

+ Evidence in focus

PICO[◇] 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[™] 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[™] 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[™]

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[™] patients



Cardiovascular surgery

PICO sNPWT vs PREVENA[™]



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[™]. Additionally, PICO sNPWT demonstrated significantly lower costs and reduced financial burden to healthcare providers following cardiovascular surgery compared to patients receiving PREVENA[™].

Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Smith+Nephew representative or distributor if you have questions about the availability of Smith+Nephew products in your area. 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.