# + Evidence in focus

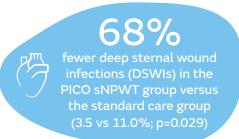
Publication summary: Tabley A, et al. Ann Thorac Surg (2020)\*

# **Smith**Nephew

PICO<sup>o</sup> Single Use Negative Pressure Therapy System (sNPWT) significantly reduced the incidence of surgical site complications (SSCs) in high-risk cardiac surgery patients versus standard care with estimated cost savings

# + Plus points







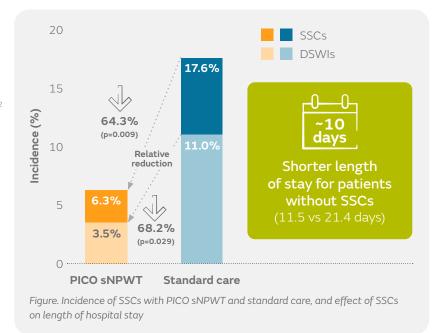
#### Overview

- A review of anonymised records before and after introduction of PICO sNPWT for high-risk patients (≥2 surgical site infection risk factors) undergoing cardiac surgery at a hospital in France
- A total of 142 patients received PICO sNPWT and 91 received standard care (mean age: 65 and 67 years, respectively)
- More patients in the PICO sNPWT group had BMI ≥35kg/m² or underwent bilateral internal mammary artery (BIMA) surgery (p<0.05 for both)</li>
- Mean EuroSCORE was 6.1 with PICO sNPWT and 5.5 for standard care (low risk, 0 to <1.5; high risk, ≥4.5)</li>

## Results

Compared with standard care, prophylactic use of PICO sNPWT resulted in:

- A significant reduction in the incidence of SSCs (6.3 vs 17.6%; p=0.009; Figure)
  - Particularly in patients with diabetes, BMI ≥35kg/m² or who had BIMA surgery (p<0.05 for all)</li>
- Fewer patients with resultant DSWIs (3.5 vs 11.0%; p=0.029; Figure)
- An estimated saving of €1,295 per patient, releasing capacity to treat 10 extra patients
- Reduced estimated cost per 100 patients (€1,485,630 vs €1,615,091)



## **Conclusions**

Use of PICO sNPWT in high-risk cardiac surgery patients significantly reduced the incidence of SSCs compared with standard care; it also reduced costs by an estimated €1,295 per patient. The authors suggest that the reduction in DSWI incidence with PICO sNPWT may be due to preventing spread of superficial infectious material.

## Citation

\*Tabley A, Aludaat C, Le Guillou V, et al. A survey of cardiac surgery infections with PICO<sup>o</sup> Negative Pressure Therapy in high-risk patients: survey of surgical site complications. Ann Thorac Surg. 2020 [Epub ahead of print].

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