NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health and social care directorate

Quality standards and indicators

Briefing paper

Quality standard topic: Rehabilitation after critical illness

Output: Prioritised quality improvement areas for development.

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Contents

1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for rehabilitation after critical illness. It provides the committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

1.1 Structure

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

If relevant, recommendations selected from the key development source below are included to help the committee in considering potential statements and measures.

1.2 Development source

The key development source(s) referenced in this briefing paper is:

Rehabilitation after critical illness in adults CG83 (2009)

2 Overview

2.1 Focus of quality standard

This quality standard will cover adults with rehabilitation needs as a result of a period of critical illness that required level 2 or level 3 critical care.

2.2 Definition

Critical care is used as a term that encompasses intensive care or intensive therapy; provided in intensive care units (ICUs) or intensive therapy units (ITUs), together with what used to be called high dependency care provided in high-dependency units (HDUs). Intensive care, or level 3 care, generally involves the support of one or more failing organ system, usually including the lungs, whereas high dependency care, or level 2 care, supports one system. Recently the distinctions have become blurred, hence the increasing use of the term critical care.

2.3 Incidence and prevalence

Approximately 163,000 people (UK Intensive Care National Audit and Research (ICNARC) Case Mix Programme (CMP) Summary Statistics 2014-15)[1] spend time in

[1] https://www.icnarc.org/Our-Audit/Audits/Cmp/Reports/Summary-Statistics

241 critical care units in England, Wales and Northern Ireland each year, the majority surviving to be discharged home.

The Adult Critical Care in England 2014/15 hospital episode statistics report[2] found of 258,956 adult critical care periods, 62.2% (161,007) adult critical care records were recorded as being for 'Non-specific general adult care'. The length of stay within critical care varied, with 51.1% of all critical care records finishing 1 or 2 days after they started. Most patients are discharged from critical care to other wards in the same hospital, 83.1%.

2.4 Management

Rehabilitation strategies during critical care and after discharge from critical care may help to improve patient outcomes, reduce the length of stay in critical care and hospital stay after discharge from critical care, minimise hospital readmission rates and reduce the use of primary care resources. These strategies can also help patients return to their previous level of activities sooner. The time taken to return to the previous level of activities depends on the patient's critical illness and is typically between 9 and 12 months after hospital discharge, or longer.

There is evidence to suggest that multidisciplinary rehabilitation strategies after critical illness can aid physical recovery and help people cope with the physical and non-physical problems associated with critical illness. The availability of rehabilitation after critical illness varies widely across the country and currently lacks coordination.

2.5 National outcome frameworks

Tables 1, 2 and 3 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 Adult social care outcomes framework 2015–16

Domain	Overarching and outcome measures
1 Enhancing quality of life for people with care and support needs	***Overarching measure*** 1A Social care-related quality of life** ***Outcome measures*** **People manage their own support as much as they wish, so they are in control of what, how and when support is delivered to match their needs** 1B Proportion of people who use services who have control over their daily life 1C Proportion of people using social care who receive self-directed support, and those receiving direct payments
2 Delaying and reducing the need for care and support	***Overarching measure*** 2A Permanent admissions to residential and nursing care homes, per 100,000 population

[2] Hospital episode statistics: Adult critical care in England 2014-15

	Outcome measures **Earlier diagnosis, intervention and reablement means that people and their carers are less dependent on intensive services** 2B Proportion of older people (65 and over) who were still at home 91 days after discharge from hospital into reablement/rehabilitation services* 2D The outcomes of short-term services: sequel to service *Placeholder 2E The effectiveness of reablement services* **When people develop care needs, the support they receive takes place in the most appropriate setting and enables them to regain their independence** 2C Delayed transfers of care from hospital, and those which are attributable to adult social care *Placeholder 2F Dementia – a measure of the effectiveness of post-diagnosis care in sustaining independence and improving quality of life***
Alignment with NHS Outcomes Framework and/or Public Health Outcomes Framework * Indicator is shared ** Indicator is complementary Indicators in italics in development	

Table 2 NHS outcomes framework 2016–17

Domain	Overarching indicators and improvement areas
1 Preventing people from dying prematurely	***Overarching indicators*** 1a Potential Years of Life Lost (PYLL) from causes considered amenable to healthcare i Adults 1b Life expectancy at 75 i Males ii Females
2 Enhancing quality of life for people with long-term conditions	***Overarching indicator*** 2 Health-related quality of life for people with long-term conditions** ***Improvement areas*** **Ensuring people feel supported to manage their condition** 2.1 Proportion of people feeling supported to manage their condition **Improving functional ability in people with long-term conditions** 2.2 Employment of people with long-term conditions*, ** **Enhancing quality of life for carers** 2.4 Health-related quality of life for carers** **Enhancing quality of life for people with mental illness** 2.5 i Employment of people with mental illness**

	*ii Health-related quality of life for people with mental illness***
	Improving quality of life for people with multiple long-term conditions
	*2.7 Health-related quality of life for people with three or more long-term conditions***
3 Helping people to recover from episodes of ill health or following injury	***Overarching indicators***
	3b Emergency readmissions within 30 days of discharge from hospital*
	Improvement areas
	Improving outcomes from planned treatments
	3.1 Total health gain as assessed by patients for elective procedures
	i Physical health-related procedures
	ii Psychological therapies
	iii Recovery in quality of life for patients with mental illness
	Improving recovery from fragility fractures
	3.5 Proportion of patients recovering to their previous levels of mobility/walking ability at i 30 and ii 120 days
	Helping older people to recover their independence after illness or injury
	3.6 i Proportion of older people (65 and over) who were still at home 91 days after discharge from hospital into reablement/rehabilitation service*
	ii Proportion offered rehabilitation following discharge from acute or community hospital*
4 Ensuring that people have a positive experience of care	***Overarching indicators***
	4b Patient experience of hospital care
	4c *Friends and family test*
	4d Patient experience characterised as poor or worse
	ii Hospital care
	Improvement areas
	Improving people's experience of outpatient care
	4.1 Patient experience of outpatient services
	Improving hospitals' responsiveness to personal needs
	4.2 Responsiveness to inpatients' personal needs
5 Treating and caring for people in a safe environment and protecting them from avoidable harm	***Improvement areas***
	Reducing the incidence of avoidable harm
	5.1 Deaths from venous thromboembolism (VTE) related events
	5.3 Proportion of patients with category 2, 3 and 4 pressure ulcers
Alignment with Adult Social Care Outcomes Framework and/or Public Health Outcomes Framework	
* Indicator is shared	
** Indicator is complementary	

Indicators in italics in development

Table 3 Public health outcomes framework for England, 2016–2019

Domain	Objectives and indicators
4 Healthcare public health and preventing premature mortality	***Objective*** Reduced numbers of people living with preventable ill health and people dying prematurely, whilst reducing the gap between communities ***Indicators*** 4.11 Emergency readmissions within 30 days of discharge from hospital*
Alignment with Adult Social Care Outcomes Framework and/or NHS Outcomes Framework * Indicator is shared	

3 Summary of suggestions

3.1 Responses

In total 12 stakeholders responded to the 2-week engagement exercise 21/11/2016 – 5/12/2016.

