

Putting NICE guidance into practice

Resource impact report: PICO negative pressure wound dressings for closed surgical incisions (MTG43)

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Summary

NICE has recommended PICO negative pressure wound dressings as an option for closed surgical incisions.

PICO dressings can be used on people who are at high risk of surgical site infection after the following surgeries:

- Colorectal surgery
- Vascular surgery
- Cardiothoracic surgery
- Orthopaedic surgery
- Caesarian surgery
- Breast surgery.

Cost modelling suggests that PICO negative pressure wound dressings provide extra clinical benefits at a similar overall cost compared with standard wound dressings.

The guidance may have resource implications at a local level because of variation in clinical practice across the country. Therefore, organisations are encouraged to evaluate their own practices against the recommendations in the NICE guidance and assess resource impact locally.

This technology is commissioned by clinical commissioning groups for surgeries and NHS England for some surgeries for specialist conditions such as specialised colorectal services. Providers are NHS hospital trusts.

1 PICO negative pressure wound dressings

- 1.1 NICE has recommended [PICO negative pressure wound dressings for closed surgical incisions](#) in the NHS.
- 1.2 Evidence supports the case for adopting PICO negative pressure wound dressings for closed surgical incisions in the NHS. They are associated with fewer surgical site infections and seromas compared with standard wound dressings.
- 1.3 PICO negative pressure wound dressings should be considered as an option for closed surgical incisions in people who are at high risk of developing surgical site infections. Risk factors for surgical site infections are described in the NICE guideline on [preventing and treating surgical site infections](#).
- 1.4 Cost modelling suggests that PICO negative pressure wound dressings provide extra clinical benefits at a similar overall cost compared with standard wound dressings.

2 Resource impact of the guidance

- 2.1 This guidance might have resource implications at a local level because of variation in clinical practice across the country. Therefore, we encourage organisations to evaluate their own practices against the recommendations in the NICE guidance and assess resource impact locally using the [local resource impact template](#).
- 2.2 This resource impact report and template look at the resource impact of using PICO dressings in colorectal, vascular, cardiothoracic, orthopaedic and breast surgery and caesarean sections. However, there may also be some other specialities that are currently benefitting from using PICO negative pressure wound dressings, but no evidence was found as part of the search for this guidance.

- 2.3 The cost of a standard dressing is estimated to be £2.50 and clinical expert opinion is that an average of 2.25 standard dressings would be needed per wound (based on an assumption that a dressing is changed every 3 days). This results in an average cost of £5.63 per person.
- 2.4 The cost of a PICO negative pressure wound dressing set which contains 2 dressings and a pump, is £130. Based on data on inpatient length of stay and a requirement to change the PICO dressing after 7 days, it is estimated that an average of 1.09 PICO sets per inpatient stay is needed. The resulting average cost of PICO dressing is therefore around £142 per person.

Savings and benefits

- 2.5 The benefits of using PICO dressings may vary between the 6 specialities included in the guidance. Providers may need to review the amount of savings, as a result of using PICO dressings, on a service to service basis.
- 2.6 According to the cost modelling, for every 1,000 uses of the PICO dressing packs, up to 367 bed days could be saved due to a reduction in surgical site infection (SSI). It is estimated that the average cost of a surgical bed is £362 per day ([National schedule of reference costs 17-18](#)).
- 2.7 The reduction in surgical site infections resulting from the use of PICO dressings may lead to a reduction in surgical re-interventions due to surgical site infection and reduced use of antibiotics to treat infection. The cumulative rates of SSI range from 9.2% in bowel surgery to less than 1% in hip and knee prosthesis according to the [surveillance of surgical site infections in NHS hospitals in England 16-17](#).

3 Implications for commissioners

- 3.1 This technology is commissioned by clinical commissioning groups for surgeries and NHS England for some surgeries for specialist conditions such as specialised colorectal services. Providers are NHS hospital trusts.
- 3.2 The cost of PICO negative pressure wound dressings will be incurred by providers.
- 3.3 Commissioners may see a saving due from a reduction in excess bed days paid for because of a reduction in surgical site infections which means that fewer inpatient spells will go beyond their trim points.
- 3.4 The provider may see savings resulting from any reductions in the use of antibiotics, reductions in surgical reinterventions because of surgical site infection and a reduction in overall bed days.
- 3.5 PICO negative pressure wound dressings for closed surgical incisions fall under several programme budgeting categories because they can be used on people after different kinds of surgeries.

4 How we estimated the resource impact

The population

- 4.1 The population eligible for PICO is all people having a surgical procedure with a closed incision and who are at a [high risk of surgical site infection](#) in certain surgical specialties. These are the specialties of colorectal surgery, vascular surgery, cardiothoracic surgery, orthopaedic surgery, caesarean surgery, and breast surgery. There are around 2.8 million procedures per year in England for these specialties according to [hospital episode statistics 17/18](#).

- 4.2 The number of people who are at high risk of surgical site infection is unclear as it varies from speciality to speciality, and there is no robust data available to quantify this for each area. Therefore, the potential future uptake of PICO is not known.
- 4.3 There is also a lack of data available on the number of people who currently use PICO negative pressure wound dressings.

About this resource impact report

This resource impact report accompanies the NICE guidance [PICO negative pressure dressings for closed surgical incisions](#) and should be read with it.

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