

Putting NICE guidance into practice

Resource impact report: Emergency and acute medical care in over 16s: service delivery and organisation (NG94)

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Summary

This report focuses on the recommendations from NICE's guideline on [emergency and acute medical care in over 16s](#). The report highlights the recommendations that have a significant resource impact for England.

There is considerable overlap between the guideline and other policy initiatives, such as a [NHS England 7 day services clinical standards](#). The report highlights the resource impact of individual recommendations but part of which is equally attributable to such policies.

The guideline aims to deliver the following benefits:

- Reduced inappropriate visits to emergency departments
- Reduced hospital admissions and readmissions
- Reduced length of stay and fewer delayed discharge bed days.

In order to deliver such benefits initial investment may be required in staffing to support the following recommendations:

- Provide specialist and advanced paramedic practitioners (recommendation 1.1.1)
- Provide 7 day inpatient access to enhanced therapy services (1.2.8)
- Provide nurse-led support in the community (recommendation 1.1.5).

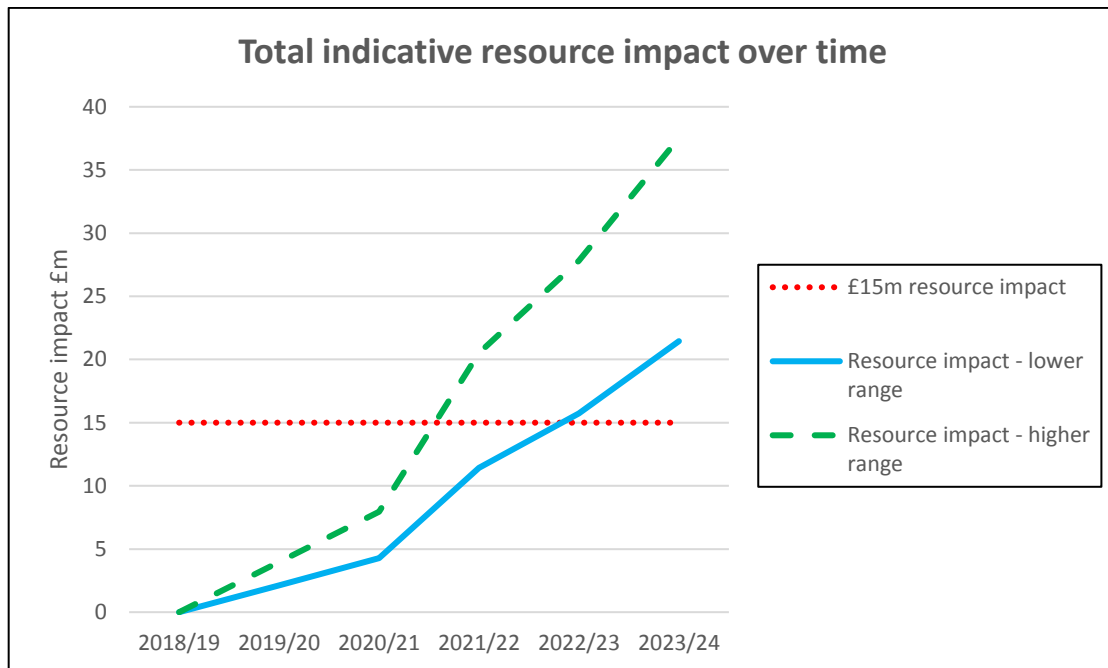
Such resources are not available immediately. There is likely to be a minimum time lag of 1 to 3 years to train such staff to allow organisations time to include in financial plans.

The cost of implementing the guideline will vary depending on current practice. Worked examples giving a range of the potential resource impact are included in section 3.

The total indicative resource impact for the estimated additional staffing requirements and the timing of costs outlined in sections 3.1 to 3.3 are shown in the graph below.

This report is supported by a resource impact template which may be used to calculate the resource impact of implementing the guidance locally.

NICE considers any guidance with a resource impact greater than £15 million at a national level to be high cost. The graph below demonstrates when this will be reached.



Urgent and emergency care services are commissioned by clinical commissioning groups and NHS England. Providers are ambulance trusts, hospital trusts, community services and primary care.