Stakeholders were asked to suggest up to 5 areas for quality improvement. Specialist committee members were also invited to provide suggestions. The responses have been merged and summarised in table 4 for further consideration by the Committee.

Full details of all the suggestions provided are given in appendix 2 for information.

Table 4 Summary of suggested quality improvement areas

Suggested area for improvement	Stakeholders
During the critical care stay • Short clinical assessment • Early structured rehabilitation	COT, SCM x3, ICU steps, Neurocare
Discharge from critical care to ward • Discharge to ward • Nutrition support	SCM, BDA
Discharge from hospital • Follow-up after discharge • Provision of information	SCM x3, ICU steps,
Coordination of the rehabilitation care pathway	SCM x3, ICU Steps,
Additional areas • Care of tracheostomy patients • Additional therapies • Functional outcomes to assess rehabilitation provision and outcomes • Delirium • Information for sepsis patients • Access to social care advice • ABCDE bundle	SCM x4 Neurocare, UKST
BDA - BDA Critical Care Specialist Group ICU steps – The intensive care patient support charity Neurocare - Neurocare Europe Limited UK sepsis Trust - UKST SCM - Specialist Committee Member	

3.2 Identification of current practice evidence

Bibliographic databases were searched to identify examples of current practice in UK health and social care settings; 583 papers were identified for rehabilitation after

critical illness. In addition, 20 papers were suggested by stakeholders at topic engagement and 64 papers internally at project scoping.

Of these papers, 5 have been included in this report and are included in the current practice sections where relevant. Appendix 1 outlines the search process.

4 Suggested improvement areas

4.1 During the critical care stay

4.1.1 Summary of suggestions

Short clinical assessment

Stakeholders highlighted that patients needed to be assessed as soon as possible, ideally within 24hrs following admission to critical care, they commented that this assessment would ensure rehabilitation needs were identified and maximise a patient's chance of recovery.

They commented that a short clinical assessment for patients at low risk can therefore provide a structured opportunity to review what an individual patient needs to ensure all patients are given the rehabilitation they require. They highlighted that this can be in the form of a rehabilitation prescription

Early structured rehabilitation

Stakeholders highlighted it is important rehabilitation starts as early as possible to make a difference to the patient's long term recovery. It was felt this can improve patient recovery through the provision of an individualised, structured rehabilitation programme. In addition stakeholders highlighted that the earlier it start the greater the clinical benefit, they commented there are low rates of rehabilitation in acutely unwell patients nationally.

Stakeholders also commented the presence of dedicated physiotherapists for critical care units, MDT ward rounds and goal setting can have a positive impact.

4.1.2 Selected recommendations from development source

Table 5 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 5 to help inform the committee's discussion.

Table 5 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Short clinical assessment	**During the critical care stay** NICE CG83 Recommendation 1.2
Early structured rehabilitation	**During the critical care stay** NICE CG83 Recommendation 1.3 to 1.6

During the critical care stay

NICE CG83 Recommendation 1.2

During the patient's critical care stay and as early as clinically possible, perform a short clinical assessment to determine the patient's risk of developing physical and non-physical morbidity.

NICE CG83 Recommendation 1.3

For patients at risk of physical and non-physical morbidity, perform a comprehensive clinical assessment to identify their current rehabilitation needs. This should include assessments by healthcare professionals experienced in critical care and rehabilitation.

NICE CG83 Recommendation 1.4

For patients at risk, agree short-term and medium-term rehabilitation goals, based on the comprehensive clinical assessment. The patient's family and/or carer should also be involved.

NICE CG83 Recommendation 1.5

The comprehensive clinical assessment and the rehabilitation goals should be collated and documented in the patient's clinical records.

NICE CG83 Recommendation 1.6

For patients at risk, start rehabilitation as early as clinically possible, based on the comprehensive clinical assessment and the rehabilitation goals. Rehabilitation should include:

- measures to prevent avoidable physical and non-physical morbidity, including a review of previous and current medication
- nutrition support, based on the recommendations in 'Nutrition support in adults' (NICE clinical guideline 32)
- an individualised, structured rehabilitation programme with frequent follow-up reviews. The details of the structured rehabilitation programme and the reviews should be collated and documented in the patient's clinical records.

4.1.3 Current UK practice

Short clinical assessment

The national critical care non-medical staff survey 2016[3] reported that 85% of 169 units provided a rehabilitation assessment in the first 24 hrs of admission and around 53% reported having a rehabilitation prescription tool.

Early structured rehabilitation

A survey of compliance with the NICE CG83 in NHS hospitals in England (Berry et al 2013)[4] found 32.8% of trusts did not set short- and medium-term rehabilitation goals based on comprehensive clinical assessment for patients. They also did not have an agreed action plan to improve on this.

4.1.4 Resource impact assessment

The resource impact report from 2009 for CG83 highlighted that there was a lack of capacity in critical care to help identify people who could benefit from early mobilisation services and to identify people who will require support following discharge.

During guideline development it was estimated that up to 800 WTE increased resource would be needed in England to help address this shortfall in capacity and the estimated resource required was around £28,000,000, however savings of around £15,000,000 were expected due to allowing 1 in 5 people in critical care to leave early and reducing length of stay in wards for the population by 3.3 days on average.

[3] National Critical Care Non-Medical Workforce Survey, Overview report, March 2016, Critical care operation delivery networks England, Wales and Northern Ireland.
[4] Berry A, Cutler L, Himsworth A, 2013, National survey of rehabilitation after critical illness, The Intensive Care Society

4.2 Discharge from critical care to ward

4.2.1 Summary of suggestions

Discharge to ward

Stakeholders highlighted discharge from critical care units to wards is often a very stressful experience for patients. With those with poor mobility requiring long periods of recovery and having poorer long term outcomes. It was felt structured handover and ongoing support has the potential to improve outcomes but remains rare in practice.

Stakeholders commented that patients assessed as being low risk in critical care should have an assessment to determine if there have been any changes in their condition and their needs should be reviewed in response to this assessment before being discharged from critical care to the ward.

Nutrition support

A stakeholder highlighted patients often have multiple and varying ongoing nutritional issues following their discharge from critical care which require specialised nutrition support to ensure they are able to regain any weight lost and replenish body stores.

4.2.2 Selected recommendations from development source

Table 6 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 6 to help inform the committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Discharge to ward	**Before discharge from critical care** NICE CG83 Recommendation 1.12, 1.13 **Transfer of patients from critical care areas to general wards** NICE CG50 Recommendation 1.14 **Care on the general ward following transfer** NICE CG50 Recommendation 1.15 and 1.16 **During ward based care** NICE CG83 Recommendation 1.14, 1.15 and 1.16
Nutrition support	**During the critical care stay** NICE CG83 Recommendation 1.6 NICE QS 24 Statement 2, 3 and 5.

During ward-based care

NICE CG 83 Recommendation 1.12

Ensure that the transfer of patients and the formal structured handover of their care are in line with 'Acutely ill patients in hospital' (NICE clinical guideline 50). This should include the formal handover of the individualised, structured rehabilitation programme.

