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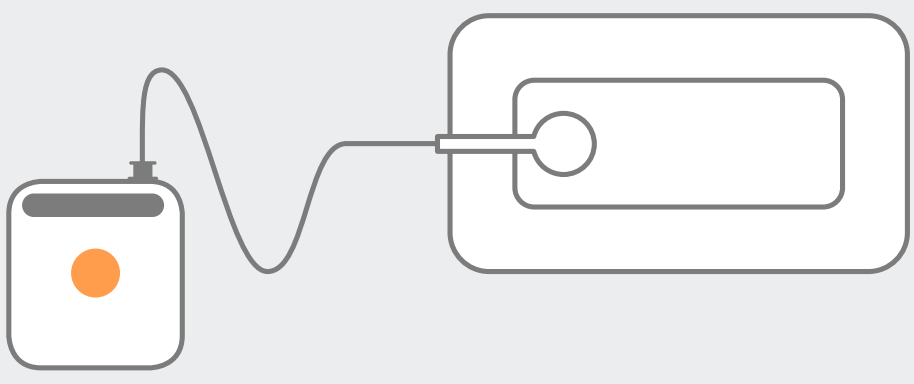
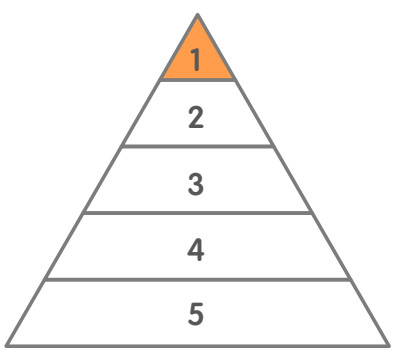
PICO◇ Single Use Negative Pressure Wound Therapy System (sNPWT) helps to reduce surgical site complications and hospital length of stay in patients with surgically closed incisions: results of a systematic review and meta-analysis[1]



What is a meta-analysis?

It's a statistical analysis of multiple scientific studies to find out how well an intervention works[2]



Highest possible level of evidence[3]

1. Meta-analysis and systematic reviews
2. Randomised controlled clinical trials
3. Cohort studies
4. Case-controlled series and case studies
5. Expert opinion

How was it done?

A comprehensive literature search mainly of Embase, PubMed and the Cochrane library* (January 2011 to August 2018) to identify randomised controlled trials and observational studies with 10 or more surgical patients per treatment arm and compare prophylactic use of **PICO** sNPWT with standard dressings[1]

6,197 studies identified[1]

392 studies reviewed[1]

29 studies included[1]

5,614 patients

Studies included from:[1]
- **Diverse geographies**
- **Several surgical specialties**

*One study was identified from Smith & Nephew records

What were the main results?

Surgical site infections (SSIs)

63%↓

Use of **PICO** sNPWT significantly reduced the risk of SSIs compared with standard dressings

(19 studies; 4,530 patients; p<0.00001)[1]

PICO sNPWT also significantly reduced the risk of SSIs versus standard dressings when analysed by surgical specialty:[1]

Breast	Obstetrics	Orthopaedics	Vascular
64%↓	51%↓	57%↓	78%↓
2 studies	3 studies	5 studies	2 studies
420 patients	2,911 patients	607 patients	193 patients
(p=0.04)	(p=0.003)	(p=0.02)	(p=0.03)

Other surgical site complications (SSCs)

In addition, the odds of other SSCs were reduced with use of **PICO** sNPWT versus standard dressings:[1]

Seroma	Skin necrosis	Dehiscence
77%↓	89%↓	30%↓
odds reduction	odds reduction	odds reduction
(6 studies, 771 patients; p<0.00001)[1]	(2 studies, 474 patients; p=0.0007)[1]	(9 studies, 1,790 patients; p=0.01)[1]

Hospital length of stay

When used prophylactically for surgically closed incisions, **PICO** sNPWT significantly reduced mean length of stay by 1.75 days compared with standard dressings[1]

Reducing length of stay due to SSIs may contribute to associated healthcare cost savings[4]

1.75 days↓

(10 studies; 948 patients; p=0.0002)[1]

No differences were observed between the two treatment groups in:
- Readmissions (9 studies; 966 patients)[1]
- Reoperations (9 studies; 1,385 patients)[1]

What did it demonstrate?

Prophylactic use of **PICO sNPWT** significantly reduced the risk of SSIs, necrosis, seroma and dehiscence in patients with surgically closed incisions when compared with standard dressings, as well as helping to reduce length of stay by 1.75 days.[1]

For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

References: 1. Smith & Nephew. February 2019. Outcomes following PICO compared to conventional dressings when used prophylactically on closed surgical incisions: systematic literature review and meta-analysis. Report reference EO/AWM/PICO/004/v3; **2.** Haidich AB. Meta-analysis in medical research. *Hippokratia*. 2010;14(Suppl 1):29–37; **3.** Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. *Evid Based Med*. 2016;21:125–127; **4.** Jenks PJ, Laurent M, McQuarry S, Watkins R. Clinical and economic burden of surgical site infection (SSI) and predicted financial consequences of elimination of SSI from an English hospital. *J Hosp Infect*. 2014;86(1):24–33.