

National Critical Care Rehabilitation Survey

Overview Report

April 2017

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Executive Summary

This national survey, carried out by the CC3N Rehabilitation Group, aimed to measure the compliance of all Trusts with critical care units against national standards (NHSE, 2014; FICM and ICS, 2015, NICE 2009). A return rate of 53.4% was achieved. Findings indicated the following levels of compliance:

- Assessment of rehabilitation needs carried out within 24 hours in critical care – 75%, overall 13% could evidence good compliance
- Performance of delirium screening assessment – 78%
- Communication and swallowing assessments for tracheostomised patients prior to ventilatory weaning – 60%, overall 28% by a speech and Language Therapist
- Adequacy of resources for 45 minutes of active therapy per day – 30%
- Use of a rehabilitation outcomes tool – 42%
- Use of a rehabilitation prescription – 53%
- Provision of information for patients on discharge – 99%
- Provision of Critical Care Follow-up Clinics – 63%
- Awareness of British Society of Rehabilitation Medicine (BSRM) guidelines (BSRM, 2014) – 42%
- Critical Care units with dedicated time allocated to coordinate rehabilitation – 42%, although 38% of these reported having a day or less per week.

Thus, areas of good compliance were identified by this survey, however the authors note that the current standards are limited in their objectivity, making measurement and benchmarking problematic. The CC3N rehabilitation subgroup has been identified as a key set of multidisciplinary experienced professionals to drive the agenda forward with the following recommendations:

Recommendation 1: Findings of this national survey to serve as the driver for national groups (e.g. ICS, FICM and NICE) to provide greater clarity and the development of *SMARTer* standards for rehabilitation after critical illness with clearer definitions for all, as illustrated in the box below.

Recommendation 2: CC3N rehabilitation group members to explore further and seek consensus opinion (from the critical care and rehabilitation community) regarding the value of performing an initial rehabilitation needs assessment within 24 hours of admission to critical care.

Recommendation 3: Network Leads to continue to support member organisations to implement delirium assessment tools as per NICE (2010).

Recommendation 4: CC3N Rehabilitation Group members to develop and share through publication, the evidence-based, consensus expert SLT opinion regarding the standards required for performance of swallowing assessments. This should include identification of the skills required regardless of which healthcare professional carries this out and to develop a strategic approach to multidisciplinary staff training.

Recommendation 5: CC3N Rehabilitation Group members to engage with those responsible for the development and publication of rehabilitation standards relevant to critical care patients, with particular reference to the requirement for 45 minutes active therapy. Such engagement should allow exploration and adaptation into the ways in which therapy input can be calculated on an individual patient and individual therapy basis. It is anticipated that this group will develop and make recommendations as appropriate using their shared expertise. Resources should be adequate to meet the provision of care required to meet the acuity, complexity and dependency needs of the Critical Care case mix/population specific to each unit/Trust.

Recommendation 6: CC3N Rehabilitation Group members to explore current outcome measures available and examine ways in which outcomes can be measured using a standardised holistic framework, for example, that of the UK Rehabilitation Outcomes Collaborative (UKROC) in relation to rehabilitation and recovery following complex illness or injury. To escalate the difficulties with interpretation of this standard to relevant groups for interim clarification until further evidence is available.

Recommendation 7: Findings of this survey to support the CC3N Rehabilitation Group towards the development and publication of a standardised national rehabilitation prescription (or other title to be decided).

Recommendation 8: CC3N Rehabilitation Group members to link with patients and families through ICU STEPS forum, via their Network organisations to explore the utility of various information formats and make recommendations as required, to ensure its usefulness to patients. Resources can be shared and developed as required through the CC3N Rehabilitation Group.

Recommendation 9: CC3N to raise with those responsible for developing and publishing the national standards the need for providing more detail in the processes involved in managing a Follow-Up Clinic following discharge into the community after an episode of critical care. Clear parameters regarding inclusion and exclusion criteria would assist business planning.

1. Introduction

This paper reports the findings from the recent CC3N National Critical Care Rehabilitation Survey carried out during August and September 2016.

2. Background

Over the last decade there has been a growing interest in patient recovery after an episode of critical illness. The publication of *Rehabilitation after Critical Illness: Clinical Guideline 83* (National Institute for Health and Excellence, NICE, 2009) raised the profile of the physical and non-physical sequelae that patients experience during their intensive care stay and for up to a year or more after discharge. The guideline emphasises the importance of a structured rehabilitation programme, including regular assessment and care planning, information provision and Follow-Up Clinics. A national critical care network survey against NICE (2009) standards was carried out in 2013 across 28 networks and 59 hospitals in England (Berry, Cutler and Himsworth, 2013). This study highlighted significant health inequalities where compliance with the standards was 52% in intensive care units (ICUs), 48% prior to transfer to the ward, 27% on the ward, 33% prior to discharge and 31% two to three months post-ICU discharge.

The NICE (2009) guidelines have subsequently been entrenched in the more recently developed (not yet publically available) *D16 (D5) Service Specification for Adult Critical Care* (NHS England, 2014) and *Guidelines for the Provision of Intensive Care Services* (Faculty of Intensive Care Medicine, FICM, and Intensive Care Society ICS 2015). A subgroup of the national Critical Care Network Lead Nurses Forum (CC3N), which also included invited Allied Healthcare Professionals (AHPs), was convened to carry out a focussed work-stream around the rehabilitation standards and members agreed to carry out an updated national survey. This paper reports the findings from the survey.

3. Aims and Objectives of the Survey

The aim of this survey was to measure the compliance of all Trusts with critical care units against the standards set out by NHS England (2014), FICM and ICS (2015), and selected NICE (2009)

A further objective of the survey was to assess the understanding that key healthcare professionals have about the current standards in order to articulate any differences in their interpretation and hence highlight any issues that may need to be escalated to the national standards groups and provide clarity. Findings from this survey will generate recommendations for future work.

4. Methodology

Using a consensus opinion, the Rehabilitation Subgroup of the National CC3N Lead Nurse Group developed a survey questionnaire (Appendix 1) to evaluate national compliance with the current standards for rehabilitation after critical illness. Some answers required a simple binary (yes / no) response, but there was the opportunity for free text comments throughout. A pilot questionnaire was tested in 20 ICUs within one Operational Delivery Network (ODN) with subsequent amendments to the tool following feedback. The pilot units were not requested to repeat the audit using the amended questionnaire.

Members of the CC3N group circulated the updated questionnaire to their member organisations within each ODN for response during August and September 2016. Thus the survey was distributed

throughout the 21 networks across England, Wales and Northern Ireland, reaching an estimated 228 general and specialist critical care units.

The questionnaire incorporated the standards identified by NHS England (2014), FICM and ICS (2015), which included some of the standards from NICE (2009), summarised in Table 1 and supported by additional *recommendations* from FICM and ICS (2015), listed in Table 2 below.

