

Putting NICE guidance into practice

Resource impact report: Leukomed Sorbact for preventing surgical site infection (MTG55)

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Summary

NICE has recommended Leukomed Sorbact for closed surgical wounds after caesarean section and vascular surgery in the NHS.

We estimate that around:

- 179,600 people in England who have a caesarean section are eligible for treatment with Leukomed Sorbact each year.
- 91,600 people in England who have vascular surgery are eligible for treatment with Leukomed Sorbact each year.
- 161,700 people in England who have a caesarean section will have Leukomed Sorbact from year 5 onwards once uptake has reached 90%.
- 82,400 people in England who have had vascular surgery will have Leukomed Sorbact from year 5 onwards once uptake has reached 90%.

The benefits derived from Leukomed Sorbact are based on a comparison to standard dressings (vapour-permeable adhesive film with absorbent sterile pad). The cost of Leukomed Sorbact has been updated to include VAT and the financial impact of this has been updated in the report.

The estimated annual saving of implementing this guidance per 100,000 population is around £10,700, based on the uptake in the resource impact assumptions is shown in tables 1 and 2. The savings are driven by a reduction in bed days and are estimated at the appropriate national tariff excess bed day rate.

The estimated annual bed day benefit of using Leukomed Sorbact, for people having caesarean section is 30 bed days per 100,000 population, and for people having vascular surgery is 14 bed days per 100,000 population. The bed day savings are based on the avoidance of an increased length of stay attributable to surgical site infections (4 days for a caesarian section and 10 days for vascular surgery).

Table 1 Estimated annual saving of implementing the guidance for caesarean section per 100,000 population

| Caesarean sections | Current practice | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|--|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Uptake rate for Standard dressings (%) | 90% | 74% | 58% | 42% | 26% | 10% |
| Uptake rate for Leukomed Sorbact (%) | 10% | 26% | 42% | 58% | 74% | 90% |
| Population having surgical site infection after standard dressing each year | 12 | 10 | 8 | 6 | 4 | 1 |
| Population having surgical site infections after Leukomed Sorbact each year | 0 | 1 | 2 | 3 | 3 | 4 |
| Total surgical site infections | 12 | 11 | 10 | 9 | 7 | 5 |
| Resource impact each year for people having caesarean section (£000s) | £0 | -£2 | -£4 | -£5 | -£7 | -£9 |

Table 2 Estimated annual saving of implementing the guidance for vascular surgery per 100,000 population

| Vascular surgery | Current practice | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|---|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Uptake rate for Standard dressings (%) | 90% | 74% | 58% | 42% | 26% | 10% |
| Uptake rate for Leukomed Sorbact (%) | 10% | 26% | 42% | 58% | 74% | 90% |
| Population having surgical site infection after standard dressing each year | 4 | 3 | 2 | 2 | 1 | 0 |
| Population having surgical site infections after Leukomed Sorbact each year | 0 | 1 | 1 | 1 | 2 | 2 |
| Total surgical site infections | 4 | 4 | 3 | 3 | 3 | 2 |
| Resource impact each year for people having Vascular surgery (£000s) | £0 | £0 | -£1 | -£1 | -£1 | -£2 |

This report is supported by a [resource impact template](#) which may be used to calculate the resource impact of implementing the guidance by amending the variables.

Maternity services and vascular surgery are commissioned by clinical commissioning groups. Providers are NHS hospital trusts.

1 Leukomed Sorbact

- 1.1 NICE has recommended [Leukomed Sorbact](#) for closed surgical wounds after caesarean section and vascular surgery in the NHS. Leukomed Sorbact should be considered as an option for people with wounds that are expected to have low to moderate exudate.
- 1.2 Leukomed Sorbact is an interactive dressing that binds to the microbes that cause surgical site infections, so they are removed when the dressing is changed. Evidence suggests that using Leukomed Sorbact instead of a standard dressing (vapour-permeable adhesive film with absorbent sterile pad), after caesarean section and vascular surgery reduces the rate of surgical site infections and leads to cost savings.