1 Introduction

- 1.1 The guideline offers best practice advice on the organisation and delivery of emergency and acute medical care in the community and in hospital.
- 1.2 This report discusses the resource impact of implementing our guideline on [emergency and acute medical care in over 16s](#) in England. It aims to help organisations plan for the financial implications of implementing this NICE guideline.
- 1.3 The guideline committee did not include detail in the recommendations about how they should be implemented (such as how many staff are needed or the exact content of an intervention) because the most cost effective solution is likely to vary depending on local systems.
- 1.4 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.
- 1.5 Urgent and emergency care services are commissioned by clinical commissioning groups and NHS England. Providers are ambulance trusts, hospital trusts, community services and primary care.

2 Background

- 2.1 People needing urgent health care have a health problem that needs immediate attention but their life is not at risk. People needing emergency health care have a health problem that occurs suddenly, needs immediate attention and may be life threatening.
- 2.2 Demand in the NHS is increasing across the whole urgent and emergency care system. In 2014/15, ambulance services

responded with face to face contacts on 6.47 million occasions ([NHS Digital Ambulance services, England 2014/15](#)).

- 2.3 There were 23.4 million attendances at all accident and emergency departments in 2016/17, including 15.9 million attendances at major units ([NHS Digital Hospital accident and emergency activity 2016/17](#)).
- 2.4 Hospitals have found it increasingly challenging to maintain the flow of patients through from admission to discharge. In 2016/17 there were 5.8 million emergency hospital admissions, of which 4.3 million arrived via ambulance ([NHS England A&E attendances and emergency admissions 2016/17](#)).
- 2.5 Delays to discharge from hospital are increasing. Last year 1.5 million acute bed days resulted from delayed discharge ([NHS England delayed transfers of care data 2016/17](#)).
- 2.6 The number of readmissions to hospital are also increasing with 11.45% of all discharges from hospital resulting in emergency readmissions within 28 days ([NHS Digital Hospital Episode Statistics, Emergency Readmissions 2011/12](#)).
- 2.7 The guideline committee considered interventions that avoid hospital admission and facilitate earlier discharge, when this can be achieved safely and without an increase in readmissions.
- 2.8 Admission to hospital and delays in discharge can negatively affect patient outcomes, creating significant anxiety, physical and psychological deterioration and increased dependence.
- 2.9 It is difficult to accurately determine the number of people at risk of hospital admission or readmission. The [Emergency Care Dataset](#) will begin collecting data in October 2017 which will give more understanding of the population using urgent and emergency care services.

3 Recommendations with potential resource impact

3.1 *Advanced paramedic practitioners*

Provide specialist and advanced paramedic practitioners who have extended training in assessing and treating people with medical emergencies (recommendation 1.1.1)

Background

- 3.1.1 There are 10 ambulance trusts in England ([NHS Confederation](#)). Paramedic training has traditionally focussed on the immediate assessment and management of potentially life threatening medical emergencies with on-going treatment and transfer to an appropriate receiving unit.
- 3.1.2 Increasingly evidence suggests that a proportion of lower acuity patients using ambulance services have the potential to undergo assessment and management in the community without the need for hospital admission.
- 3.1.3 Practitioners with enhanced training and education in other professional groups, such as nursing and therapies, can treat and discharge patients.
- 3.1.4 The guideline committee therefore investigated whether enhancing the competencies of paramedics resulted in a reduction in hospital admissions and demand for Emergency Department services

Assumptions made

- 3.1.5 The salary plus on costs for a Band 7 advanced paramedic practitioner is £48,155 and is taken from [Unit costs of health and social care 2016 \(PSSRU\)](#).
- 3.1.6 The cost of a face to face ambulance response in the local template is £236 (ASS02 [NHS reference costs 2015/16](#)).

- 3.1.7 The cost of an A&E attendance arriving by ambulance in the local template is £141 (VB07Z [National tariff 2017/18](#)).
- 3.1.8 The cost for an emergency admission in the local template is £1,120 (average of reduced short stay emergency tariff for medical HRGs, [National tariff 2017/18](#)).
- 3.1.9 The time taken to train additional advanced paramedic practitioners is assumed to be 3 years, and the indicative costs of implementation have been phased to reflect this assumption.
- 3.1.10 Uptake of the recommendation is assumed to be 30% the first year after training is complete, 60% in the second year, and 100% thereafter.