TABLE 1. STANDARDS

<p>Standards (NHSE, 2014) D16 (D5) Specification for Adult Critical Care Found at https://www.engage.england.nhs.uk/consultation/specialised-services-policies/user_uploads/adlt-critical-care-serv-spec.pdf</p>
<p>The two standards are:</p> <ul style="list-style-type: none"> - 100% patients received a rehabilitation assessment within 24 hours of admission - 100% of NICE 83 eligible patients on discharge from critical care receive a rehabilitation prescription <p>The expectations are:</p> <ul style="list-style-type: none"> - To improve functionality and increase the quality of life for patients recovering from a period of critical illness - This must be updated throughout the rest of the patient’s stay in hospital in accordance with NICE 83 - Services available following the critical care phase of the patient journey <ul style="list-style-type: none"> • Specialised rehabilitation services • Critical Care Follow-Up • Clinical Psychology • Local Hospital and Community Rehabilitation Services • Voluntary Support Services
<p>Standards (FICM and ICS, 2015)</p> <ul style="list-style-type: none"> - Assessment of the rehabilitation needs of all patients within 24 hours of admission to critical care and NICE 83 eligible patients on discharge from critical care must receive a rehabilitation prescription - All patients with a tracheostomy must have communication and swallowing needs assessed when the decision to wean from the ventilator has been made and the sedation hold has started - All patients will be screened for delirium - Patients receiving rehabilitation are offered a minimum of 45 minutes of each active therapy that is required, for a minimum of 5 days a week, at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it - Patients must have all rehabilitation outcomes quantified using a tool that can track progression from the acute sector into primary care to facilitate care needs in the community - Patients discharged from ICU must have access to an ICU Follow-Up Clinic .

TABLE 2. ADDITIONAL RECOMMENDATIONS THAT UNDERPIN REHABILITATION AFTER CRITICAL ILLNESS

Recommendations (FICM and ICS, 2015)
<ul style="list-style-type: none"> - <i>Physiotherapy services should provide assessment and intervention seven days per week; provision should be made for other therapy services to be provided as needed at weekends.</i> - <i>All complex/high risk patients should have a named key worker allocated to coordinate patient/carer liaison with therapy services, and to ensure that assessments, outcome measures and goals are collated and transferred to the community services.</i> - <i>A structured and eventually nationally consistent integrated care pathway for hospital discharge must be employed to facilitate care at home or care closer to home for patients whose needs can be met in the community</i> - <i>A rehabilitation prescription transfer of patient information should record rehabilitation requirements including physical, functional, communication, social, spiritual, nutritional and psychological aspects and have nationally agreed assessments and outcome measures.</i> - <i>All patients should have individualised goals set for rehabilitation. For those assessed as low-risk this may take the form of a simple bedside discussion during the ward round. By contrast high-risk patients will require a focused Multi-Disciplinary Team (MDT) with weekly goals set, documented and audited. These will be set in conjunction with the patient and/or carer where appropriate.</i> - <i>Expectations of both patients and families should be regularly addressed and in a consistent manner by the most appropriate senior member of the MDT. All patient and family communication must be centrally documented to ensure that it can be easily accessed by all MDT members.</i> - <i>For high risk/complex patients the opportunity to capture the experience should be offered to the patient and family in a manner that they can reflect upon and engage with during the time spent in hospital. This may take the form of diaries, either paper or electronic, and may include photos, videos and written information. This material may be collected prospectively or retrospectively depending on the desire of patient and family.</i>

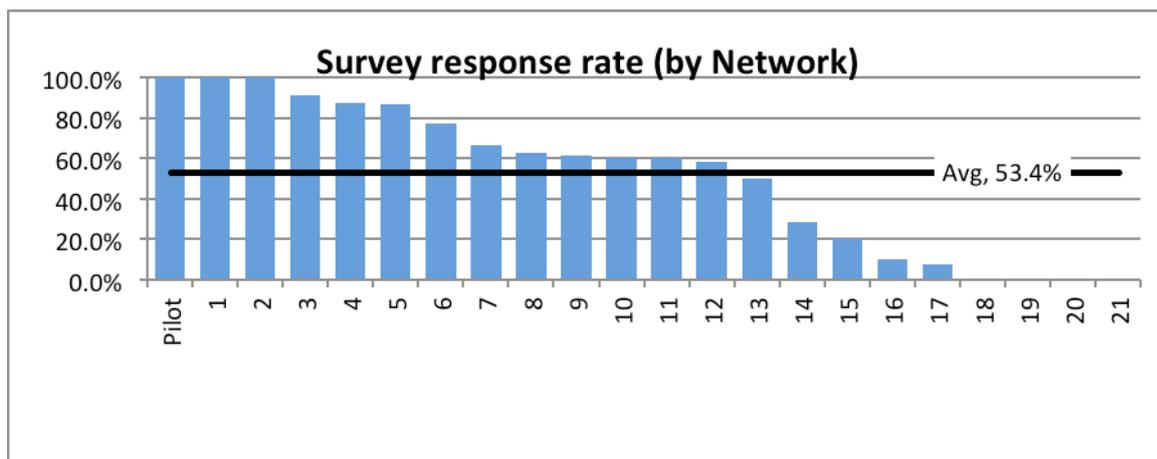
All returns were submitted to a central password protected email account for analysis. Data from each hospital was entered into a password protected Microsoft[®] Excel database and was analysed using descriptive statistics, supported by a data analyst. Anonymity of individual unit data was guaranteed, and participation in this anonymised national report and wider sharing was explicitly acknowledged using the consent question, *I/we agree for the data, after anonymising, to be used in reports and publications.* All units responded yes except four; for those who did not answer the question, participation in the survey was considered evidence of consent.

5. Results

Of the 228 potential responses, 122 surveys (53.4%) were returned (inclusive of the 20 units who piloted the survey).

The bar chart below illustrates the response rate by ODN (anonymised).

