NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Resource impact report:
Perioperative care in adults (NG180)

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Summary

This report focuses on the recommendation from NICE's guideline on perioperative care in adults that we think will have the greatest resource impact nationally (for England), and will need the most additional resources to implement or potentially generate the biggest saving. It is:

- Provide postoperative care in a specialist recovery area (a high-dependency unit, a post-anaesthesia care unit or an intensive care unit) for people with a high risk of complications or mortality. **(recommendation 1.5.1).**

We encourage organisations to evaluate their own practices against the recommendations in the NICE guideline and assess costs and savings locally. Organisations can input estimates into the local resource impact template to reflect local practice and estimate the impact of implementing the guideline. Examples of the potential resource impact for 3 scenarios are provided in tables 1 and 2. Further analysis showing the split between the provider and commissioner impact is shown in tables 3 and 4.

Table 1 Potential resource impact of providing specialist recovery using standard NICE assumptions for population of England

Increase in specialist recovery activity	5%	10%	20%
Resource impact for England (£'000)	3,416	6,832	13,664

Table 2 Potential resource impact of providing specialist recovery using standard NICE assumptions for population of 100,000

Increase in specialist recovery activity	5%	10%	20%
Resource impact per 100,000 (£'000)	6	12	25

Implementing the guideline may result in the following additional costs:

- increase in staffing levels to deliver specialist recovery

Implementing the guideline may also result in the following benefits and savings:

- reduced use of critical care beds
- reduced mortality
- reduced cancellations of surgical procedures
- reduced length of hospital stay following surgery

Surgical services are commissioned by clinical commissioning groups (CCGs) and NHS England. Providers are NHS hospital trusts.

1 Introduction

1.1 The guideline offers best practice advice on perioperative care.

1.2 This report discusses the resource impact of implementing our guideline on perioperative care in adults in England. It aims to help organisations plan for the financial implications of implementing this NICE guideline.

1.3 We encourage organisations to evaluate their own practices against the recommendations in the NICE guideline and assess costs and savings locally. Organisations can input estimates into the local resource impact template to reflect local practice and estimate the impact of implementing the guideline.

1.4 Surgical services are commissioned by clinical commissioning groups (CCGs) and NHS England. Providers are NHS hospital trusts.

2 Background

2.1 There are around 600,000 major, very major or complex surgeries carried out on adults each year in England (2017-18 reference costs). Current practice is that specialist recovery areas are used for these people in many cases. However, it is not possible to determine that this is being done in all specialties and in all trusts. Where this is not current practice there is likely to be a resource impact.

2.2 Specialist recovery areas are post-operative facilities where people have an enhanced level of support and observation to reduce complications in people who have had surgery.

2.3 It is possible that by implementing this guidance, the number of people who are treated in a specialist recovery area in the post-operative period will increase.

3 Recommendations with potential resource impact

3.1.1 Provide postoperative care in a specialist recovery area (a high-dependency unit, a post-anaesthesia care unit or an intensive care unit) for people with a high risk of complications or mortality. **(recommendation 1.5.1).**

3.1.2 The committee was shown evidence that a short period in a specialist recovery area before transferring to a ward was cost effective when compared to treatment on a ward only.

3.1.3 The committee believed that specialist recovery areas were already widely used and current best practice, however there was some uncertainty as to whether this was being done in all specialties and in all areas of the country.

3.1.4 The difficulty in determining the extent to which specialist recovery areas are currently used has led to a local resource impact template being produced. Users can enter their own assumptions into the local template based on data in their area to determine the to implement this recommendation locally.

Assumptions made

3.1.5 It is assumed that there are around 1,100 major, complex or high-risk surgeries per 100,000 population per year, based on 2017-18 reference costs activity submissions. This is equivalent to around 622,000 surgeries for England. This is used as an analogue for the number of people who have a high risk of complications or mortality.

3.1.6 As the number of eligible surgeries in England is based on 2017-18 data, the number of eligible surgeries in future may be reduced as a result of the COVID-19 pandemic

3.1.7 Additional beds with 24-hour care nursing will be required for specialist recovery areas.

3.1.8 The template assumes 1 full day of treatment in a specialist recovery area per person.

3.1.9 The template assumes patients currently stay 1 full day in Critical Care

3.1.10 It is assumed that drugs costs and all other treatment costs are unchanged and the only additional resource is increased staffing.

Resource impact

3.1.11 Examples of the potential resource impact for 3 scenarios based on the assumptions in section 5 are provided in tables 3 and 4.

Table 3 Potential resource impact of providing specialist recovery using standard NICE assumptions for population of England

Increase in specialist recovery activity	5%	10%	20%
Cost of delivering increased specialist recovery capacity (£'000) **Provider**	8,624	17,247	34,494
Potential saving from reduction in critical care use (£'000) **Commissioner**	(5,207)	(10,415)	(20,830)
Resource impact for England (£'000)	3,416	6,832	13,664

Table 4 Potential resource impact of providing specialist recovery using standard NICE assumptions for population of 100,000

Increase in specialist recovery activity	5%	10%	20%
Cost of delivering increased specialist recovery capacity (£'000) **Provider**	16	31	62
Potential saving from reduction in critical care use (£'000) **Commissioner**	(10)	(19)	(37)
Resource impact per 100,000 (£'000)	6	12	25

3.1.12 Using the first scenario of a 5% increase in specialist recovery activity, this is further broken down in table 5 to highlight the potential staff costs for the provider and the savings attributable to a commissioner from a reduced use of critical care beds.