Transfer of patients from critical care areas to general wards

NICE CG50 Recommendation 1.14

After the decision to transfer a patient from a critical care area to the general ward has been made, he or she should be transferred as early as possible during the day. Transfer from critical care areas to the general ward between 22.00 and 07.00 should be avoided whenever possible, and should be documented as an adverse incident if it occurs.

Care on the general ward following transfer

NICE CG50 Recommendation 1.15

The critical care area transferring team and the receiving ward team should take shared responsibility for the care of the patient being transferred. They should jointly ensure:

- there is continuity of care through a formal structured handover of care from critical care area staff to ward staff (including both medical and nursing staff), supported by a written plan
- that the receiving ward, with support from critical care if required, can deliver the agreed plan.

The formal structured handover of care should include:

- a summary of critical care stay, including diagnosis and treatment
- a monitoring and investigation plan
- a plan for ongoing treatment, including drugs and therapies, nutrition plan, infection status and any agreed limitations of treatment
- physical and rehabilitation needs
- psychological and emotional needs
- specific communication or language needs.

NICE CG50 Recommendation 1.16

When patients are transferred to the general ward from a critical care area, they should be offered information about their condition and encouraged to actively participate in decisions that relate to their recovery. The information should be tailored to individual circumstances. If they agree, their family and carers should be involved.

During ward-based care

NICE CG 83 Recommendation 1.13

Give patients the following information before, or as soon as possible after, their discharge from critical care. Also give the information to their family and/or carer, unless the patient disagrees.

- Information about the rehabilitation care pathway.
- Information about the differences between critical care and ward-based care. This should include information about the differences in the environment, and staffing and monitoring levels.
- Information about the transfer of clinical responsibility to a different medical team (this includes information about the formal structured handover of care recommended in 'Acutely ill patients in hospital' (NICE clinical guideline 50).

- If applicable, emphasise the information about possible short-term and/or long-term physical and non-physical problems that may require rehabilitation.
- If applicable, information about sleeping problems, nightmares and hallucinations and the readjustment to ward-based care.

NICE CG83 Recommendation 1.1.4

For patients who were previously identified as being at low risk before discharge from critical care, perform a short clinical assessment to determine their risk of physical and non‑physical morbidity (see table 1).

NICE CG 83 Recommendation 1.15

For patients at risk, perform a comprehensive clinical reassessment (see recommendation 1.9) to identify their current rehabilitation needs

NICE CG83 Recommendation 1.16

For patients at risk, offer an individualised, structured rehabilitation programme, based on the comprehensive clinical reassessment and the agreed or updated rehabilitation goals set before the patient was discharged from critical care.

NICE CG83 Recommendation 1.6

For patients at risk, start rehabilitation as early as clinically possible, based on the comprehensive clinical assessment and the rehabilitation goals. Rehabilitation should include:

- nutrition support, based on the recommendations in 'Nutrition support in adults' (NICE clinical guideline 32)

NICE Quality Standard 24 Statement 2: Treatment

People who are malnourished or at risk of malnutrition have a management care plan that aims to meet their complete nutritional requirements.

NICE Quality Standard 24 Statement 3: Documentation and communication of results and nutrition support goals

All people who are screened for the risk of malnutrition have their screening results and nutrition support goals (if applicable), documented and communicated in writing within and between settings.

NICE Quality Standard 24 Statement 5: Review

People receiving nutrition support are offered a review of the indications, route, risks, benefits and goals of nutrition support at planned intervals.

4.2.3 Current UK practice

Discharge to ward

A survey of compliance with NICE CG83 in NHS hospitals in England (Berry et al 2013)[5] found 69% of trusts had a formal structured handover of care for patients.

Nutrition support

No published studies on current practice were highlighted for this suggested area for quality improvement; this area is based on stakeholder's knowledge and experience.

4.2.4 Resource impact assessment

No resource impact was anticipated from recommendations in this area of CG83.

[5] Berry A, Cutler L, Himsworth A, 2013, National survey of rehabilitation after critical illness, The Intensive Care Society

4.3 Discharge from hospital and follow up

4.3.1 Summary of suggestions

Follow up after discharge from hospital

Stakeholders highlighted patients discharged from hospital have significant ongoing physical and psychological morbidity associated with their critical care stay. They also suggested critical care units may not be offering any form of follow up directly related to critical illness.

Stakeholders commented that patients should be followed up 2-3 months after hospital discharge to ensure they can access the correct rehabilitation support, they commented that some emotional and physical problems only become apparent after discharge. A stakeholder also commented that the follow-up of patients should be lifelong.

Stakeholders also highlighted that early identification of emerging problems can reduce the dependence on other support services such as the need for counselling, they commented there are low numbers of people using support networks set up outside the NHS.

Provision of information

Stakeholders reported that patients and relatives need help and support to recover after discharge from critical care, and the provision of good quality, relevant and appropriate information is a key aspect of this. They commented that little formal guidance or support is offered to carers.

4.3.2 Selected recommendations from development source

Table 7 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 7 to help inform the committee's discussion.

Table 7 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Follow up after discharge from hospital	**Before discharge to home or community care** NICE CG83 Recommendations 1.20 and 1.21 **2-3 months after discharge from critical care** NICE CG 83 Recommendation 1.25
Provision of information	**Before discharge to home or community** NICE CG83 Recommendation 1.22

Before discharge to home or community care

NICE CG83 Recommendation 1.20

Before discharging patients who were receiving the individualised structured rehabilitation programme during ward-based care:

- perform a functional assessment which should include the following physical and non-physical dimensions (also see table 2 for possible examples):
    - physical problems (physical dimension)
    - sensory problems (physical dimension)
    - communication problems (physical dimension)
    - social care or equipment needs (physical dimension)
    - anxiety (non-physical dimension)
    - depression (non-physical dimension)
    - post-traumatic stress-related symptoms (non-physical dimension)
    - behavioural and cognitive problems (non-physical dimension)
    - psychosocial problems (non-physical dimension).
- assess the impact of the outcomes from the functional assessment on the patient's activities of daily living and participation

- based on the functional assessment, review, update and agree the rehabilitation goals with the patient. The family and/or carer should be involved if the patient agrees.

NICE CG83 Recommendation 1.21

If continuing rehabilitation needs are identified from the functional assessment, ensure that before the patient is discharged:

- discharge arrangements, including appropriate referrals for the necessary ongoing care, are in place before completing the discharge
- all discharge documents are completed and forwarded to the appropriate post-discharge services and the patient
- the patient, and/or the family and/or carer as appropriate, is aware of the discharge arrangements and understands them.