2 Resource impact of the guidance

- 2.1 We estimate that around:
 - 179,600 people in England who have a caesarean section are eligible for treatment with Leukomed Sorbact each year
 - 91,600 people in England who have vascular surgery are eligible for treatment with Leukomed Sorbact each year
 - 161,700 people who have a caesarean section will have Leukomed Sorbact from year 5 onwards once uptake has reached 90%
 - 82,400 people who have vascular surgery will have Leukomed Sorbact from year 5 onwards once uptake has reached 90%.
- 2.2 The benefits derived from Leukomed Sorbact are based on a comparison to standard dressings (vapour-permeable adhesive film with absorbent sterile pad).
- 2.3 The current treatment and future uptake figure assumptions are based on clinical expert opinion and are shown in the resource impact template.

- 2.4 The estimated annual saving of implementing this guidance for the population of England based on the uptake in the resource impact assumptions is shown in tables 3 and 4. The total saving from year 5 once steady state is reached is equivalent to around £10,700 per 100,000 population.
- 2.5 The estimated annual bed day benefit of using Leukomed Sorbact, for people having caesarean section is 30 bed days per 100,000 population, and for people having vascular surgery is 14 bed days per 100,000 population.

Table 3 Resource impact of implementing the caesarean section guidance using NICE assumptions per 100,000 population

| Caesarean section | Current practice | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|--|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Uptake rate for Standard dressings (%) | 90% | 74% | 58% | 42% | 26% | 10% |
| Uptake rate for Leukomed Sorbact (%) | 10% | 26% | 42% | 58% | 74% | 90% |
| Population having standard dressing each year | 287 | 236 | 185 | 134 | 83 | 32 |
| Population having Leukomed Sorbact each year | 32 | 83 | 134 | 185 | 236 | 287 |
| Total caesarean sections | 319 | 319 | 319 | 319 | 319 | 319 |
| Population having surgical site infection after standard dressing each year | 12 | 10 | 8 | 6 | 4 | 1 |
| Population having surgical site infections after Leukomed Sorbact each year | 0 | 1 | 2 | 3 | 3 | 4 |
| Total surgical site infections | 13 | 11 | 10 | 8 | 7 | 6 |
| Resource impact each year for people having caesarean section (£000s) | | -£2 | -£4 | -£5 | -£7 | -£9 |

Table 4 Resource impact of implementing the vascular surgery guidance using NICE assumptions per 100,000 population

| Vascular surgery | Current practice | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|---|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Uptake rate for Standard dressings (%) | 90% | 74% | 58% | 42% | 26% | 10% |
| Uptake rate for Leukomed Sorbact (%) | 10% | 26% | 42% | 58% | 74% | 90% |
| Population having standard dressing each year | 146 | 120 | 94 | 68 | 42 | 16 |
| Population having vascular surgery and Leukomed Sorbact each year | 16 | 42 | 68 | 94 | 120 | 146 |
| Total vascular surgery | 163 | 163 | 163 | 163 | 163 | 163 |
| Population having surgical site infection after standard dressing each year | 4 | 3 | 2 | 2 | 1 | 0 |
| Population having surgical site infections after Leukomed Sorbact each year | 0 | 1 | 1 | 1 | 2 | 2 |
| Total surgical site infections | 4 | 4 | 3 | 3 | 3 | 3 |
| Resource impact each year for people having vascular surgery (£000s) | | £0 | -£1 | -£1 | -£1 | -£2 |

2.6 This report is supported by a [resource impact template](#) which may be used to calculate the resource impact of implementing the guidance by amending the variables.

Savings and benefits

2.7 Leukomed Sorbact dressings are expected to reduce the number of surgical site infections, compared to standard dressings (vapour-permeable adhesive film with absorbent sterile pad), that occur following caesarean sections and vascular surgery. They are expected to reduce readmission and shorten length of stay in hospital. This will also help to reduce the use of antibiotics.

2.8 The reduced length of stay for people in vascular surgery may help to improve theatre utilisation and reduce waiting lists.

3 Implications for commissioners

3.1 Maternity services and vascular surgery are commissioned by clinical commissioning groups. Providers are NHS hospital trusts.

3.2 There will be an increased cost for providers to use the more expensive Leukomed Sorbact dressings. This will be offset by the savings from reduced surgical site infections, reduced length of stay for people in hospitals and reduced readmissions.