FIGURE 1. BAR CHART TO ILLUSTRATE SURVEY RESPONSE RATE BY ODN



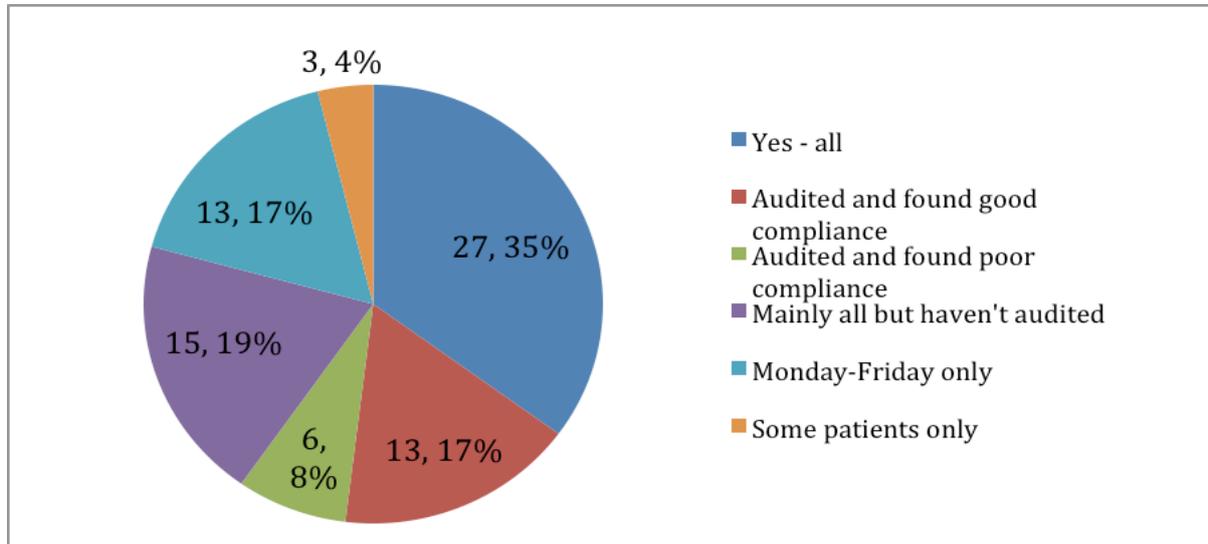
The questionnaires from the 20 pilot units in one ODN have been excluded from the analysis here, as the questions posed were not fully comparable with the final dataset. A brief summary of the analysis from the pilot study sample subgroup can be found in Appendix 2. The findings in the main body of this report are therefore formulated from 102 respondents (44.7%) and analysis is presented below in the following 10 sub-sections representing each of the standards audited. Four ODNs did not submit any data.

5.1. Assessment of the rehabilitation needs of all patients (100%) must be carried out within 24 hours of admission to critical care (NHSE, 2014; FICM and ICS, 2015).

Participants were asked if an assessment of patient rehabilitation needs was completed within 24 hours of admission to critical care in all patients. Three quarters (75%; n=77) of respondents declared compliance. Only 13 of these units however could claim good compliance for all critical care patients with audit trail evidence.

Of these 77 respondents, 53 (69%) indicated that the assessment was documented by physiotherapists in the main, but also by the bedside nurses in 22% (n=17) of cases. It was mostly completed either as part of a pathway, as a hard copy *pro forma* (35%; n=27), a single document (26%; n=20) or recorded in electronic format (25%; n=19). Pie Chart 1 below illustrates the findings in more detail.

FIGURE 2. PIE CHART SHOWING BREAKDOWN OF UNITS REPORTING COMPLIANCE WITH THE 24HR ASSESSMENT(N=77)



5.2 During their critical care stay, all patients will be screened for delirium (FICM and ICS, 2015).

Overall compliance with delirium screening was reported as 78% (n=80). Of those 80 who were compliant, the CAM-ICU was the tool of choice in 95% (n= 76) with screening performed every 24 hours in 30% (n=23), every 12 hours in 45% (n=34) and eight hours or more frequently in 25% (n=19). Thus all of those who screened for delirium did so with the minimum daily frequency as set down by NICE (2010b) guidance.

5.3 All patients with a tracheostomy must have communication and swallowing needs assessed when the decision to wean from the ventilator has been made and the sedation hold has started (FICM and ICS, 2015).

There were 61 respondents who reported compliance with this standard (60%). While the majority of assessments (50%) were carried out by a Speech and Language Therapist (SLT), there was significant variation overall, as 57 of these respondents identified:

- SLT in 50% (n=29)
- A 'swallow-trained' nurse in 29% (n=17)
- Bedside nurse in 1 case (2%)
- 'Other' practitioner in 1 case (2%)
- A physiotherapist in 1 case (2%)
- Collaboratively in 14% (n=8)

5.4 All patients receiving rehabilitation are offered a minimum of 45 minutes of each active therapy that is required, for a minimum of five days a week, at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it (FICM and ICS, 2015).

Compliance in respect of this standard was difficult to measure. The free text responses indicated a lack of clarity amongst the participants in respect of the limited definition of ‘active therapy.’ There was discrepancy regarding how the 45 minutes might be apportioned or understood, some felt the patient should receive 45 minutes with as many therapists as required to safely move a patient, whereas others felt that if three therapists were required, then the patient should only receive 15 minutes of therapy time. For example, some respondents thought it included time for writing notes while others believed it would include nursing activities as well. It is therefore difficult to draw conclusions from these findings while the definitions from the national standards remain unclear. Figure 3 below provides an overview of some of the key narrative comments relating to this issue.

Figure 3. NARRATIVE COMMENTS

<p><i>We have struggled with this definition, and would welcome clarity</i></p> <p><i>The period of 45 min of therapy is very poorly defined; and this definition will remain vague due to the variable presentation and nature of the patients (e.g. elective / trauma); it should change as the ability of the patient to tolerate / participate in rehab changes so that the patient receives the most appropriate amount of input (time and staff) to suit their needs i.e. it should be patient specific</i></p> <p><i>Therapy is done according to how much the patient can tolerate, regardless of time. Option of assistant input for bed exercises if patient able to tolerate more</i></p>	<p><i>Transferring to chair, sitting on the edge of bed, actively encouraging patient independence</i></p> <p><i>Physiotherapy as a service will only spend 20 minutes a day but as a therapy cumulatively it is provided for more than 45 minutes by the MDT</i></p> <p><i>I would think it is an accumulation of time x number of therapists - I think the figure is unhelpful though as some patients need more and some less for effective therapy</i></p> <p><i>An MDT approach across the day</i></p> <p><i>It is the rehabilitation time for the patient not the staff giving it. Could be sitting, using exercise bike or walking etc.</i></p>
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Opinion, albeit subjective, was also sought from the respondents regarding adequacy of physiotherapy resources; responses overall indicated that these were limited. In 66% of responses (n=67), resources were reported to be inadequate to meet the 45-minute per day for five days per week. Only 31 respondents (30%) declared that they had adequate resources. Only 38% (n=39) of respondents were able to provide a five-day service to meet the rehabilitation goals of their patient group, and only 30% of respondents (n=31) were able to provide a level of service with a 1:4 therapist to patient ratio.

Furthermore, participants were asked if the physiotherapy team provided an outpatient rehabilitation class specifically for critical illness rehabilitation; only 15% (n=15) of respondents stated that they were able to do so. Thus 83% (n= 85) did not. Two respondents did not answer this question. No definition of, or parameters for, such a class were requested or stated. Access to other therapies was not explored by this survey but it is noted that the standard suggests 45 minutes of each therapy.

5.5 Patients must have all rehabilitation outcomes quantified using a tool that can track progression from the acute sector into primary care to facilitate care needs in the community (FICM and ICS 2015).

Compliance with use of a tracking tool was 42% (n=43), but again ‘free-text’ comments indicated a lack of clarity around this standard. There was a diversity of tools identified in use:

- 18 identified use of the Chelsea Physical Assessment Tool (CPAx),
- 24 used non-standardised (unnamed) outcome measures
- 7 identified use of a pathway of assessments
- 3 identified a combination of measures and pathways.

These findings indicate that there is currently no standard approach to monitoring rehabilitation outcomes in the critical care patient population.

