NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Centre for Clinical Practice

Review of Clinical Guideline (CG83) - Rehabilitation after critical illness

1. Background information

Guideline issue date: 2009

3 year review: 2012 (first review)

National Collaborating Centre: Centre for Clinical Practice

Review recommendation

- The guideline should not be updated at this time.

Factors influencing the decision

Literature search

1. From initial intelligence gathering and a high-level randomised control trial (RCT) search clinical areas were identified to inform the development of clinical questions for focused searches. Through this stage of the process six studies were identified relevant to the guideline scope. The identified studies related to the following clinical areas within the guideline:
    - Different rehabilitation strategies/programmes for adult patients.
    - Optimal time for initiating or delivering rehabilitation strategies/programmes to adult patients.

2. No clinical questions were developed based on the clinical areas above, qualitative feedback from other NICE departments and the views expressed by the Guideline Development Group.

3. No evidence was identified which directly answered the research recommendations presented in the original guideline.

4. A few ongoing clinical trials (publication dates unknown) were identified focusing on rehabilitation following critical Illness, use of neuromuscular electrostimulation (NMES) for treatment or prevention of ICU-associated weakness, rehabilitation among intensive care unit (ICU) survivors, impact of an aerobic exercise rehabilitation programme, evaluation of a rehabilitation complex intervention, and a trial of intensive versus standard physical rehabilitation therapy in critically ill patients.

Guideline Development Group and National Collaborating Centre perspective

5. A questionnaire was distributed to GDG members and the National Collaborating Centre to consult them on the need for an update of the guideline. Six responses were received. Three respondents indicated that there was no new relevant literature that potentially changes current recommendations. The other three respondents mentioned new evidence on nurse led intensive care follow-up programmes for improving long term outcomes from critical illness, early physical and occupational therapy in mechanically ventilated critically ill patients, and further evidence supporting the importance of early mobilisation after critical illness.

   With regard to ongoing research relevant to the guideline, the GDG provided the following details:

   - Health Technology Assessment (HTA) for early physical therapy.
   - CPAX study carried out by Eve Corner from Chelsea and Westminster.
   - REVIVE study on effectiveness of a rehabilitation programme in survivors of critical illness following intensive care unit (ICU) discharge.
   - RECOVER study on evaluation of a rehabilitation complex intervention for patients following intensive care discharge

- REMAIC study on rehabilitating muscles after intensive care.
- National Institute for Health Research (NIHR) – patient benefit study assessing mobilisation and amino acid supplementation.
- Aerobic exercise after critical illness.

The responses suggested that there was no evidence addressing patient experience or differential effectiveness of an intervention according to ethnicity or gender, or other dimension of equality. In terms of cost effectiveness, the respondents did not identify new evidence. There were no anecdotal efficacy or safety concerns.

6. Five respondents agreed that the guideline should not be updated while one respondent suggested that it should be but no specific areas of the guideline were mentioned.

Implementation and post publication feedback

7. In total 12 enquiries were received from post-publication feedback, most of which were routine. The key points that emerged from post-publication feedback were as follows:

    - Whether there is guidance in relation to the discharge of patients from Accident & Emergency Departments.
    - Request for information on audit support of the guideline.

    This feedback did not contribute towards the development of clinical questions for the focused searches.

8. A field team implementation feedback report identified that the guidance was considered particularly difficult to implement, due mainly to the view that it required additional resources to implement the recommendations on follow-up. The findings of the field team suggested that the guidance was considered aspirational.

    This feedback did not contribute towards the development of clinical questions for the focused searches.

Relationship to other NICE guidance

9. NICE guidance related to CG83 can be viewed in Appendix 1.

Summary of Stakeholder Feedback

Review proposal put to consultees:
The guideline should not be updated at this time.
The guideline will be reviewed again according to current processes.

10. In total 12 stakeholders commented on the review proposal recommendation during the 2 week consultation period.

11. Nine stakeholders agreed with the review proposal recommendation that this guideline should not be updated at this time.

12. Three stakeholders did not agree:

    - One stakeholder mentioned a review of the short clinical assessment inclusion criteria i.e. how many days in Critical Care before an assessment becomes necessary. However, the review process did not reveal any new evidence in this area. The current recommendation covers a critical care population and it is very difficult to put a threshold on the number of days before an assessment becomes necessary. However, if an assessment is not carried out and the patient is discharged to the ward, the current recommendation supports a further clinical assessment. This acts as a safety net for those patients who didn't have an initial critical care clinical assessment.
    - The stakeholders also mentioned that follow up of 2-4 months is not recommended in the guideline and that this should be conducted with a healthcare professional experienced in Critical Care. However, current recommendations are not intended to be

prescriptive to allow different local service configurations based on local commissioning framework.