Table 5 Breakdown of resource impact for a 5% increase in specialist recovery activity using standard NICE assumptions

Increase in specialist recovery activity	**Unit cost (£)**	**Units**	**Cost ('000)**
Band 6 nurse costs (£'000)[1]	58,838	118.69	6,983
Consultant costs (£'000)[2]	138,198	11.87	1,640
Total staff costs (£'000) Provider			**8,623**
Potential savings from avoided critical care bed days ('000)[3] **Commissioner**	837.22	6,220	(5,207)
Net resource impact for England (£'000)			**3,416**

1 Based on 24-hour care provided by band 6 nurses at top of band

2 Assumes 0.1 consultants per nurse are required to deliver specialist recovery

3 Assumes 20% of people who have specialist recovery would otherwise have been treated in critical care for 1 day post-operatively

Benefits and savings

3.1.13 Increase in the use of specialist recovery areas is likely to reduce the use of critical care for people who have undergone major, complex or high-risk surgery. Based on the assumptions in section 5 these benefits translate to approximately 31 fewer critical care bed-days per year per provider (based on 200 providers), assuming a 5% increase in the number of people using specialist recovery areas. This is equivalent to approximately 124 fewer critical care bed-days per year per provider assuming a 20% increase in the number of people using specialist recovery areas, as modelled in the resource impact template.

3.1.14 This may lead to cash savings for commissioners (as modelled in this analysis) and capacity benefits for providers. However, if any critical care capacity created by investment in specialist recovery areas is immediately filled, these cash-benefits will not be realised by commissioners. The number of potential critical care bed days saved by expanding the use of specialist recovery areas are show in tables 6 and 7.

Table 6 Potential reduction in critical care bed days by using specialist recovery using standard NICE assumptions for the population of England

Increase in specialist recovery activity	5%	10%	20%
Critical care bed days saved	6,220	12,440	24,880

Table 7 Potential reduction in critical care bed days by using specialist recovery using standard NICE assumptions per 100,000 population

Increase in specialist recovery activity	5%	10%	20%
Critical care bed days saved	11	22	44

3.1.15 Increase in the use of specialist recovery areas may reduce the total length of stay for people who have had major, complex or high-risk surgery. It may also improve mortality rates and reduce the number of surgical procedures cancelled. The financial benefits of these implications have not been included in this model a lack of robust data to support calculating these impacts.

4 Implications for commissioners

4.1 Surgical services fall under programme budgeting category 23X ‘Other, miscellaneous other’.

4.2 The main implementation costs will fall on providers if an increase in staffing is required to deliver specialist recovery. Providers may have capacity benefits arising from a decrease in the use of critical care facilities, a reduction in the cancellations of procedures and a potential reduction in length of stay. If there is a decrease in the use of critical care facilities, this may decrease the cost to commissioners, depending on the contract in place. Critical care activity may be paid for by commissioners at a locally negotiated bed day tariff or through a block contract.

4.3 Commissioners and providers will need to work together to determine how providers should be reimbursed for the increased specialist recovery activity.

5 Assumptions made

5.1 The resource impact template makes the following assumptions:

- providing increased nursing cover at a Band 6 level to deliver specialist recovery costs £225 per specialist recovery episode (which includes employer on costs and an assumed level of enhancements). This assumes 24-hour care by a band 6 nurse and can be amended by users based on local conditions.
- nursing costs are based on top of band 6 with 23% enhancements, based on 24-hour nursing care, 4.1% sickness absence and 33 days annual leave entitlement, this can be amended by users based on local conditions
- 0.25 nurses per patient (1:4 ratio) is required to deliver specialist recovery, this can be amended by users based on local conditions
- 0.1 consultants per nurse are required to deliver specialist recovery, this can be amended by users based on local conditions.
- No capital costs have been included in the resource impact template because the committee felt that increased care

intensity with additional staffing would be the key feature of specialised recovery. Some investment in equipment may be required at a local level, this will be dependent on current circumstances and service arrangements.

- there are around 1,100 complex, major or high-risk surgeries per 100,000 population
- around 70% of people currently access care in a specialist recovery area and up to 90% will in future (based on expert clinical opinion), this can be amended by users based on local conditions
- Around 20% of people who have specialist recovery would otherwise have been treated in critical care (for 1 day) post-operatively, this can be amended by users based on local conditions
- The cost of a day in critical care is £837, this can be amended by users based on local conditions. This unit cost is based on reference costs 2018-19 for 0 organs supported and includes non-pay and overhead costs.
- people will spend, on average, 24 hours in specialist recovery following surgery, this can be amended by users based on local conditions.

5.2 All of these are intended to be illustrative assumptions and can be amended by users locally.

5.3 There is no national price for specialist recovery. The cost of specialist recovery is based on the increased level of nursing cover required to ensure that the additional people who are treated in specialist recovery have a high level of care and regular observations.

5.4 Based on the assumptions above, a 5% increase in specialist recovery activity for a population of 100,000 would require 0.21 WTE of nursing cover which would cost £12,556 at band 6 and an additional 0.02 WTE of consultant cover which would cost £2,949

based on the 2003 contract. This would generate savings of £9,363 from the reduced use of critical care and would result in a net resource impact of £6,142.

About this resource impact report

This resource impact report accompanies the NICE guideline on perioperative care and should be read in conjunction with it. See terms and conditions on the NICE website.