Resource impact summary report

Resource impact
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NICE has recommended that Kurin Lock can be used in the NHS to reduce contamination in blood culture collection in emergency departments with high blood culture contamination rates while more evidence is generated.

Kurin Lock is intended for use in secondary care, for people who have blood culture samples taken when bloodstream infections are suspected. Adopting Kurin Lock

would need no change to standard practice. It has no additional staffing demands compared to standard of care but some minimal training on the use of the device may be needed.

Current management involves cleaning the injection site with antiseptic, inserting a needle, and collecting blood directly into blood culture collection bottles.

There are around 16.7 million attendances in major A&E units in England (Hospital Accident & Emergency Activity, 2022-23 - NHS Digital). Blood culture contamination or false positive blood culture results can have detrimental effects on the patient and health service. This may have capacity implications through people having extended hospital stays, antibiotic exposure and diagnostic investigations.

Kurin Lock costs £19.50 per device and with 2 devices used per person, the total cost is £39 per test. Standard care devices cost £0.96 per person. Therefore, an additional cost of around £38 per person per test would be incurred when using a Kurin Lock device.

A resource impact template has been developed and published alongside this report. The template provides an illustration of the potential resource impact. It is based on an estimated 100,000 people attending A&E and 10% (10,000) of these requiring a blood culture test, of which 10% (1,000) using Kurin Lock. The table below shows the associated potential costs and savings from adopting Kurin Lock. The figures are based on the economic model evidence looking at 1 patient.

Table 1: Potential savings from using Kurin Lock compared to standard care in England

Details	**Unit cost**	**Attendances**
Number of people attending A&E (majors & minors)	-	**100,000**
Proportion estimated to receive a blood culture test	-	10%
Number of blood culture tests	-	**10,000**
Kurin Lock uptake	-	**10%**
Equivalent number of attendances	-	1,000
-	-	-
Costs	-	**£000**

Kurin Lock (2 devices per person)	£39.00	£39,000
Standard care (2 devices per person)	£0.96	£960
Additional cost (£000)	**£38.04**	**£38,040**
-	-	-
Benefits based on activity detail below	-	-
Bed days savings (based on sepsis and other infections)	£692.00	£81,587
-	-	-
Total savings (£000s)		**£81,587**
-	-	-
Cost saving activity	-	**-**
Bed days avoided	-	118
Reduction in blood culture tests	-	59
Reduction in antibiotic use	-	110

Blood culture tests and antibiotic use assumed to be covered by the tariff cost of £692. However, the template allows users to estimate the costs of antibiotic use. The model assumed a 0.11 day saving of antibiotic use per person. However, this is unlikely to be realised if prescriptions are based on the pack size issued as is usually the case in practice.

The bulk of the savings is attributable to the bed days avoided. A bed day cost of around £316 would be required in order for Kurin Lock to breakeven. Bed day saving unit costs were based on the external assessment group (EAG) model. In practice, the bed day savings may be lower.

The capacity impacts are a result of a reduction in blood culture test contamination and the associated benefits such as:

- reduction in length of stay due to reduced blood culture contamination
- reduction in laboratory tests/investigations due to reduced blood culture contamination
- reduced days of antibiotics use and the associated costs. However, the associated cash savings are unlikely to be realised if prescriptions are based on number of whole days.

These benefits may also provide some savings to offset some of the potential costs that may result from using Kurin lock compared to the standard of care.

The template helps organisations to assess costs and the associated capacity impacts from using Kurin Lock compared to standard care. Organisations can amend the template by inputting local data to estimate the resource impact at a local level.

Blood culture services are commissioned by integrated care boards. Providers are NHS hospital trusts and secondary care providers.