Costs

- 3.1.11 Introducing higher banded advanced paramedic practitioners will result in additional staff costs for ambulance trusts. Staff undergoing additional training may need to be released to attend courses, and additional staff time could be needed to backfill rotas. There may also be increased training and education costs, such as higher education fees.
- 3.1.12 To give an indicative national costs for providing additional advanced paramedic practitioner posts, a range of costs have been estimated. These indicative cost calculations are summarised in table 1.

Table 1 Range of indicative cost of providing additional advanced paramedic practitioner posts

	Salary and on cost per staff member (£)	Cost per trust (£)	Number of ambulance trusts	Indicative national resource impact (£000)	
				For England	Per 100,000 population
5 additional Band 7 advanced paramedic practitioner	48,155	240,775	10	2,408	4
10 additional Band 7 advanced paramedic practitioner	48,155	481,550	10	4,816	9

3.1.13 There is likely to be a delay in uptake of the recommendation as staff will need to be training and organisations will need time to include in financial plans. An estimate of the range of national indicative costs over time is shown in table 2.

Table 2 National indicative resource impact per 100,000 population over time of providing additional advanced paramedic practitioner posts

	2018/19 (£000)	2019/20 (£000)	2020/21 (£000)	2021/22 (£000)	2022/23 (£000)	2023/24 (£000)
5 additional Band 7 advanced paramedic practitioner	0	0	0	1	3	4
10 additional Band 7 advanced paramedic practitioner	0	0	0	3	5	9

Benefits and savings

3.1.14 Using advanced paramedic practitioners may result in fewer attendances at emergency departments and fewer hospital admissions, as some patients may be more appropriately cared for via primary care and community services. Advanced paramedic practitioners may also complete episodes of care without the need for onward referral. This is associated with improved patient

outcomes, and clinical expert opinion states there is evidence of increased patient satisfaction.

- 3.1.15 Advanced paramedic practitioners are usually deployed as solo responders in a car. The cost of responding to call out will be less than for an ambulance, which is a higher cost vehicle staffed as a minimum by an emergency care worker and a paramedic.

Other considerations

- 3.1.16 The local [resource impact template](#) can be used by organisations to model any local costs and savings associated with implementing this recommendation.

3.2 *Enhanced inpatient access to physiotherapy and occupational therapy*

Provide access to physiotherapy and occupational therapy 7 days a week for people admitted to hospital with a medical emergency (recommendation 1.2.8)

Background

- 3.2.1 Physiotherapy and occupational therapy are an important component in the recovery from acute illness, particularly in chest disease, falls, stroke, frail patients and prolonged admissions. More intense therapy would be expected to lead to shorter hospital stays and quicker recovery from immobility caused by illness. Likewise the risk of physical deterioration from lack of access to therapies over a weekend would be expected to extend hospital stay and increase comorbidities.
- 3.2.2 Currently 7 day therapy services are regularly delivered in specialist services such as respiratory and trauma units, but is not common practice in general medical units.

- 3.2.3 Providing support services seven days per week is included standard 9 of the [NHS England Seven Day Services Clinical Standards](#).

Assumptions made

- 3.2.4 The salary plus on costs for a Band 2 therapy assistant is taken from [Unit costs of health and social care 2016 \(PSSRU\)](#).
- 3.2.5 The salary plus on costs for a Band 5 physiotherapist or occupational therapist is taken from [Unit costs of health and social care 2016 \(PSSRU\)](#).
- 3.2.6 The cost of a delayed discharge bed day is £224 (average of excess bed day cost for medical HRGs, [National tariff 2017/18](#)).
- 3.2.7 The time taken to train additional staff is assumed to be 1 year for a Band 2 therapy assistant and 3 years for a Band 5 physiotherapist or occupational therapist. The indicative costs of implementation have been phased to reflect these assumptions.
- 3.2.8 Uptake of the recommendation is assumed to be 30% the first year after training is complete, 60% in the second year, and 100% thereafter.