3.3 Leukomed Sorbact dressings for caesarean section falls within the programme budgeting categories of 18X maternity and reproduction. Leukomed Sorbact dressings for vascular surgery falls within the programme budgeting categories of 10X problems of circulation.

4 How we estimated the resource impact

The population

- 4.1 Leukomed Sorbact can be used for people who have had babies delivered by caesarean section and following vascular surgery when wounds are expected to have low to moderate exudate. The eligible population is summarised in table 5.
- 4.2 All people who have babies delivered by caesarean section would be eligible for Leukomed Sorbact. Based on the NHS maternity statistics for 2018/19 there were around 179,600 caesarean sections.
- 4.3 Clinical experts advised which vascular surgery procedures are likely to result in wounds that would be suitable for Leukomed Sorbact dressings. Treatments which are likely to result in an incision of less than 5mm, and wounds at high risk of high exudate are not suitable for Leukomed Sorbact dressings.
- 4.4 Using Hospital episode statistics (HES) data from NHS Digital there are around 91,600 vascular surgery procedures per year that are suitable for Leukomed Sorbact dressings.

Table 5 Number of people eligible for treatment in England

| Population | Proportion of previous row (%) | Number of people |
|---|--------------------------------|------------------|
| Number of births per year | | 572,768 |
| Number of caesarean section births | 31.36 | 179,620 |
| Population having caesarean section eligible to use Leukomed Sorbact | 100. | 179,620 |
| Total number of people having caesarean section estimated to have Leukomed Sorbact each year from year 5 | 90 | 161,658 |
| | | |
| Adult population | | 44,263,393 |
| Incidence of vascular surgery | 0.21 | 91,581 |
| Total number of people eligible for treatment with Leukomed Sorbact | 100 | 91,581 |
| Total number of people estimated to have Leukomed Sorbact each year from year 5 | 90 | 82,423 |

Assumptions

4.5 The resource impact template assumes that:

- the current rate of surgical site infection (SSI) following caesarean section using standard dressings is 4.35%, ([External assessment centre \(EAC\) report for NICE Leukomed Sorbact guidance](#)). There is a relative risk reduction of 67% when using Leukomed Sorbact dressings which gives a reduced risk rate of 1.44%
- the current rate of SSI following vascular surgery using standard dressings is 2.5%, ([EAC report for NICE Leukomed Sorbact guidance](#)). There is a relative risk reduction of 42% when using Leukomed Sorbact dressings which gives a reduced risk of 1.45%
- based on expert clinical opinion around 10% of people in both population groups are currently using Leukomed Sorbact dressings and 90% are using standard surgical dressings

- based on expert clinical opinion in future practice, 90% of people in both population groups will use Leukomed Sorbact dressings and 10% will use standard surgical dressings
- the cost of standard surgical dressings used in the EAC assessment for this topic are from the NHS supply chain catalogue and are as a result commercial in confidence, local organisations should use their own costs in the accompanying template.
- The average unit cost of Leukomed Sorbact dressings supplied by the company of £9.15 has been updated to include the impact of VAT. The average unit cost inclusive of VAT is £10.98 which is the cost used in the template.
- Based on expert clinical opinion, it is expected that 25% of people will need a replacement dressing when using both standard and Leukomed Sorbact dressings in both populations.
- the cost of surgical site infection for caesarean section (£1,668, 4 additional bed days at £417 per day) and vascular surgery (£2,660, 10 additional bed days at £266 per day) is based on the average additional length of stay from [Jenks et al. 2013](#) and the costs used are the national tariff excess bed day prices for the relevant service.

Sensitivity analysis

4.6 Varying the rate of surgical site infection following caesarean section, using Leukomed Sorbact dressings from 1.44% in the base case to between 0.44% to 2.44% leads to an estimated saving of between £15,000 and a saving £6,500 (£10,700 in the base case) for the population of England.

4.7 Varying the rate of surgical site infection following vascular surgery, using Leukomed Sorbact dressings from 1.45% in the base case to between 0.45% to 2.45% leads to an estimated saving of between £14,200 and a saving £7,300 (£10,700 in the base case) for the population of England.

About this resource impact report

This resource impact report accompanies the NICE guidance on [Leukomed Sorbact for preventing surgical site infection](#) and should be read with it.

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