site complications (SSC) in routine primary hip and knee replacements. *Wound Repair Regen*. 2017;25(3):474–482. Available at: [Wound Repair and Regeneration](#)

The PICO pumps contain a MAGNET. Keep the PICO pumps at least 4 inches (10 cm) away from other medical devices at all times. As with all electrical medical equipment, failure to maintain appropriate distance may disrupt the operation of nearby medical devices.

For full product and safety information, please see the Instructions for Use.

Reference: 1. Karlakki SL, Hamad AK, Whittall C, Graham NM, Banerjee RD, Kuiper JH. Incisional negative pressure wound therapy dressings (iNPWTd) in routine primary hip and knee arthroplasties: A randomised controlled trial. *Bone Joint Res*. 2016;5(8):328–337.

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