Costs

- 3.2.9 The committee concluded that extended access physiotherapy and occupational therapy over 7 days on medical wards could have a significantly positive impact on hospital flow and patient outcomes at a cost effective level in hospitals.
- 3.2.10 The committee concluded that extended access to therapy was likely to be cost saving. To implement this recommendation, some trusts will need to increase the provision of physiotherapy and occupational therapy service. This cost should be offset by cost savings from reduced length of stay and fewer delays to discharge.

3.2.11 To give an indicative national cost for providing enhanced physiotherapy and occupational therapy on medical wards, a range of costs have been estimated. These indicative cost calculations are summarised table 3.

Table 3 Range of indicative cost of providing enhanced physiotherapy and occupational therapy services

	Salary and on cost per staff member (£)	Cost per trust (£)	Number of acute providers	Indicative national resource impact (£000)	
				For England	Per 100,000 population
1 additional Band 2 hospital based therapist assistant	20,238	20,238	152	3,076	6
2 additional Band 5 hospital based therapist	28,689	57,378	152	8,721	16
Total indicative resource impact – lower range		77,616		11,797	22
2 additional Band 2 hospital based therapist assistant	20,238	40,476	152	6,152	11
3 additional Band 5 hospital based therapist	28,689	86,067	152	13,082	24
Total indicative resource impact – higher range		126,543		19,234	35

3.2.12 There is likely to be a delay in uptake of the recommendation as staff will need to be training and organisations will need time to include in financial plans. An estimate of the range of national indicative costs over time is shown in table 4.

Table 4 National indicative resource impact per 100,000 population over time of providing enhanced physiotherapy and occupational therapy services

	2018/19 (£000)	2019/20 (£000)	2020/21 (£000)	2021/22 (£000)	2022/23 (£000)	2023/24 (£000)
Additional therapy staff – lower range	0	2	3	10	15	22
Additional therapy staff – higher range	0	3	7	18	26	35

3.2.13 As providing support services seven days per week is already included in the [NHS England 7 day services clinical standards](#), the resource impact for this recommendation will depend on how far implementation has progressed.

Benefits and savings

3.2.14 Patients receiving a 7 day physiotherapy and occupational therapy service in hospital are likely to have shorter lengths of stay, increased quality of life and improved survival rates.

3.2.15 Early mobilisation is likely to reduce morbidity of patients with an acute medical emergency. Early mobilisation is recommended in a number of other NICE clinical guidelines ([Stroke CG68](#), [hip fracture CG124](#), [VTE CG92](#)).

Other considerations

3.2.16 The committee noted that the cost of the intervention could be reduced if conducted partly by a therapy assistant or as part of an exercise class where multiple people are being treated together. They also noted that physiotherapy and occupational therapy are usually delivered by a team of staff with mixed skills and therefore it is not appropriate to evaluate the two separately.

3.2.17 The local [resource impact template](#) can be used by organisations to model any local costs and savings associated with implementing this recommendation.

3.3 **Community nursing**

Provide nurse-led support in the community for people at increased risk of hospital admission or readmission. The nursing team should work with the team providing specialist care (recommendation 1.1.5)

Background

- 3.3.1 Community nursing refers to a diverse range of nurses and support workers who work in the community, including district nurses, intermediate care nurses, community matrons and hospital at home nurses. Community nurses are employed by acute or community trusts.
- 3.3.2 Community nursing does not specifically include general practice nurses, community mental health, learning disability or children's nurses although these roles are all central to integrated working.
- 3.3.3 Community nurses have developed additional skills in response to the changing needs of the population they serve such as long term condition management and identifying and supporting those with exacerbations of serious illnesses.
- 3.3.4 The committee found that for adults who are at risk of acute medical emergencies, community-led nurse care is less costly and more efficient than usual care in the community.

Assumptions made

- 3.3.5 The salary plus on costs for a Band 2 community support worker is taken from [Unit costs of health and social care 2016 \(PSSRU\)](#).
- 3.3.6 The salary plus on costs for a Band 5 community nurse is taken from [Unit costs of health and social care 2016 \(PSSRU\)](#).
- 3.3.7 The estimated cost of admission and readmission is taken from [National tariff 2017/18](#).