2-3 months after discharge from critical care

NICE CG83 Recommendation 1.25

Based on the functional reassessment:

- Refer the patient to the appropriate rehabilitation or specialist services if:
    - the patient appears to be recovering at a slower rate than anticipated, according to their rehabilitation goals, or
    - the patient has developed unanticipated physical and/or non-physical morbidity that was not previously identified.
- Give support if the patient is not recovering as quickly as they anticipated.
- If anxiety or depression is suspected, follow the stepped care models recommended in 'Anxiety' (NICE clinical guideline 113) and 'Depression' (NICE NICE clinical guideline 90).
- If PTSD is suspected or the patient has significant symptoms of PTS, refer to 'Post-traumatic stress disorder (PTSD)' (NICE clinical guideline 26).

Before discharge to home or community care

NICE CG83 Recommendation 1.22

Give patients the following information before their discharge to home or community care. Also give the information to their family and/or carer, if the patient agrees.

- Information about their physical recovery, based on the goals set during ward-based care if applicable.
- If applicable, information about diet and any other continuing treatments.
- Information about how to manage activities of daily living including self-care and re-engaging with everyday life.
- If applicable, information about driving, returning to work, housing and benefits.
- Information about local statutory and non-statutory support services, such as support groups.
- General guidance, especially for the family and/or carer, on what to expect and how to support the patient at home. This should take into account both the patient's needs and the family's/carer's needs.
- Give the patient their own copy of the critical care discharge summary.

4.3.3 Current UK practice

Follow-up after discharge from hospital

A UK survey on rehabilitation following critical illness (Connolly et al, 2014)[6] looking at adult intensive care units found 27.3% (48 out of 182) offered a follow-up service 2–3 months following hospital discharge. They also found that 6.3% (12 out of 182) organisations reported that a rehabilitation programme was available following hospital discharge for post critical illness patients.

A survey of compliance with the NICE CG83 in NHS hospitals in England (Berry et al 2013)[7] found 50% of trusts in the UK offered a structured and supported self-directed rehabilitation manual for at least six weeks following discharge. It also found only 36.2% (21 centres) were compliant with reviewing the rehabilitation needs of patients at 2-3 months after discharge from critical care.

[6] Connolly B, Douiri A, Steier J, Moxham J, Denehy L, Hart N , 2014, A UK survey of rehabilitation following critical illness: implementation of NICE Clinical Guidance 83 (CG83) following hospital discharge
BMJ Open

[7] Berry A, Cutler L, Himsworth A, 2013, National survey of rehabilitation after critical illness, The Intensive Care Society

The national critical care non-medical workforce survey 2016[8] found that of 126 critical care units, 29% reported physiotherapists contributing to follow-up clinics and 19% of units providing outpatient based services following discharge.

When units were asked about psychology provision, 135 units responded, and reported that psychological follow-up clinics is offered in 13% of units, frequently limited to 1 hour per week, only 1 unit provided community psychological follow-up (4hr/week).

When asked about OT support at follow-up, 146 units responded, and there were 5.5% (8/146) of units providing follow-up services and 13.7% (20/146) providing vocational follow-up.

Provision of information

A survey of compliance with NICE CG83 in NHS hospitals in England (Berry et al 2013)[9] found 46.6% of trusts were compliant with the guideline in relation to giving patient and family/carer information about diet and other ongoing treatments. In addition 44.8% of trusts reported that they were giving patients information about management of activities of daily living and what to expect on returning home.

4.3.4 Resource impact assessment

No resource impact was anticipated from recommendations in this area of CG83.

[8] National Critical Care Non-Medical Workforce Survey, Overview report, March 2016, Critical care operation delivery networks England, Wales and Northern Ireland.
[9] Berry A, Cutler L, Himsworth A, 2013, National survey of rehabilitation after critical illness, The Intensive Care Society

4.4 Coordination of rehabilitation pathway

4.4.1 Summary of suggestions

A stakeholder highlighted generally better coordination of rehabilitation services is needed. They highlighted patients have complex and varied needs after critical illness, and felt currently rehabilitation provided to patients after critical illness is very inconsistent, depending on how local provision is organised. Stakeholders commented that the multi-disciplinary team (MDT) should have coordinators who identify needs, develop and document rehabilitation plans and supervise their implementation.

Stakeholders commented on the lack of access to members of the MDT, such as psychologists, physiotherapists and speech and language therapists and national variation in waiting time for interventions identified following assessments.

They commented that improved access to psychologists is needed to deliver assessments and to train and supervise staff in delivering interventions for long term psychological morbidity such as post-traumatic stress disorder (PTSD) to patients and their families throughout the rehabilitation pathway.

4.4.2 Selected recommendations from development source

Table 8 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 8 to help inform the committee's discussion.

Table 8 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Coordination of the rehabilitation pathway	**Key principle of care** NICE CG83 Recommendation 1.1 **During ward based care** NICE CG83 Recommendation 1.17

Key principle of care

NICE CG83 Recommendation 1.1

To ensure continuity of care, healthcare professional(s) with the appropriate competencies[10] should coordinate the patient's rehabilitation care pathway. Key elements of the coordination are as follows.

[10] The healthcare professional(s) may be intensive care professional(s) or, depending on local arrangements, any appropriately trained healthcare professional(s) from a service (including specialist rehabilitation medicine services) with access to referral pathways and medical support (if not medically qualified).

- Ensure the short-term and medium-term rehabilitation goals are reviewed, agreed and updated throughout the patient's rehabilitation care pathway.
- Ensure the delivery of the structured and supported self-directed rehabilitation manual, when applicable.
- Liaise with primary/community care for the functional reassessment at 2–3 months after the patient's discharge from critical care.
- Ensure information, including documentation, is communicated between hospitals and to other hospital-based or community rehabilitation services and primary care services.
- Give patients the contact details of the healthcare professional(s) on discharge from critical care, and again on discharge from hospital.

During ward based care
NICE CG83 Recommendation 1.17

The individualised, structured rehabilitation programme should be developed and delivered by members of a multidisciplinary team, and should include appropriate referrals, if applicable.

4.4.3 Current UK practice

The national critical care non-medical workforce survey 2016[11] which collected data on the staffing levels of 9 different types of staff in critical care, found that of the 169 critical care units surveyed for physiotherapist provision had a total of 562wte band 5-8 physiotherapists. It also found that service delivery over the weekend, bank holidays and on calls was provided by physiotherapist who do not routinely work in critical care.

When asked about provision of psychological support, 135 units responded and 17% of units reported offering psychological support to patients and families in the unit.

Of the 146 units that responded with levels of occupational therapy (OT) staff, only 14% (20/146) of units reported OT input on critical care.

Of the 145 units responding with their speech and language therapy (SALT) provision, 30% of units (43/145) could identify a SALT.

Of the 169 units returning data on their dietetics provision, 86% (145/169) of units had access to a dietitian.

[11] National Critical Care Non-Medical Workforce Survey, Overview report, March 2016, Critical care operation delivery networks England, Wales and Northern Ireland.

4.4.4 Resource impact assessment

No resource impact was anticipated from recommendations in this area of CG83.

4.5 Additional areas

Summary of suggestions

The improvement areas below were suggested as part of the stakeholder engagement exercise. However they were felt to be either unsuitable for development as quality statements, outside the remit of this particular quality standard referral or require further discussion by the committee to establish potential for statement development.

There will be an opportunity for the committee to discuss these areas at the end of the session on 20/01/2017.