Figure 4. NARRATIVE COMMENTS

<p><i>No funding or tool yet to be developed for use on this site</i></p> <p><i>The tool being used needs to be sensitive to the change /progression of the patient's rehab throughout their stay and back into the community</i></p> <p><i>Allows us to understand long term impact that critical illness acquired weakness can have on this population</i></p> <p><i>CPAX</i></p> <p><i>CPAX and grip strength</i></p> <p><i>Ensures patients receive effective, continuous physiotherapy</i></p>	<p><i>One outcome measure which screens the need for rehab input in a primary care setting post hospital discharge</i></p> <p><i>Elderly mobility scale</i></p> <p><i>GPICS and NICE 83</i></p> <p><i>It follows the patient and can be used by all MDT</i></p> <p><i>An outcome measure that is quantifiable and can show rehabilitation progression from critical care to the community, which is sensitive enough to pick up change and not too general that the tool is redundant by the time the patient reaches the community</i></p> <p><i>Need to use a recognised outcome measure</i></p>
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5.6 On discharge from critical care, NICE 83 eligible patients must receive a rehabilitation prescription (NHSE, 2014, FICM and ICS 2015).

Respondents indicated that a rehabilitation prescription was provided for patients on discharge in 53% (n=54) of units. For most respondents (n=39; 38%), this was a physiotherapy-only plan, thus negating the multi-disciplinary approach. For 21 respondents (21%), the prescription formed part of the aforementioned rehabilitation pathway document, while for 15 respondents the ‘prescription’ was interpreted as a discharge summary. Thus, as with other standards measured in this survey, there was lack of clarity around the definition of a ‘prescription’ and this may have influenced the responses and subsequent findings, as illustrated by the narrative responses captured in the table below.

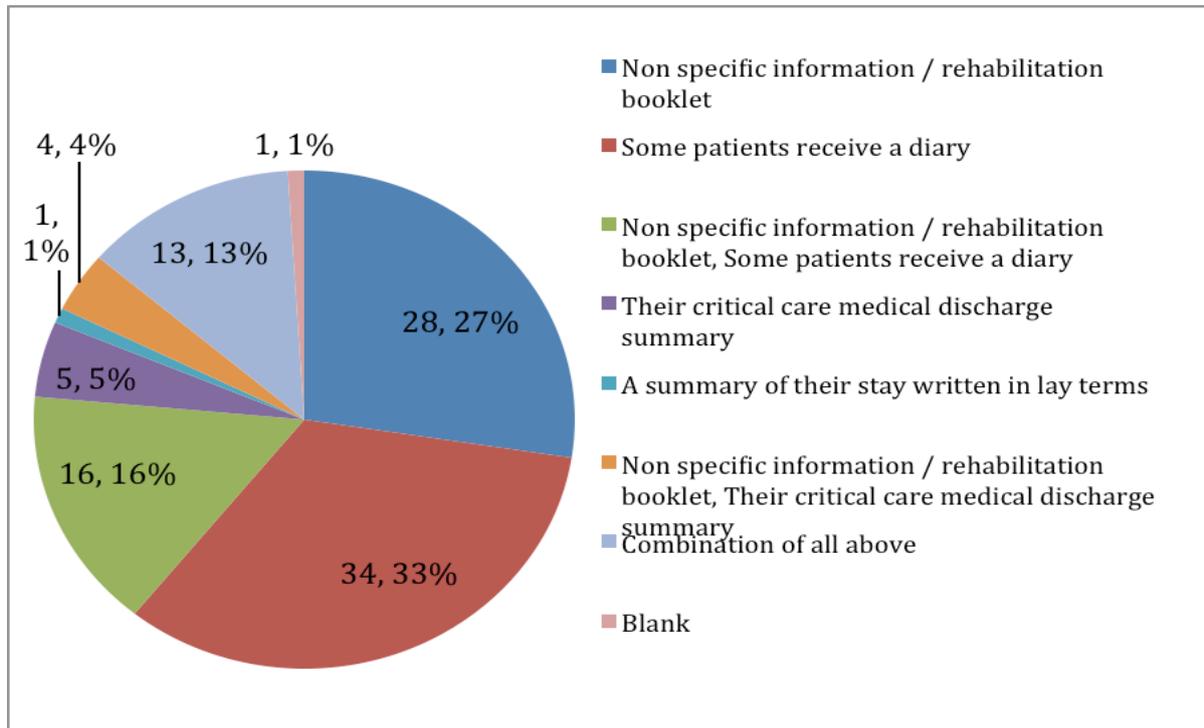
FIGURE 4: DEMONSTRATING WHETHER PATIENTS RECEIVE A REHABILITATION PRESCRIPTION THAT IS COMPLETED BY A MULTIDISCIPLINARY TEAM (all units responded to this question)

	Number of responses
It is just a physiotherapy plan	39
It is part of a rehabilitation pathway document	21
Yes, from Critical Care discharge	3
Yes, from first assessment	9
No, just a discharge summary with a medical plan	15
No, nothing	11
Other	3
Blank / no response	1
Total	102

5.7 NICE, 2009, FICM and ICS (2015) recommendations indicate that all units should provide patients with information on discharge from critical care. This may take the form of an information booklet, and/or a discharge summary, and/or a diary.

Survey findings showed that, in some cases (n=28), a non-specific rehabilitation information booklet was provided. Others indicated that in most cases information was provided in the form of a diary (n=34). For 16 respondents, patients received both a diary and an information booklet. Five reported the use of a medical discharge summary and 13 respondents provided a combination of a booklet, diary and discharge summary. Figure 5. below illustrates these findings. There was not an option for ‘no information provided’, but all units except one were able to identify use of one of the options, suggesting that some information was given in 99% of cases.

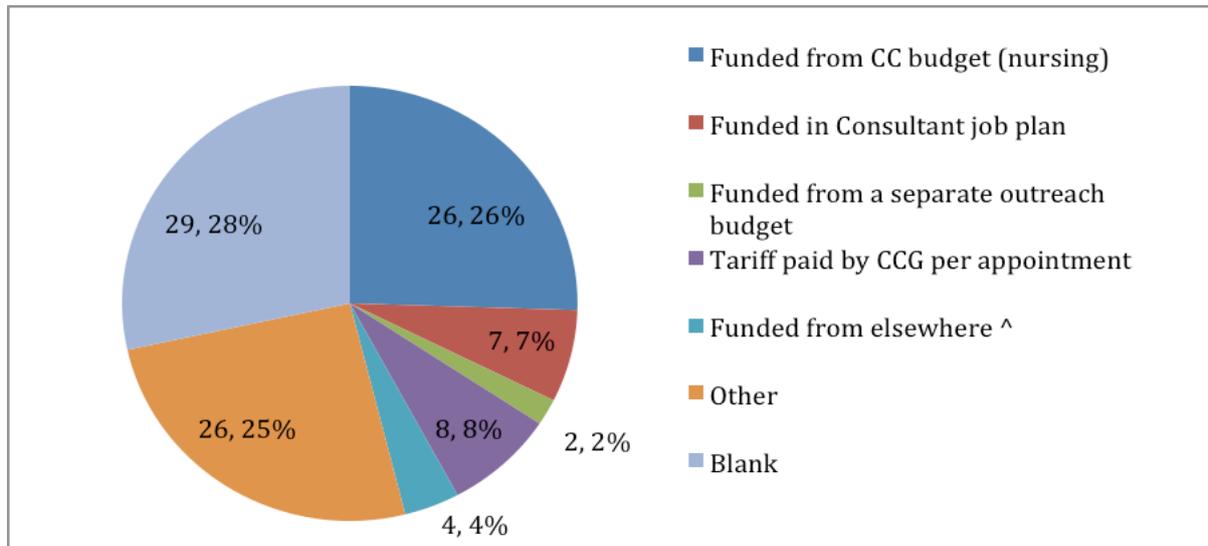
FIGURE 5. PIE CHART TO ILLUSTRATE INFORMATION GIVEN ON DISCHARGE FROM CRITICAL CARE



5.8 Patients discharged from critical care must have access to a critical care Follow-Up Clinic (FICM and ICS, 2015, NHSE, 2014).