3.3.8 The time taken to train additional staff is assumed to be 1 year for a Band 2 community support worker and 3 years for a Band 5 community nurse. The indicative costs of implementation have been phased to reflect these assumptions.

3.3.9 Uptake of the recommendation is assumed to be 30% the first year after training is complete, 60% in the second year, and 100% thereafter.

Costs

3.3.10 Expanding or developing community nursing teams could lead to increased staffing costs as more nurses and support worker posts may need to be created.

3.3.11 Additional staffing costs may be offset by hospital savings through prevention of admissions and readmissions. It is unclear whether these interventions will be cost saving or cost increasing overall and is dependent on the patient cohort and local service structures.

3.3.12 To give an indicative national cost for providing additional community nursing posts, a range of costs have been estimated. These indicative cost calculations are summarised in table 5.

Table 5 Indicative cost of providing additional community nursing posts

	Salary and on cost per staff member (£)	Indicative national resource impact (£000)	
		For England	Per 100,000 population
200 additional Band 2 community support worker	20,238	4,048	7
100 additional Band 5 community nurse	31,990	3,199	6
Total indicative resource impact – lower range		7,247	13
350 additional Band 2 community support worker	20,238	7,083	13
200 additional Band 5 community nurse	31,990	6,398	12
Total indicative resource impact – higher range		13,481	25

3.3.13 There is likely to be a delay in uptake of the recommendation as staff will need to be training and organisations will need time to include in financial plans. An estimate of the range of national indicative costs over time is shown in table 6.

Table 6 National indicative resource impact per 100,000 population over time of providing additional community nursing posts

	2018/19 (£000)	2019/20 (£000)	2020/21 (£000)	2021/22 (£000)	2022/23 (£000)	2023/24 (£000)
Additional community nursing staff – lower range	0	2	4	9	11	13
Additional community nursing staff – higher range	0	4	8	16	20	25

Benefits and savings

3.3.14 Community nursing can result in more personalised and effective care which is delivered in the most appropriate setting. Care can be condition specific and community nursing teams are better able to build person-specific knowledge.

3.3.15 Patients are likely to experience better outcomes as a result of being cared for by community nursing teams.

Other considerations

3.3.16 Availability of appropriately trained community nursing staff may be problematic due to the recruitment and retention issues currently being experienced within the NHS.

3.3.17 Regional geography, such as rural or urban populations, will have an impact on how care is delivered and structured, and may also affect recruitment.

3.3.18 The development of community nursing teams should be done in line with [NHS England's framework for commissioning community nursing](#).

3.3.19 The local [resource impact template](#) can be used by organisations to model any local costs and savings associated with implementing this recommendation.

