

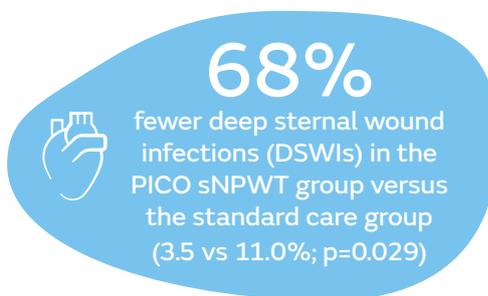
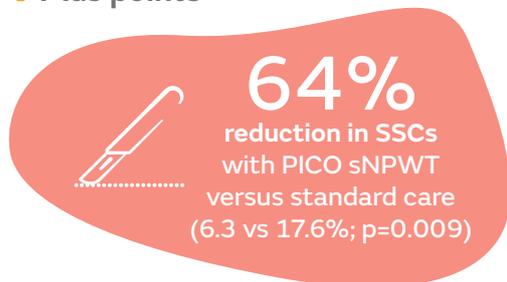
+ Evidence in focus

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

Smith+Nephew

PICO^o 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 $\geq 35\text{kg/m}^2$ or underwent bilateral internal mammary artery (BIMA) surgery ($p < 0.05$ for both)
- Mean EuroSCORE was 6.1 with PICO sNPWT and 5.5 for standard care (low risk, 0 to < 1.5 ; high risk, ≥ 4.5)

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 $\geq 35\text{kg/m}^2$ or who had BIMA surgery ($p < 0.05$ for all)
- Fewer patients with resultant DSWIs (3.5 vs 11.0%; $p = 0.029$; Figure)
- An estimated saving of £1,165** per patient, releasing capacity to treat 10 extra patients
- Reduced estimated cost per 100 patients (£1,337,052** vs £1,453,420**)

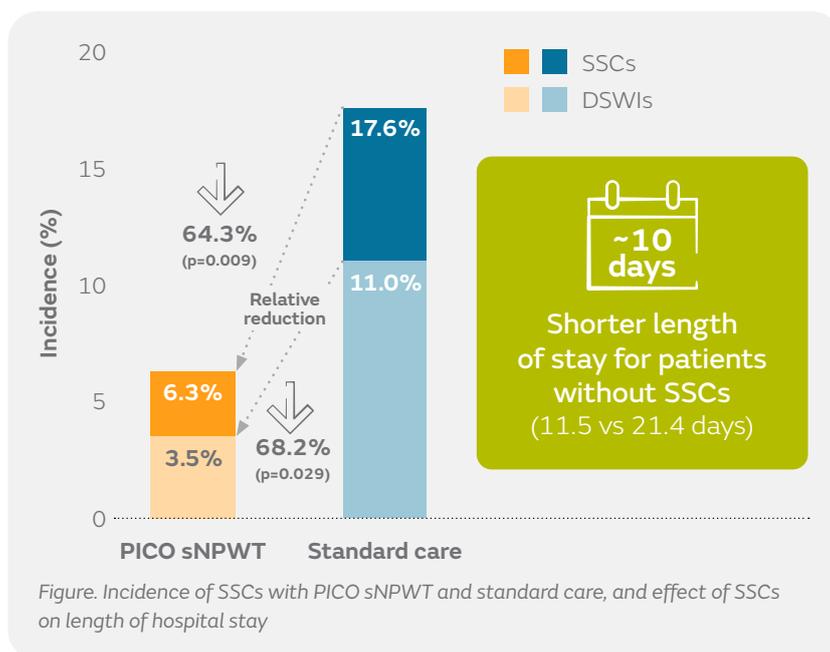


Figure. Incidence of SSCs with PICO sNPWT and standard care, and effect of SSCs on length of hospital stay

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 £1,165** 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^o Negative Pressure Therapy in high-risk patients: survey of surgical site complications. *Ann Thorac Surg*. 2020. Available at: [Annals of Thoracic Surgery](https://doi.org/10.1053/j.athoracsurg.2020.04.011)

**Costs based on a conversion rate of 0.8999 (EUR to GBP) in April 2021

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