Care of tracheostomy patients

Stakeholders suggested tracheostomy patients in critical care do not have adequate access to swallowing assessments prior to weaning and more clarity is needed around the staffing skills required to be able to deliver this part of the service. Stakeholders also suggested that patient with a tracheostomy are frustrated by the inability to communicate and the lack of support for communication received from critical care staff. These specific suggestions are not directly covered in CG83 but form part of the general principles of care for the guideline.

Additional therapies

Stakeholders suggested conventional therapies for patients following critical care can be ineffective. They felt identification and rapid adoption of therapies which can transform post illness recovery is a major priority and suggested NMES (neuromuscular electronic stimulation) as a suitable alternative, commenting that it would also reduce the risk of venous thromboembolism and pressure ulcers. This suggestion is not covered by CG 83 and is outside of the scope for this quality standard.

Functional outcomes to assess rehabilitation provision and outcomes

Stakeholders suggested there is a lack of accepted outcome measures to allow evaluation of rehabilitation provision within critical care and throughout the patient's recovery which limits benchmarking and comparison between units. This is outside the scope of this quality standard and underpinning guidance.

Delirium

Stakeholders suggested delirium is a significant problem to people who are critically ill who can also be adversely effected by the experience for a long time after discharge. It was felt that more could be done to assist patients in intensive care

experiencing delirium. This is covered by NICE quality standard 63, Delirium in adults:

Statement 1: Adults newly admitted to hospital or long-term care who are at risk of delirium are assessed for recent changes in behaviour, including cognition, perception, physical function and social behaviour.

Statement 2: Adults newly admitted to hospital or long-term care who are at risk of delirium receive a range of tailored interventions to prevent delirium.

Statement 5: Adults with current or resolved delirium who are discharged from hospital have their diagnosis of delirium communicated to their GP.

Information for sepsis patients

One stakeholder highlighted that specific information on support for people having survived sepsis should be given as they often experience higher lengths of stay, and increased risks of complications. A separate quality standard referral is in development for sepsis.

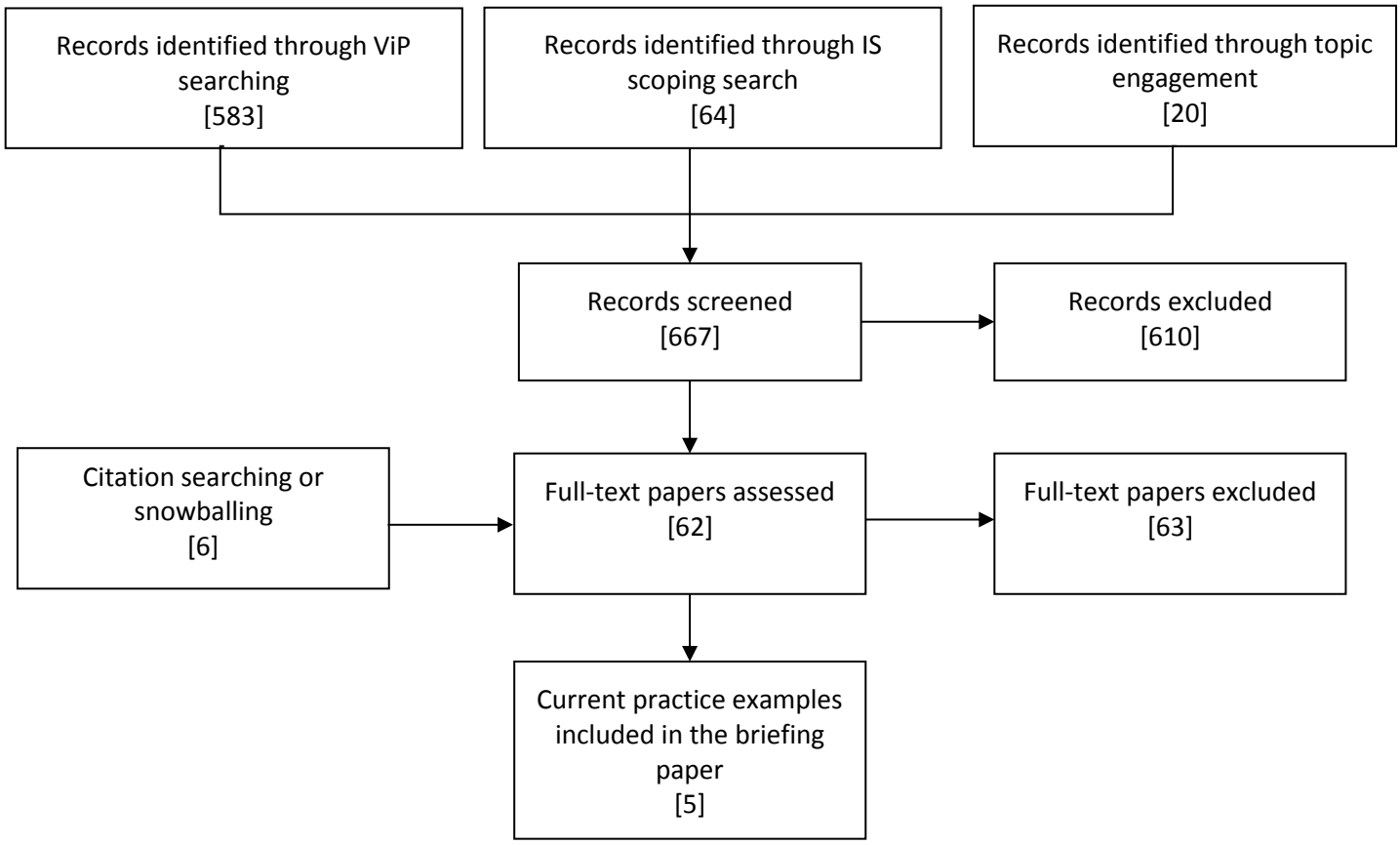
Access to social care advice

Stakeholders commented that patients and their families should have access to social care advice during the rehabilitation pathway. They commented that advice was required on finances, welfare benefits, housing relationships and returning to work. Access to social care advice is not directly covered in development source, CG83 although elements of social care form part of the assessments for patients rehabilitation needs.

ABCDE bundle

One stakeholder referred to the use of the ABCDE bundle within critical care to support early mobilisation of patients. This is not covered within the source guidance and is out of scope for the quality standard.