Compliance with the provision of Follow-Up Clinics was positively reported in 63% (n=64) of respondents, with 48% (n=31) of the clinics in place being nurse-led. There was involvement from other allied healthcare professionals (AHPs) in 61% of clinics (n=39). The external funding mechanism for these clinics was unclear overall, however 26 were funded from the critical care nursing budget and seven from intensivitists' job plans. There was clear commissioning provision for Follow-Up Clinics in only eight organisations. As with other elements of the standards however, there was lack of clarity around the definition of a clinic and for whom these should be provided, and there was variation in respect of how many appointments patients were given. Patients were seen at two to three months; two to three months and six months; or two to three months, six months and 12 months, but in most cases (n=42), patients were given as many repeat appointments as required. The Pie Chart (Figure 6) below illustrates the funding streams for all Follow-Up Clinics.

Figure 6. PIE CHART TO ILLUSTRATE FUNDING SOURCES FOR FOLLOW-UP CLINICS



5.9. Healthcare professionals in critical care should be able to demonstrate an awareness of additional standards from the British Society of Medicine (BSRM) document *Rehabilitation for patients in the acute care pathway following severe disabling illness or injury* (BSRM, 2014).

The findings here indicated that over half the respondents (58%; n=59) were unaware of this document and its associated standards. Half of the respondents (50%; n=51) reported access to a consultant in rehabilitation medicine either in their own Trust, a tertiary centre or within their Critical Care Network.

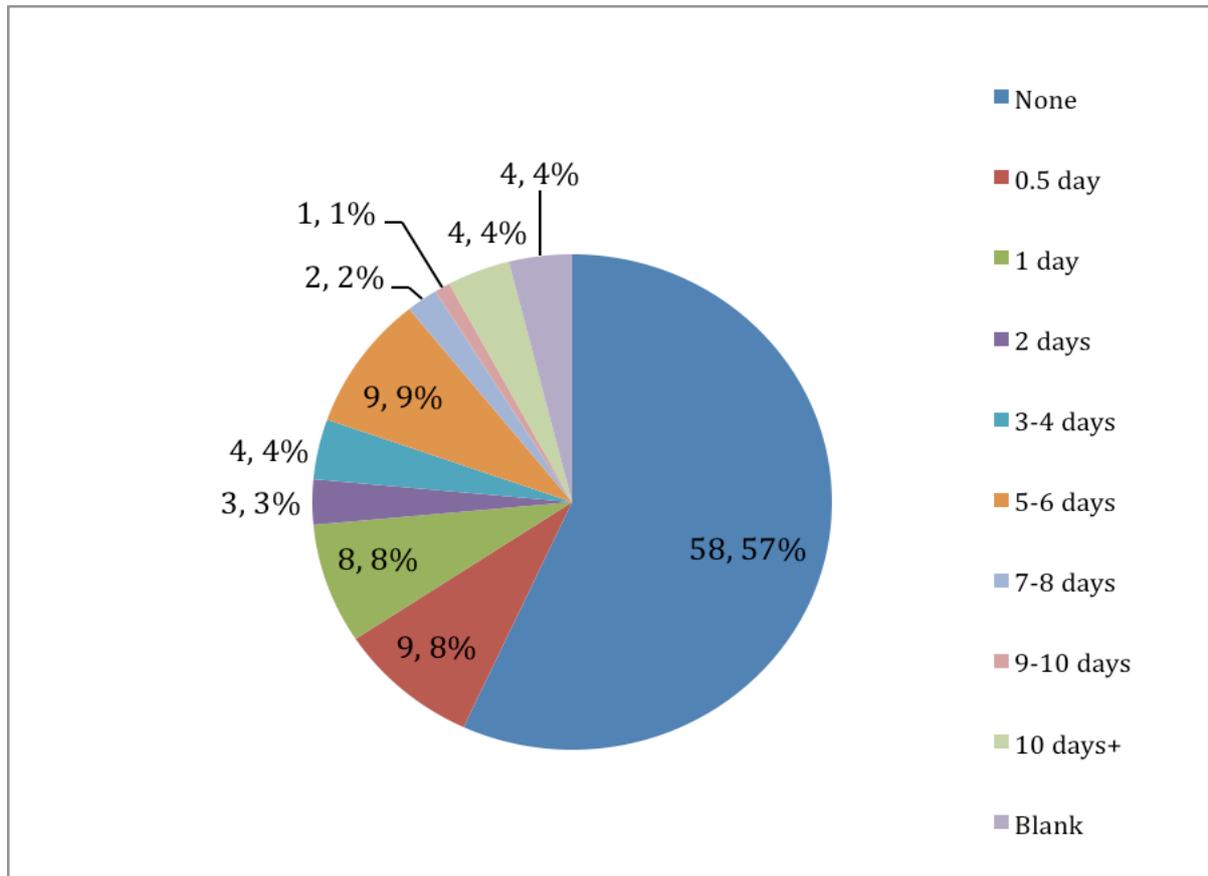
5.10 Time allocated for coordinating rehabilitation

To provide a rudimentary overview of resources available within critical care for rehabilitation services, respondents were asked to make an estimate of the time allocated to coordinating rehabilitation, using the following (un-validated) formula:

$$N = \text{number of healthcare professionals} \times \text{number of days per week}$$

The pie chart below illustrates the findings from this query, highlighting that in most cases (n=58; 57%) no time was allocated specifically to rehabilitation coordination.

FIGURE 7. PIE CHART TO SHOW TIME ALLOCATED FOR REHABILITATION COORDINATION PER WEEK



Narrative comments indicated that some units are developing new roles to address the issue of coordination. Figure 8. below illustrates comments that describe developments currently underway.

FIGURE 8. EXAMPLES OF NEW ROLE DEVELOPMENTS WITHIN CRITICAL CARE REHABILITATION

Critical Care Rehabilitation Sister post established, dedicated physiotherapy hours allocated, clerical management from ITU administration.

Critical Care Rehabilitation Sister post established.

One WTE band 7 critical care rehabilitation nurse specialist, two WTE band 3 rehabilitation assistants

Critical care follow up team expansion, creating of rehabilitation assistants.

