


## PICO<sup>®</sup> Single Use Negative Pressure Wound Therapy (sNPWT) helped reduce surgical site infections (SSIs) after caesarean section when used as part of an SSI prevention care bundle


Erritty M, Hale J, Thomas J, et al. Reduction of adverse outcomes from caesarean section by surgical site infection prevention care bundles in maternity. *Int J Gynaecol Obstet*. 2022 Nov 30. [Epub ahead of print]


Available at: [Int J Gynaecol Obstet](https://doi.org/10.1016/j.ijgo.2022.11.001) 

### Key points

With use of PICO sNPWT as part of an SSI prevention care bundle in women undergoing caesarean section, compared to standard care:

 **Overall significant reduction in SSI incidence** throughout the study period (average monthly reduction: 14.0%;  $p=0.004$ )

 **Average SSI incidence remained below 7.5%** (study target) for the last 12 months of the study

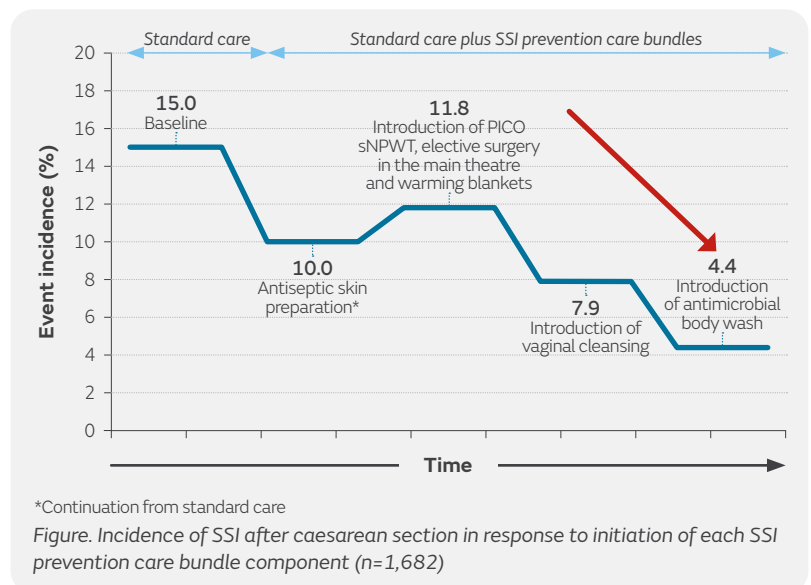
 **Overall significant decline in sepsis, reoperation, or readmission for SSI** from 12.5 to 0.5% ( $\chi^2=90.1$ ;  $p<0.001$ )

### Overview

- An independent prospective study assessing the effectiveness of an SSI prevention care bundle that included the use of PICO sNPWT in 1,682 women (mean age: 33 years) who underwent caesarean section in a UK hospital
- In addition to standard care, components of the SSI prevention care bundle were sequentially introduced to assess their efficacy, at least one-month apart, over 8 months (step 1: antiseptic skin preparation [continuation of use from standard care]; step 2: PICO sNPWT, performing elective surgeries in the main theatre and warming blankets; step 3: vaginal cleansing; step 4: pre-operative antimicrobial body wash)
- SSI, sepsis, reoperation, or readmission to hospital for SSI were assessed over 17-months following implementation of the SSI prevention care bundle
- The target was to achieve  $\leq 7.5\%$  SSI incidence (half of the incidence found in a previous 4-month audit [Getting It Right First Time (GIRFT)] with standard care alone: 16.3%)

### Results

- Compared with standard care alone, the use of an SSI prevention care bundle including PICO sNPWT resulted in:
  - An overall significant reduction in SSI incidence throughout the 17-month study period (average monthly reduction: 14.0%;  $p=0.004$ )
  - A continued significant decline in SSI incidence ( $\chi^2=22.1$ ;  $p<0.001$ ) following introduction of PICO sNPWT, elective surgery in the main theatre and warming blankets (Figure)
  - Average SSI incidence remained below the target of 7.5% for the last 12 months of the study
  - An overall significant decline in incidence of sepsis, reoperation, or readmission for SSI following introduction of each SSI prevention care bundle component from 12.5 to 0.5% ( $\chi^2=90.1$ ;  $p<0.001$ )
- Superficial incisional SSI occurred in 6.4% ( $n=108$ ) women; deep incisional SSI occurred in 0.5% ( $n=8$ ) of the patient population, and there was no organ/space SSI



### Conclusions

The implementation of an SSI prevention care bundle that included the use of PICO sNPWT effectively helped reduce SSIs, sepsis, reoperation, and readmission for SSI in women undergoing caesarean section, compared with standard care alone. The authors concluded the use of the care bundle was simple, inexpensive, and effective and therefore recommended routinely offering it to women undergoing caesarean section.

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