Appendix 1: Review flowchart



Appendix 2: Suggestions from stakeholder engagement exercise – registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
1. Short clinical assessment					
1	College of Occupational Therapists	Key area for quality improvement 1 Assessment of client-centred rehabilitation needs as soon as clinically possible following admission to critical care.	Early rehabilitation provided by a members of the multidisciplinary team with specialist skills in treating patients with critical illness, is recommended within NICE guidelines through all stages of their hospital admission.	As stated in Guidelines for the Provision of Intensive Care Services: • There is a Lack of consistent national standardised tools, or outcomes for patient in this population. • This setting should maximise patient's chances of return to pre-admission function, physical, social and psychological.	Please see the Guidelines for the Provision of Intensive Care Services http://www.ics.ac.uk/ICS/guidelines-and-standards.aspx On P.58. Section 3.1.3. Standards set out standards and recommendations for rehabilitation in critical care.
2	SCM 2	The rehabilitation prescription	This is evidenced in NICE (2009) and is a standard indicated in D16 and GPICS		
3	ICU steps	Key area for quality improvement 3 1.4 For patients who were previously identified as being at low risk…perform a short clinical assessment…	The rehabilitation requirements of patients can change, or occasionally have been missed, and this provides a structured opportunity to review what an individual patient needs.	Many patients (and their relatives) experience the 'step down' to ward care as a difficult transition. Sometimes the patient's condition can deteriorate or their rehabilitation needs change. This Quality Standard would ensure that all patients are given the rehabilitation they require.	
4	SCM 2	Short clinical assessment required for	This standard is based on evidence from NICE (2009) and	The Prescription and 24-hour Assessment are being addressed in a variety of ways across the UK as evidenced by the findings from the	Please see D16 Specification for Adult Critical Care (NHSE,

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		patients within 24 hours of admission	indicated in both the D16 and GPICS standards	CC3N National Survey (unpublished). Recent findings indicated lack of clarity from the existing standards had subsequently resulted in significant variation in interpretation. The standard therefore needs to be objective and SMART. GPICS (2015) provides more detail. The standard should perhaps identify a set of essential criteria to be contained within the prescription in order to achieve a minimum standard, guiding practitioners towards national consistency (rather than an exact format). Evidence from practice indicates that while the 24 hour standard for initial assessment captures the short stay patient, the data gathered during that time is arguably, from a practice perspective, not useful for planning rehabilitation at this stage. Rather the ongoing patient assessment is key, with the associated adjustments in care planning and prescription also ongoing throughout the pathway. Thus a pathway document might be the way forwards to plot the patient's progression. This can be helpful in supporting the patient's retrospective overview of their recovery as well as healthcare professionals.	2015), Guidelines for the Provision of Intensive Care Services (GPICs, FICM, 2015) Unpublished National Survey of Rehabilitation after Critical Illness (CC3N Rehabilitation Group, October 2016) – awaiting final report -draft data analysis available, but final report will be available during this consultation. D16 national gap analysis National Non-medical workforce survey (critical care)
2. Early structured rehabilitation					
5	ICU steps	Key area for quality improvement 2 1.6 For patients at risk, start rehab as early as clinically possible…Rehabilitation should include etc.	To ensure rehabilitation starts at the optimum time to make a difference to the patient's long term recovery	To improve patient recovery through the provision on an individualised, structured rehabilitation programme.	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
6	SCM 1	Key area for quality improvement 1 Defining early rehabilitation for patients within critical care	Early and structured rehabilitation is recommended in NICE CG83. A key component is for rehabilitation to start as early as clinically possible to maximise effectiveness	Point prevalence surveys both nationally and Internationally show relatively low rates of rehabilitation in acutely unwell patients. There are a number of recent publications addressing the barriers and safety of rehabilitation but as yet no clear guidance and local practice remains variable.	
7	SCM 3	Key area for quality improvement 5 Early intervention and increase in Physiotherapy	Patients can be adversely affected when realising that it may take a considerable time to regain their previous level of fit.	When a patient feels well in themselves but is unable to return to full employment within a reasonable period of they can experience trauma. (personal experience). In some cases the reliance on state benefits can be an economic and social factor in an extended period of recovery.	Dr Nicholas Harts study "Muscle function and biology during critical illness and CIP" found that muscle protein is significantly broken down in the first week of critical illness, with patients losing 2% of muscle mass per day."
8	SCM 1	Key area for quality improvement 2 Quantifying structured rehabilitation within ICU	There is good evidence that a structured approach to rehabilitation within ICU can significantly improve short and long term outcomes following critical illness.	Evidence shows only half of ICU's in the UK have adopted early mobility practice, with only 20% having a formalised protocol for delivery (Bakhru et al, 2016). Current markers for critical care from the GPICS guideline are insufficient to measure or advise on improving quality. For example - The suggestion that patients should receive a minimum of 45 minutes therapy time per day does not state what should be included in this time and appears an arbitrary figure without context of the patients current status.	

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				- The suggestion of a comprehensive assessment at critical care discharge, whilst a useful point, does not address the rehabilitation occurring on the unit prior to discharge Positive factors associated with a structured service are the presence of a dedicated physio for ICU, MDT ward rounds and goal setting (Bakhru et al, 2016)	
9	Neurocare Europe Limited	Rehabilitation after critical illness	Post event rehabilitation is a poorly resourced area of medical practice in the UK irrespective of whether it is post critical illness of for example post trauma or post events such as TKA. Very few patients effectively recover pre-disablement/illness/ strength, mobility and the potential for self-sufficiency.	Effective rehabilitation is crucial to the future wellbeing and HRQoL of the patient. Ineffective rehabilitation from earlier illnesses/conditions may hastens the onset of subsequent illness which in turn adds cost to the individual lifetime treatment cost profile. Conversely, effective rehabilitation can serve to avoid the onset and treatment costs of further illnesses/conditions	CG 83 notes" The general perception among patients, families and most healthcare professionals is that these people undergo a rapid convalescence and recover to their previous life, in terms of both quantity and quality. CG 83 emphasises that the fundamental obstacle to be overcome is that of muscle weakness :"general muscle atrophy, joint pain, loss of bone mass and loss of proprioception are associated with prolonged critical illness and lengthy periods of bed rest and immobility (Ferrando et al. 1995; Haines 1974; Nava 1998). The duration of critical care stay is also

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					associated with the degree of mobility problems (Jones and Griffiths 2000). A large follow-up study of patients with acute respiratory distress syndrome (ARDS) further confirmed that muscle weakness is the single greatest determinant of outcome."
3. Discharge to ward					
10	SCM 1	Key area for quality improvement 4 Ward care following ICU discharge	NICE guidance recommends a seamless pathway for patients from admission to critical care through hospital discharge and beyond.	Discharge to ward environments is often a very stressful experience for patients leaving ICU. Those with poor mobility have been demonstrated to require long periods of recovery and poorer long term outcomes. Structured handover and ongoing support has the potential to improve outcomes but remains rare in practice	
4. Nutrition support					
11	BDA Critical Care Specialist Group	Key area for quality improvement 1 Targeted Nutrition Support following discharge from Intensive Care	Patients can lose up to 2% lean body mass per day during the first 7 days of an ICU stay (Puthucheary et al 2013). Patients will generally gain weight back following an ICU but this is often predominantly fat and not functional lean body mass (Herridge et al 2003).	Simply giving 'nutrition support advice' may not capture the complicated needs of this patient group. Post ICU they are likely to have ongoing high protein requirements in addition to increased calorie requirements. Ensuring that the right type of stores are regained is vital is ensuring that the patient can engage in the physical therapy required for their rehabilitation.	Herridge et al (2003) One-year outcomes in survivors of the acute respiratory distress syndrome. *New England Journal Of Medicine*,348,683-693 Merriweather et al (2013) Nutritional Rehabilitation after ICU – does it happen: a qualitative interview and