Looking into Family liaison nurse

6. Overview of the findings

This report has presented the findings from a sample of 102 responses to a national survey across England, Wales and Northern Ireland.

Positive findings demonstrated that *within* the boundaries of critical care units most:

- Are compliant with the 24 hour rehabilitation assessment (75%), but only 13% of units declared good compliance.
- Screen critical care patients for delirium (78%) and nearly all of these (95%) use the CAM-ICU
- Assess communication and swallowing needs prior to weaning tracheostomised patients from the ventilator (60%).

There are clear pockets of good practice regarding rehabilitation requirements beyond critical care units into ward areas and the community where;

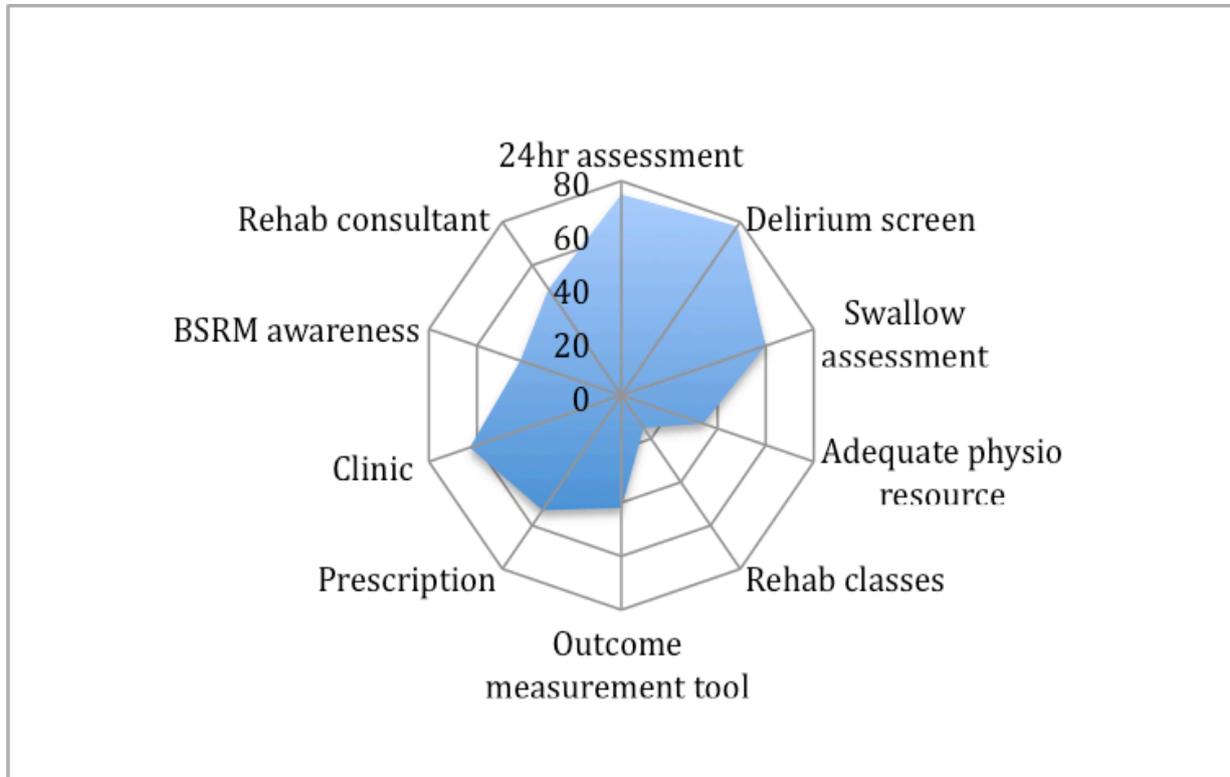
- Rehabilitation prescriptions are available on discharge from critical care in 53% of cases, but there is variation in what a 'prescription' comprises.
- A post-critical care Follow-Up Clinic is provided in 63% of hospitals, with the majority being nurse led
- Half of the organisations surveyed (50%) had access to a medical consultant specialising in rehabilitation.

Conversely, this national rehabilitation survey has highlighted some significant gaps in resources. Respondents to the questions relating to physiotherapy services (66%) stated that their resources were inadequate to meet the FICM and ICS (2015) standard for 45 minutes per patient over five days per week. Similarly, the free text responses to the assessment of communication and swallowing assessments were indicative of lack of SLT provision to complete complex assessments on patients with tracheostomies that may still be ventilated. Access to therapists other than physiotherapy was not explored by this survey. The CC3N National Critical Care Non-Medical Workforce Survey (March 2016) did however. It included, and identified, significant gaps in physiotherapy, pharmacy, dietetics, occupational therapy, speech and language therapy and clinical psychology, but there were no subsequent recommendations.

The current survey highlighted that time dedicated to the coordination of critical care rehabilitation was limited, but some member organisations are developing new roles to address the gaps. The findings also indicate that the use of a tool to track the progression of rehabilitation outcomes from the acute sector into primary care is not well understood or delivered. While 42% reported compliance with this standard, they were unclear regarding which tool was in use.

The spider chart in Figure 9. below provides a visual summary of the overall compliance with the standards assessed.

FIGURE 9. SPIDER CHART FOR OVERALL % COMPLIANCE WITH STANDARDS ASSESSED (n=102).



7. Discussion and Recommendations

The findings from this CC3N National Rehabilitation Survey have highlighted some key areas of good practice across England, Wales and Northern Ireland within the walls of critical care units, where over three quarters of responding organisations were compliant with the 24-hour rehabilitation assessment and delirium screening, and 99% provided some form of information to patients on discharge.

The survey has however highlighted significant gaps in the rehabilitation process where Follow-Up Clinics are provided in just 63% of organisations and rehabilitation prescriptions are available in 53%. Gaps in resources are also highlighted, namely physiotherapy and Speech and Language Therapy services, but it is acknowledged that access to other therapy services was not explored in this study. This was however highlighted by the CC3N National Critical Care Non-Medical Workforce Survey (March 2016), which identified limited resources across the wider range of therapies. Thus there is significant room for improvement, particularly when most respondents identified that they have no dedicated time identified for coordinating rehabilitation.

7.1 Clarity of standards

The findings indicate that resources for, and provision of, rehabilitation services after critical illness is variable and inconsistent across England, Wales and Northern Ireland. One of the limitations of this national survey however lies in the clarity of definition within the standards used, against which practice was assessed. Subsequently, it is evident that the respondents to this survey and/or the healthcare care teams implementing them in practice have interpreted the rehabilitation standards differently across the Networks, and this will have influenced the findings here. For example, lack of clear understanding around what constitutes 45 minutes of therapy or what should be included in a rehabilitation prescription are two examples where respondents expressed concerns around clarity of definition. While there is perhaps a valid argument for not being too prescriptive in respect of the rehabilitation standards, without clear definitions of key terms it is difficult to objectively measure compliance and benchmark across organisations and networks against such standards (NHSE, 2014; FICM and ICS, 2015 and NICE 2009).

