

Reducing Surgical Site Infections Post-Caesarean Section

Michael Magro, MBBS, BSc(Hons), MRCOG, PGCert(Darzi), Consultant Obstetrician & Gynaecologist at Barking, Havering and Redbridge University Hospitals NHS Trust

Objective:

Post-caesarean section surgical site infection (SSI) is a worldwide problem that leads to poor patient experience, significant morbidity, increased healthcare costs and occasionally mortality. Recording of SSI rates is not mandatory in England but it is a common complication post caesarean. Barking, Havering & Redbridge University Hospitals NHS Trust (BHRUT) maternity unit sought to:

- reduce their SSI rate and improve the patient experience by replacing Mepore® wound dressings with Leukomed® Sorbact® (Essity), bacteria binding dressings, for closed caesarean wounds
- to determine any resource savings compared to the dressing used previously

Design:

A prospective audit was undertaken to compare SSI incidence pre-and-post implementation of the dressing.

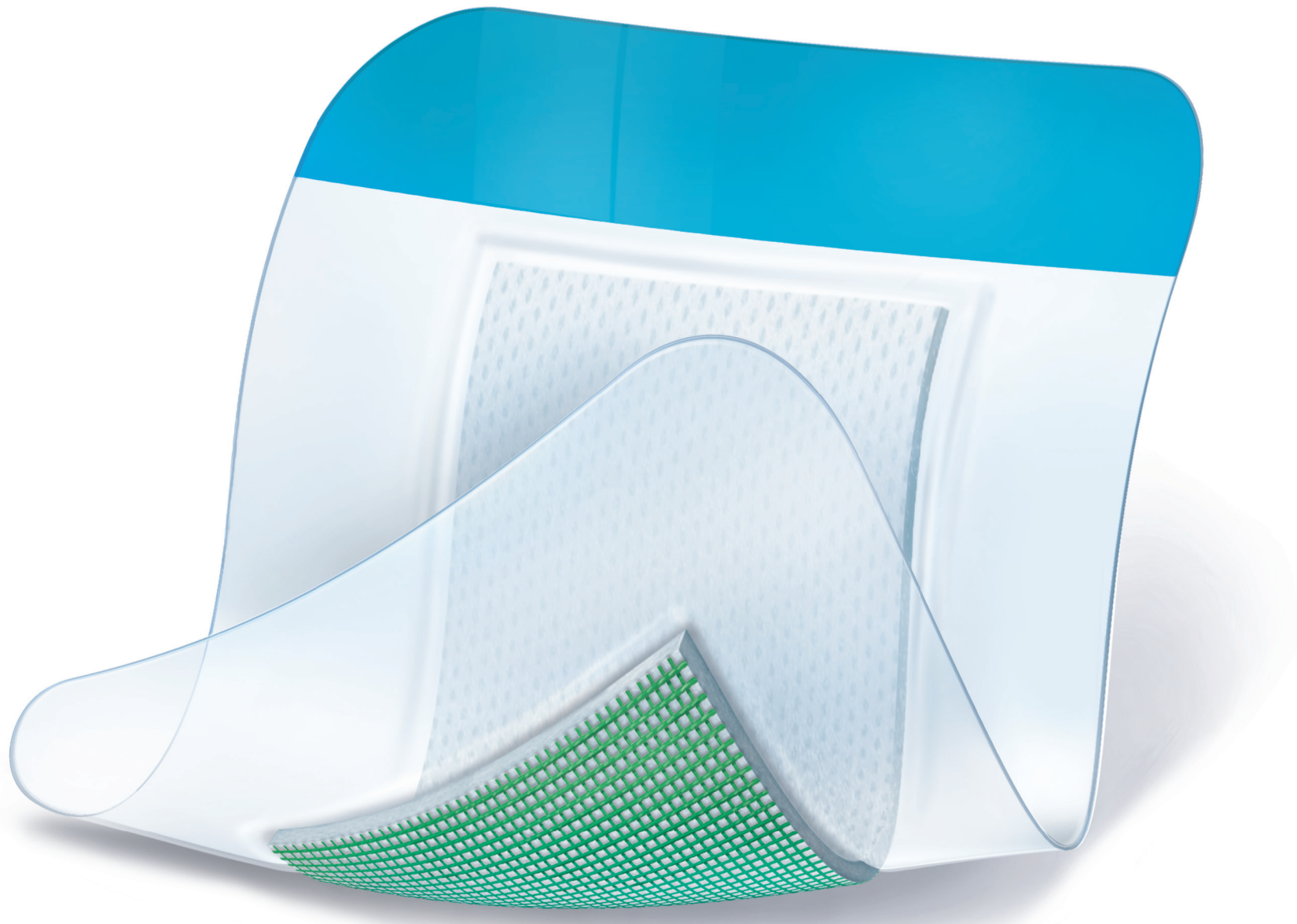
Method:

Prior to this practice change, data was retrospectively audited for the period January-December 2021 where all women who had a caesarean section (elective and emergency) had a Mepore® dressing left in situ for 24-48 hours. The baseline SSI rate was 6.1% and SSI readmission rate of 1.27%. From January 1st 2022, all women who had a caesarean section at BHRUT had their wound covered with a Leukomed® Sorbact® dressing which was left in situ for 5 days. No changes were made to wound cleaning products, prophylactic antibiotic use or surgical technique. Wound closure technique remained the choice of the individual surgeon. Essity worked with staff providing two weeks of education and support in relation to use of the new dressing.

Results:

Comparative data for January-December 2022 showed a consistent reduction, culminating in a **38%** reduction in SSI rate (overall SSI rate = **3.8%**), a **31%** reduction in readmission rate for SSI (overall rate = **0.88%**), a **39%** reduction in readmission bed days and a **30%** reduction in antibiotic use. There was a reduction in SSI rates in all BMI categories. Total savings due to the reduction in SSI rates over twelve months are **£234,784**. The cost savings to BHRUT solely attributable to the reduction in readmissions was **£49,750** or **£21 per caesarean**, which will be an ongoing saving.

Percentage Change 2021 v 2022	
CS SSI Rate	↓ 37.7%
Readmission Rate for SSI	↓ 30.7%
Readmission Days	↓ 38.3%
Antibiotic usage for SSI	↓ 30.4%



Leukomed® Sorbact® single-use, bacteria-binding, adhesive-bordered dressing

Conclusion:

Switching from an absorbent dressing (Mepore®) to a bacteria binding dressing (Leukomed® Sorbact®) for all women having a caesarean allowed BHRUT to realise significant cost savings whilst making significant improvements in clinical outcomes. The additional bed days freed created spare capacity within the department and improved patient experience due to fewer and shorter readmissions. The reduction in antibiotic use is an important additional improvement, especially in the current climate of concerns with antibiotic resistance. For the maternity unit staff, despite workforce shortages, it has been hugely positive to demonstrate that we can still innovate, improve outcomes and realise cost savings.