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			Patients often have multiple and varying ongoing nutritional issues following their discharge from ICU including poor appetite, early satiety, taste changes and swallowing difficulties all of which require specialised nutrition support to ensure they are able to regain any weight lost and replenish body stores.	Current practice does not reflect even the limited nutritional recommendations from the NICE 2009 guidelines (Merriweather et al 2013) We currently have limited means for assessing nutritional status and body composition. There has already been work looking at measuring lean body mass using techniques such as ultrasound, and more guidance is needed on how this may be used in practice.	observational study. *Journal of Clinical Nursing*,23,654-622 Puthucheary, Z.A., Rawal, J., McPhail, M., Connolly, B., Ratnayake, G., Chan, P., Hopkinson, N.S., Padhke, R., Dew, T., Sidhu, P.S. and Velloso, C., 2013. Acute skeletal muscle wasting in critical illness. *Jama*, *310*(15), pp.1591-1600.
5. Follow-up after discharge					
12	SCM 3	Key area for quality improvement 1 Formalisation of Rehabilitation after Critical Illness service	The effect of a stay in Intensive Care is ongoing and may result in trauma many years after discharge. Early identification of possible emerging problems can reduce in the dependence on other support services such as the need for stress counselling. The availability of ongoing support may result in a direct improvement in the quality of life after discharge.	The numbers making use of Support networks set up outside the NHS or in addition to the service offered by a hospital highlight the need for an improvement in follow-up	A questionnaire on follow-up support circulated by the Intensive Care Societies Patient and Relatives Committee approximately two years ago was sent to all NHS hospitals in England. Although the response was disappointing it highlighted the fact that a very small percentage offered a full service.
13	SCM 1	Key area for quality improvement 5	NICE guidance recommends a seamless pathway for patients from admission to critical care through hospital discharge and beyond.	Patients discharged from hospital have significant ongoing physical and non-physical morbidity associated with their critical care stay. Despite this, less than 30% of ICU's surveyed offered any form of follow up directly	

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		Ongoing rehabilitation following discharge from hospital		related to critical illness. Of those that did only limited access to physiotherapy and rehabilitation was available. Exercise based interventions in the post discharge period have suggested some benefit to quality of life but are provided by only a handful of trusts within the UK.	
14	ICU steps	Key area for quality improvement 5 1.25 Based on the functional assessment: refer patient to the appropriate rehabilitation or specialist services if…etc	For many patients and relatives, the transition from hospital to home is a difficult one because they realise how different normal life will be for them (either for the short or long term). There can be emotional and physical problems which need addressing, and some of these only become apparent after discharge.	This will ensure that patients are assessed 2-3 months after discharge. This will check that patients are being given the rehabilitation that they need, especially if this support has not been previously identified.	
15	SCM 5	A recognition of the lifelong trajectory of critical illness	The current CG 83 states a follow up at 2 -3 months only	I asked our patient support group this question and they were horrified to think of what they would have missed out on if they had not been followed up beyond 2-3 months.	
6. Provision of information					
16	ICU steps	Key area for quality improvement 4 1.22 Give patients the following information before their discharge home…Also give the information to their family and/or carer…	Physical and emotional recovery from critical illness is a long process. Provision of information empowers patients and their relatives to understand the process and how best to help themselves throughout the complex recovery	Patients and relatives often find critical illness as a very traumatic experience. They need help and support to recover, and the provision of good quality, relevant and appropriate information is a key aspect of this.	
17	SCM 3	Key area for quality improvement 2	Carers have a total awareness of the suffering and possible	Very little formal guidance or support is offered to Carers after discharge from the hospital	

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		Carer support during and after discharge of the patient	implications of a patient's condition while in Intensive Care. Upon discharge from the Unit to the ward the carer may feel a sense of insecurity. Discharge from the hospital means the carer then has to take responsibility for the patient twenty four seven.		
7. Coordination of the rehabilitation pathway					
18	SCM 1	Access to clinical psychology for patients recovering from critical illness	Limited availability of clinical psychologists has resulted in patients waiting long periods for intervention.	In my local ODN we have explored ways in which this can be delivered differently and identified training for the critical care multi-professional team. Again, we need to consider the clarity/ objective/SMART approach to the standard required and help to limit variation. Currently a regional post-code lottery.	
19	SCM 4	Access to clinical psychology.	A clinical health psychology team to deliver advanced psychological (both emotional and cognitive) assessment and support, and to train and supervise staff in provision of basic psychological assessment and support of all patients and families in critical care units (CCU), post-CCU and post-hospital discharge, and to contribute to holistic care and future well-being plans	A considerable body of evidence has accrued including at least seven systematic reviews and a meta-analysis documenting high prevalence both of acute stress in critical care (stressors and stress reactions) and long-term psychological morbidity such as post-traumatic stress disorder (PTSD) post-critical care. Intensive Care Society guidelines state that all critical care units should employ a full-time senior health psychologist to provide services for patients, families and staff. However a national critical care workforce survey suggested that only about 8% of CCUs (England, Wales, Northern Ireland offer any type of psychological service. In this small	1. Howell D and Wade D, 2015: Guidelines for Provision of Intensive Care Services (GPICS), Chapter 2.2.10: Practitioner Psychologists (The Critical Care Team). *The Intensive Care Society* 2015, pp48-50 2. National critical care non-medical workforces survey, 2016 3. Wade & Howell (2016): What can psychologists do in Intensive Care?

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				number of units typical provision was one day a week of psychologist time.	*Intensive Care Unit Management and Practice. See:* https://healthmanagement.org/c/icu/issuearticle/what-can-psychologists-do-in-intensive-care 4. Systematic review suggesting that psychological, and non-pharmacological interventions can reduce both short-term and long-term stress of critical care: Wade D, Hardy R, Howell D, Mythen M. Identifying clinical and acute psychological risk factors for PTSD after critical care: a systematic review. *Minerv Anestesiol* 2013; 79:1-20 5. Further information available from Critical Care Psychology special interest group – co-led by Dorothy Wade and Julie Highfield (University College Hospital, Wales)
20	SCM 4	MDT rehab teams.	Each hospital to have a multi-disciplinary critical care rehabilitation team including coordinators. Rehabilitation	Experience talking to many critical care clinicians and therapists around the country suggests that few hospitals have formalised comprehensive critical care rehabilitation	There are some examples of good practice, i.e. where more comprehensive critical