Recommendation 1: Findings of this national survey to serve as the driver for national groups (e.g. ICS, FICM and NICE) to provide greater clarity and the development of *SMARTer* standards for rehabilitation after critical illness with clearer definitions for all, as illustrated in the box below.

- **S** - specific, significant, stretching
- **M** - measurable, meaningful, motivational
- **A** - agreed upon, attainable, achievable, acceptable, action-oriented
- **R** - realistic, relevant, reasonable, rewarding, results-oriented
- **T** - time-based, time-bound, timely, tangible, trackable.

7.2. Assessment of rehabilitation needs within 24 hours

During the design of the survey questionnaire, CC3N Rehabilitation Group members expressed concerns regarding the lack of evidence to support the 24-hour timeframe required for the initial assessment in the critical care setting using the short and comprehensive assessment tools (NICE, 2009). Nevertheless, it was recognised that this falls in line with the Intensive Care National Audit and Research Centre (ICNARC) 24-hour data collection methodology. Any compliance with this standard might arguably be criticised however as simply a ‘tick box’ exercise and should not be interpreted as agreement by the critical care professional community with the national requirement or that it is recognised as an indicator of quality care. Furthermore, it could be argued that this timeframe might be detrimental to patient care, as a further assessment may not be completed for some time after admission. Pragmatically, a longer timeframe post-ICU admission (e.g. 72-96 hours)

was considered to be more appropriate for the critical care environment and this requires more exploration and clarification.

Recommendation 2: CC3N rehabilitation group members to explore further and seek consensus opinion (from the critical care and rehabilitation community) regarding the value of performing an initial rehabilitation needs assessment within 24 hours of admission to critical care.

The CC3N subgroup chair has shared these findings with the NICE Specialist Standards Committee for Rehabilitation after Critical Illness (convened in February 2017) and it is acknowledged that the consultation currently underway may provide a solution (publication pending August 2017).

7.3 Delirium assessment

NICE (2010) guidelines indicate that patients should be observed at least daily for any changes in behaviour suggestive of delirium and where noted this should prompt an assessment by a competent practitioner with the CAM-ICU. This survey examined compliance with screening, the frequency of such and the tools used, but it did not explore the treatment response to any positive findings, as these are not included in the rehabilitation standards (NHSE, 2014; FICM and ICS, 2015). Overall the findings of this survey indicated that most respondents were screening more frequently than the minimum 24 hours required (NICE, 2010).

Recommendation 3: Network Leads to continue to support member organisations to implement delirium assessment tools as per NICE (2010).

7.4 Speech and Language Therapy assessment for tracheostomised patients

In October 2015, at the request of the Adult Critical Care Clinical Reference Group (ACC CRG) and NHS England, the Adult Critical Care Operational Delivery Networks (ACC ODNs) were invited to undertake an initial gap analysis against the D16 (D5) standards. Findings highlighted gaps in therapy services. The CC3N National Critical Care Non-Medical Workforce Survey (March 2016) later reinforced these findings and showed SLTs, along with other therapy services, are not readily available in all critical care units. Findings from the current survey have again reinforced these findings where there was wide variation in the professionals groups carrying out a swallowing assessment for tracheostomised patients prior to ventilatory weaning. In the limited group where swallow assessments were performed, a SLT, nurse or physiotherapist was responsible. These findings have been shared with the SLT representative at the ICS.

Recommendation 4: CC3N Rehabilitation Group members to develop and share through publication, the evidence-based, consensus expert SLT opinion regarding the standards required for performance of swallowing assessments. This should include identification of the skills required regardless of which healthcare professional carries this out and to develop a strategic approach to multidisciplinary staff training.

7.5 Therapy Resources

The findings of this survey, which focused specifically on physiotherapy services and not the full range within the multi-professional team, highlighted that there are insufficient resources to meet the requirement for 45 minutes of physiotherapy per day per patient for five days a week. Arguably, this standard was not derived from robust evidence and the dependency and complexity of patients needs to be measured on an individual basis using a range of tools for example, but not exclusively, the rehabilitation complexity scale (RCS-E) and the Northwick Park Therapy Dependency Assessment (NPTDA). Furthermore, this survey showed that physiotherapy resources were unable to meet the ratio of 1:4 therapists in critical care. Without a clear definition of the boundaries of the specified therapy, and with a limited evidence base, the analysis indicates the need for a clearer definition than using a 45-minute target for each therapy and poses the question if this is the right standard to be working towards.

Recommendation 5: CC3N Rehabilitation Group members to engage with those responsible for the development and publication of rehabilitation standards relevant to critical care patients, with particular reference to the requirement for 45 minutes active therapy. Such engagement should allow exploration and adaptation into the ways in which therapy input can be calculated on an individual patient and individual therapy basis. It is anticipated that this group will develop and make recommendations as appropriate using their shared expertise. Resources should be adequate to meet the provision of care required to meet the acuity, complexity and dependency needs of the Critical Care case mix/population specific to each unit/Trust.

7.6 Clinical Outcomes

More than half of the respondents in this survey were unable to evidence tools in use to track patient progression from critical care into the community. Where tools were identified, there was considerable variation in what was used and a general notion that everyone is doing something different, which gives no assurance of equality or quality care. Furthermore, survey responses showed limited understanding of what is required to achieve this standard. Work is being undertaken nationally and internationally to establish a core outcome set for research in rehabilitation and recovery following critical illness.

Recommendation 6: CC3N Rehabilitation Group members to explore current outcome measures available and examine ways in which outcomes can be measured using a standardised holistic framework, for example, that of the UK Rehabilitation Outcomes Collaborative (UKROC) in relation to rehabilitation and recovery following complex illness or injury. To escalate the difficulties with interpretation of this standard to relevant groups for interim clarification until further evidence is available.

This would enable a consensus to be achieved in order to support and track patient progression, facilitate benchmarking and future research.

7.7 Rehabilitation Prescription

Survey findings indicate a requirement for clarification around the term ‘prescription’ which has proved to be a term that is misleading and a source of confusion for some respondents. Authors considered that ‘prescription’ might not be the correct terminology.

Recommendation 7: Findings of this survey to support the CC3N Rehabilitation Group towards the development and publication of a standardised national rehabilitation prescription (or other title to be decided).

Anticipating resistance to rigid standardisation, the Group recommends that a set of core elements be determined that could be used flexibly in a prescription, underpinned by British Society of Rehabilitation Medicine (2014) guidance. These principles would then serve as the basis of standardisation for benchmarking across Networks.

7.8 Patient Information

The survey showed that patient information was provided in a range of different formats including diaries, booklets, leaflets and discharge summaries.

Recommendation 8: CC3N Rehabilitation Group members to link with patients and families through ICU STEPS forum, via their Network organisations to explore the utility of various information formats and make recommendations as required, to ensure its usefulness to patients. Resources can be shared and developed as required through the CC3N Rehabilitation Group.

It is suggested that the impending NICE standards, currently under consultation may provide the focus for this work.