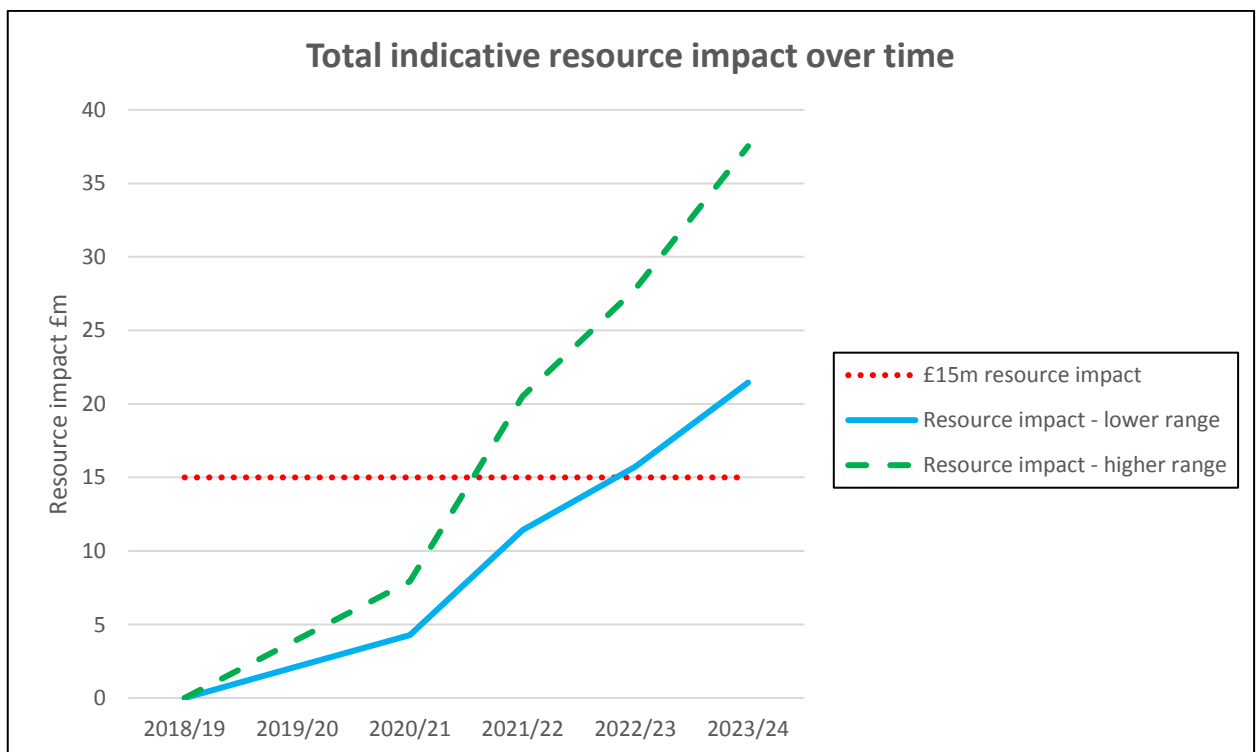
3.4 **Summary of indicative resource impact**

3.4.1 The total indicative resource impact for the estimated additional staffing requirements outlined in sections 3.1 to 3.3 are shown in table 7.

Table 7 Total indicative resource impact over time

	2018/19 (£000)	2019/20 (£000)	2020/21 (£000)	2021/22 (£000)	2022/23 (£000)	2023/24 (£000)
Resource impact – lower range	0	2,137	4,274	11,422	15,721	21,452
Resource impact – higher range	0	3,971	7,941	20,524	27,813	37,531

3.4.2 NICE considers any guidance with a resource impact greater than £15 million at a national level to be high cost. The graph below demonstrates when this will be reached.



3.4.3 At the lower range, resource impact reaches over £15m in year 2022/23. At the higher range, resource impact reaches over £15m in year 2021/22.

3.5 ***Other recommendations with potential resource impact***

3.5.1 Several other recommendations in the guideline have the potential to lead to increased costs and / or savings when implemented. The size of any potential costs or savings will depend on local current arrangements and the extent to which organisations implement the recommendations.

3.5.2 Areas highlighted for potential resource impact are as follows:

- Provision of point-of-care C-reactive protein testing for people with suspected lower respiratory tract infections (recommendation 1.1.2)
- Provide advanced community pharmacy-based service (1.1.3)
- Provide multidisciplinary intermediate care (1.1.6)
- Provide multidisciplinary community-based rehabilitation (1.1.7)
- Provide access to liaison psychiatry in hospital (1.2.3).

3.5.3 Investing in these areas may lead to increased benefits and savings including:

- Reduced inappropriate visits to emergency departments
- Reduced hospital admissions and readmissions
- Quicker discharge from hospital
- Reduced delays to discharge from hospital
- Improvements to hospital flow

3.5.4 The local [resource impact template](#) can be used by organisations to model any additional investment in these areas and any associated savings.

4 Implications for commissioners

- 4.1 Commissioning for urgent and emergency care needs to be in line with NHS England's programmes on the [five year forward view](#) and [urgent and emergency care programme](#).
- 4.2 Commissioners should be aware that there are eight [urgent and emergency care vanguards](#) operating in England, undertaking work testing both national and local interventions to transform urgent and emergency care services in England.
- 4.3 Costs and associated savings are likely to arise in different sectors of the health and social care system. Commissioners may need to consider local funding changes to reflect this and support providers.

About this resource impact report

This resource impact report accompanies the NICE guideline on [emergency and acute medical care in over 16s](#) and should be read in conjunction with it. See [terms and conditions](#) on the NICE website.

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