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			coordinators to identify each patient's key physical, psychological and social issues before critical care discharge; develop and document a rehabilitation plan to address all key issues; and to supervise implementation of the plan throughout the rehabilitation pathway through to post-hospital follow-up services.	pathways, and where they exist, few are implemented and coordinated as planned.	care pathways have been established, e.g. Manchester Royal Infirmary and Blackpool Teaching Hospitals NHS Foundation Trust (diagram of pathway available on request from DW)
21	SCM 5	Pathway to minimise psychological consequences for both the patient and families	1:1 visits back to the unit, +/- diaries, referral to trauma services, collaborative working with Trauma services, support group		
22	SCM 5	Speech & Language therapy after ICU			
23	ICU steps	Key area for quality improvement 1 1.1 To ensure continuity of care, healthcare professionals…should coordinate the patient's rehabilitation care pathway. Key elements are as follows…etc	To ensure patient's individual rehabilitation needs are met. Patients have complex and varied needs after critical illness, and this needs co-ordination to ensure appropriate rehabilitation is provided.	Rehabilitation provided to patients after critical illness is very inconsistent, depending on how local provision is organised (or if it is organised).	
8. Additional areas					
24	Neurocare Europe Limited	Identification of therapy which can be self-administered	To be effective therapies which are used to recover muscle strength must be administered	As noted above, the prognosis for a successful outcome is poor under present treatment pathways	Clinical trials have shown NMES to be effective,

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			relatively intensively and if the assistance of an HCP is required for each session this would be prohibitively expensive		safe and easily administered
25	SCM 2	Access to therapy for patients recovering from critical illness	ABCDEF bundle evidence and early mobilisation support this standard, but clarity is required in respect of what this should comprise	Clarity around the standard is required. As in other comments. This would provide support to those services who are trying to expand as well as the commissioning process.	
26	SCM 1	Swallowing assessment for tracheostomy patients prior to weaning	Limited access to SALT as evidenced by D16 gap analysis and Workforce Survey.	As with psychology skills above – we need to state what the alternative solution might be. There needs to be clarity around the skills required to be able to deliver this part of the service. Hence the standard needs to be more precise.	
27	Neurocare Europe Limited	Avoidance of venous thrombosis in this patient category 3	Prolonged bed occupancy and relative immobility after discharge brings a considerably enhanced risk of venous thrombosis	Current pathways (using compression hosiery and sequentially inflated compression leggings /boots are relatively ineffective and inconvenient to the patient.	One of the established indications for NMES is “avoidance of venous thrombosis” the source for which is FDA. This application of NMES is presently under review by “The Cochrane Collaboration”
28	Neurocare Europe Limited	Avoidance of and healing of Pressure Ulcers in this patient	As above but the risk is of ulceration	Current treatment pathways can be improved with the adoption of clinically proven adjunct therapies	One of the established indications of NMES is “improve local circulation” which is considered by many to be an important mechanism of action in wound healing. Electrotherapy and pressure ulcer healing is

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					presently under review by "The Cochrane Collaboration".
29	UK Sepsis Trust	Key area for quality improvement 1 Accessing support for patients surviving sepsis	There is good evidence that appropriate support and education for people who survive sepsis will dramatically improve their quality of life, and get them back to living their life to the full, working and taking an active role in society. There are an estimated 106,000 people who survive sepsis every year in the United Kingdom. It is vital that appropriate levels of support are provided, depending on the person's experience of sepsis.	There is huge variation across the country in the support that is offered and provided to sepsis survivors. Overall there is a very low level of support available and this needs to be changed. The lack of support means that people are discharged from hospital with no information and no support, leading to long term consequences to their health. This needs to be addressed as a matter of urgency. We agree that Critical Care should routinely offer follow-up by experienced health professionals to patients. For patients who have experienced sepsis, who have a higher length of stay and increased risk of physical, psychological and cognitive after-effects, this should be resourced and linked to support services. As per NICE NG51 recommendation 1.11.5, written and verbal information should be provided at discharge.	NG51 Chao PW, Shih CJ, Lee YJ et al. Am J Respir Crit Care Med. 2014 Nov 1;190(9):1003-11
30	Neurocare Europe Limited	Identification and adoption of compatible therapies.	Conventional therapies used within the patient category are largely ineffective. Identification and rapid adoption of therapies which can transform post illness recovery is a major priority	Present treatment pathways (even where they exist) are sporadically deployed and often ineffective and result in incomplete recovery and therefore increase the risk of the onset of further disabling conditions with associated treatment costs and bring reduced HRQoL	Conventional techniques in Physiotherapy are minimally effective in this patient population many of whom will be incapable of even relatively undemanding volitional

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					exercise and if the recovery of muscle mass and strength is the primary therapeutic objective there are very few options available. Neuromuscular electronic stimulation (NMES)has been used in clinical trials in critically ill, immobile patients and has been shown as an effective intervention in maintaining muscle mass and strength (Dirks ML et al 2015)(Maddocks m.et al 2013) We submit that NMES could play an important role in rehabilitation after critical illness and will, if invited, submit further clinical evidence during the consultation phase of this" Guideline Development "
31	SCM 1	Key area for quality improvement 3 Functional outcomes to assess rehabilitation provision and outcomes	There is good evidence that a structured approach to rehabilitation within ICU can significantly improve short and long term outcomes following critical illness.	At present there is a lack of accepted outcome measures to allow evaluation of rehabilitation provision within ICU and throughout the patient's recovery. This also limits benchmarking and comparison between units. A number of core domains have been suggested in the literature for assessing both the short and long term recovery of patients admitted to critical care	

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32	SCM 3	Key area for quality improvement 3 Voiceless	One of the most frustrating occurrences for a patient in Intensive Care is the inability to communicate effectively because of a tracheotomy,	As a patient, being unable to communicate with relatives and clinical staff can cause considerable stress. Although some nursing staff do have the ability to lip read many do not.	
33	SCM 3	Key area for quality improvement 4 Delirium	A carer witnessing a patient experiencing delirium can be a very disturbing thing for them. To a patient an hallucination is very real; to differentiate between reality from an hallucination while being critically ill is not always possible	A patient who experiences a particularly bad hallucination can be adversely effected by the experience for a long time after discharge.	
34	SCM 3	Additional developmental areas of emergent practice		About support network	
35	SCM 4	Access to social care advice.	Every patient to have access to social advice as needed – on matters including financial hardship, welfare benefits, housing, relationships, and return to work – as relevant pre-hospital discharge, and as part of post-hospital critical care follow-up services.	There is some evidence that critical care patients and their families suffer a range of social problems including loss of income (for both patients and family members who care for them), inability to return work, homelessness and relationship strain.	1. The InS:PIRE programme at Glasgow Royal Infirmary –a 5-week ICU rehabilitation service that encompasses social as well as physical/psychological issues. Now funded for evaluation across Scotland. See: http://www.nhsggc.org.uk/about-us/media-centre/news/2016/001/inspire

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					2. An exploration of social and economic outcomes of critical care patients. See: http://ccforum.biomedcentral.com/articles/10.1186/cc12745 3. Thrive: An international initiative to address post-intensive care outcomes. See: http://www.sccm.org/Research/Quality/thrive/Pages/default.aspx 4. ICUSteps, a patient group that highlights all aspects of critical care recovery including social, economic and return to work issues: See: http://icusteps.org/
9. Other					
36	SCM 5	Using patient and relative experience to inform the quality standard	Participatory research methodology Experience Based Co Design with a focus on 'after ICU' not during		
37	SCM 5	Provision of patient & public engagement and involvement as part of the rehab programme	Volunteering, research involvement, 1:1 support		