7.9 Follow-Up Clinics

Follow-Up Clinics were not universally available, despite recommendations having been in place since 2000 from the Department of Health and again from NICE in 2009. There was little standardisation in practice across the sample or within ODNs, including the make-up of the teams delivering the service, but particularly in relation to funding.

Recommendation 9: CC3N to raise with those responsible for developing and publishing the national standards the need for providing more detail in the processes involved in managing a Follow-Up Clinic following discharge into the community after an episode of critical care. Clear parameters regarding inclusion and exclusion criteria would assist business planning.

This might be achieved through CC3N Leads working with their Network organisations and linking in with other national groups and commissioning bodies. Again, the pending NICE standards may provide further support to this recommendation.

8. Conclusion

This survey aimed to measure practice compliance against the standards set down by NHSE (2014), FICM and ICS (2015) and NICE (2009), but also to assess key healthcare professionals' understanding of such in order to convey different interpretations and highlight issues for escalation to national standards groups. The findings clearly identified a need for greater clarification of current standards, with a 'SMART' approach to their articulation. Furthermore, the survey has highlighted gaps in the services, emphasizing the limitations within the therapy services in particular. Recommendations have been made for advancing the care of rehabilitating patients both within and without the four walls of critical care units. The CC3N Rehabilitation Group has been identified as a key group of expert practitioners that will drive the agenda forward through the ODNs.

9. References

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Appendix 1: Survey Questionnaire



Rehabilitation Survey

Implementation progress against current standards



Please complete all questions and email back to your Lead Nurse
 'White' boxes are free-text, 'purple' boxes have drop-down options

Completed by: Email:

I/we agree for the data, after anonymising, to be used in reports and publications.

Network:

Trust:

Name of Unit:

Type of Unit:

If 'other' please state:

Assessment of the rehabilitation needs of ALL patients within 24 hours of admission to Critical Care.

Does your unit complete a simple screening assessment of patient rehabilitation needs within 24 hours of admission to Critical Care? (This should be based on an abridged CG83 short/comprehensive assessment)

If yes, how is this assessment documented?

Do you capture all patients? (select option that best describes)

Who is completing this assessment? (select all that apply)

During Critical Care stay - All patients will be screened for delirium.

Do you screen all patients for delirium?

What screening/assessment tool is used to assess for delirium?

If other, please state what tool is used

How often is delirium screening routinely completed (assuming it could be done on change of mental status)? (this isn't specified in GPICG)

All patients with a tracheostomy must have communication and swallowing needs assessed when the decision to wean from the ventilator has been made and the sedation hold has started.

Are patients having their communication and swallowing needs assessed as per the standard?

If Yes, who is completing this assessment? (select all that apply)

Comments:

Patients receiving rehabilitation are offered a minimum of 45 minutes of each active therapy that is required, for a minimum of 5 days a week, at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it.

Are physiotherapy resources adequate on Critical Care to meet this standard?

Does your service meet the ratio of 1 WTE Physiotherapist to 4 Critical Care patients?

Are physiotherapy resources adequate to provide enough time to achieve the rehab goals of patients, 5 days a week, whilst they still benefit from it?

Comments:

What is your understanding of how 45 mins is defined?
 For example; does a sit on the side of the bed taking 15 mins with 3 physiotherapy staff = 45mins?

Does your physiotherapy team provide an outpatient rehabilitation class specifically for critical illness rehab?

Patients must have all Rehabilitation outcomes quantified using a tool that can track progression from the Acute sector into Primary care to facilitate care needs in the community.

Does your unit comply with this standard?

What is your understanding of this standard?



Rehabilitation Survey

Implementation progress against current standards



What assessment and/or tracking tools are in use in Critical Care?

What assessment and/or tracking tools are in use on your general hospital wards?

What assessment and/or tracking tools are in use in community settings? (i.e. Follow-up clinic or rehab classes)

NICE 63 eligible patients on discharge from Critical Care must receive a rehabilitation prescription.

Does your unit comply with this standard?

Do patients receive a rehabilitation prescription that is completed by a multidisciplinary team?

What does the rehabilitation prescription look like? (Examples below, please free text your answer)

Example 1: It is a one-page document, which informs the ward of future rehabilitation needs (completed by whom?)

Example 2: It is part of the patient discharge summary, which informs the wards of future rehabilitation needs (completed by whom?)

Example 3: It is a pathway document that encompasses all the assessments and creates a prescription early. Starts on admission to Critical Care and continues on the wards and through to Follow-up clinic.

What information is given to the patient about their stay on critical care when they are transferred to ward level care, or home from critical care?
(select all that apply)

Patients discharged from Critical Care must have access to a Critical Care follow-up clinic.

Is there a Critical Care Follow-up clinic available to all patients?
(This may just be a self referral system from contact details in a leaflet and doesn't have to mean all patients are invited)

If Yes, is the clinic:

Are there other specialties attending the clinic or available during the clinic if required?
(This is not a prerequisite if there are robust referral routes to other specialties in place)

If Yes, who? (select all that apply)

Comments:

How is the clinic funded?

Comments:

How many appointments can a patient have?

Additional standards from British Society of Rehabilitation Medicine (BSRM) document 'Rehabilitation for patients in the acute care pathway following severe disabling illness or injury'

Are you aware of this document?

Is there a Rehabilitation Medicine Consultant available (either within own Trust / from a Tertiary Centre / within network) to clinically review patients with complex care needs?

Additional information not related to current standards - Time and roles dedicated to rehabilitation

How much time is allocated for co-ordinating rehabilitation? (n = no. of people x no. of days per week)

Please describe any new job posts that have been introduced in your Trust to address the monitoring or extra rehabilitation demands of patients. (e.g. rehabilitation co-ordinators, Critical Care Nurse specialist or liaison posts or rehabilitation assistants)

Describe where roles may have been reorganised or expanded (with number of hours) to accommodate improvements in patient rehabilitation (e.g. within Physiotherapy, OT, Follow-up or Outreach services)

Thank you for taking the time to complete this survey 😊

Appendix 2. Data summary from the pilot sites – (National comparison in brackets)

1. Assessment of rehabilitation needs carried out within 24 hours in critical care – 85% (75%)
the level of compliance was not asked.
2. Performance of delirium screening assessment – 95% (78%)
3. Communication and swallowing assessments for tracheostomised patients prior to ventilatory weaning – This asked about SLT resources and 25% have a SLT who can meet the standard (60% met the standard 28% by a speech and Language Therapist)
4. Adequacy of resources for 45 minutes of active therapy per day – 35% (30%)
5. Use of a rehabilitation outcomes tool – 25% (42%)
6. Use of a rehabilitation prescription – 25% (53%)
7. The provision of information for patients on discharge was not asked
8. Provision of Critical Care Follow-up Clinics – 60% (63%)
9. Awareness of British Society of Rehabilitation Medicine (BSRM) guidelines (BSRM, 2014) – 40% (42%)
10. Critical Care units with dedicated time allocated to coordinate rehabilitation – 65%, although 54% of these reported having a day or less per week. (42%, although 38% of these reported having a day or less per week)