

## + Evidence in focus

PICO<sup>®</sup> Single Use Negative Pressure Wound Therapy System (sNPWT) is associated with significantly lower healthcare resource utilization (HCRU) costs and likelihood of dehiscence following cardiovascular surgery compared to PREVENA<sup>™</sup> in real-world use

Smith+Nephew

Bashyal RK, Searle R, Nherera LM, Wright A. Effects of single-use negative pressure wound therapy on healthcare use: US analysis of a large claims database. *J Wound Care*. 2025;34(8):555–562.

### Overview

- Retrospective review of the US PREMIER PINC AI Healthcare Database for patients receiving either PICO sNPWT or PREVENA<sup>™</sup> following cardiovascular surgery between January 2017–June 2022
  - The study included and compared over 5,000 adult patients
- Study endpoints included clinical and HCRU outcomes
  - Clinical outcomes included surgical site complications (SSCs)
  - HCRU outcomes included length of stay and costs at admission and post-surgery

### Results, compared to patients receiving PREVENA<sup>™</sup>

#### 57.8% significantly lower odds of dehiscence with PICO sNPWT ( $p<0.01$ )

- Patients that received PICO sNPWT following cardiovascular surgery showed reduced odds ( $p=ns$ ) of developing:
  - Surgical site infection (SSI) at 30 days
  - Superficial SSI at 30 days
  - Deep SSI at 90 days
  - Seroma at 30 days



9.1% significantly lower length of stay for patients receiving PICO sNPWT ( $p<0.0001$ )

### Methodology



PREMIER Healthcare Database



2,552 PICO sNPWT patients

2,552 PREVENA<sup>™</sup> patients



Cardiovascular surgery

#### PICO sNPWT vs PREVENA<sup>™</sup>



Assess the effect of two sNPWT devices on HCRU and SSCs during real-world use

#### Significantly lower costs for patients receiving PICO sNPWT ( $p<0.0001$ )



-10.34% reduced costs at admission



-12.46% reduced costs 30 days post-surgery



-12.65% reduced costs 90 days post-surgery

### Conclusion

In real-world use, the implementation of PICO sNPWT following cardiovascular surgery demonstrated significant reductions in the odds of developing dehiscence compared to patients receiving PREVENA<sup>™</sup>. Additionally, PICO sNPWT demonstrated significantly lower costs and reduced financial burden to healthcare providers following cardiovascular surgery compared to patients receiving PREVENA<sup>™</sup>.

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