- Another issue mentioned was the timing for the provision of a critical care discharge summary which should be at a juncture when the patient is able to comprehend it (with explanation). However, the review process did not reveal any new evidence in this area and the current recommendations are evidence based.

Anti-discrimination and equalities considerations

13. No evidence was identified to indicate that the guideline scope does not comply with anti-discrimination and equalities legislation. The original scope is inclusive of adults with rehabilitation needs as a result of a period of critical illness that required level 2 and level 3 critical care.

Conclusion

14. Through the process no evidence was identified which would indicate a significant change in clinical practice.
15. The 'Rehabilitation after critical illness guideline' should not be considered for an update at this time.

Relationship to quality standards

16. This topic is not currently being considered for inclusion in the scope of a quality standard.

17. This topic is not currently being considered as a core library topic.

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Louise Millward – Associate Director
Faisal Siddiqui – Technical Analyst

Centre for Clinical Practice
19.06.2012

Appendix 1

The following NICE guidance is related to CG83:

Guidance	Review date
CG 103: Delirium: diagnosis, prevention and management (July 2010)	July 2013
CG 92: Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital. (January 2010)	January 2013
CG 113: Generalised anxiety disorder and panic disorder (with or without agoraphobia) in adults. (January 2011)	January 2014
CG 90: Depression: the treatment and management of depression in adults (update). (October 2009)	October 2012
CG 42: Dementia: Supporting people with dementia and their carers in health and social care. (November 2006)	April 2014
CG 32: Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition. (February 2006)	June 2014

CG 26: Post-traumatic stress disorder (PTSD): The management of PTSD in adults and children in primary and secondary care. (March 2005)	July 2014
CG 68: Diagnosis and initial management of acute stroke and transient ischaemic attack (TIA). (July 2008)	Currently under review (April 2012)
CardioQ-ODM (oesophageal Doppler monitor). Medical technologies guidance. (March 2010).	TBC
Cardiac rehabilitation service. Commissioning guide. (March 2008)	TBC
Related NICE guidance not included in CG83	
None	
Related NICE guidance in progress	
Stroke rehabilitation.	TBC
CG 56: Triage, assessment, investigation and early management of head injury in infants, children and adults. (September 2007)	TBC
CG 48: Secondary prevention in	February 2014

primary and secondary care for patients following a myocardial infarction. (May 2007)	
Related NICE quality standard	
Stroke. Quality standard. June 2010. [Specific quality measures: Ongoing inpatient rehabilitation and ongoing rehabilitation]	Review date: TBC.

Appendix 2

National Institute for Health and Clinical Excellence

Review of Clinical Guideline (CG83) – Rehabilitation after critical illness
Guideline Review Consultation Comments Table
13-27 February 2012

Type (NB this is for internal purposes – remove before posting on web)

SH = Registered Stakeholders. These comments and responses will be posted on the NICE website when the guideline is published.
NICE = Comments from NICE. These are added to this table for convenience but will not be posted on the web.
Non Reg = These are no longer accepted and should not be added to the table

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
SH	Lancashire Teaching Hospital NHS Foundation Trust		Return trial Crit Care Med 2012 Vol 40 No 4 should be looked at as part of the review. Shows benefit of rehab program.			Thank you very much for your comment. The study you refer to is a pilot

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
						investigation looking at multicomponent rehabilitation program (combining cognitive, physical, and functional training) for intensive care unit survivors. The results showed the program to be feasible and clinically effective in improving cognitive performance and functional outcomes in just 3 months. The authors concluded

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
						that future investigations with a larger sample size should be conducted to build on this pilot feasibility program and to confirm these results. This area will be considered in the next update review of this guideline.
SH	Faculty of Intensive Care Medicine	Yes, not this year.	But probably need to wait till we have results of 3 research projects that will be published in the near future. REMAIC (Eddleston and Griffiths) a NIHR project, Diaries project (Christrine Jones) recently published in Intensive Care Medicine and lastly the Edinburgh group's RECOVER project under the direction of Tim Walsh; to be published in 2013.			Thank you very much for your comment. These studies will be considered in a future update review of this guideline.
SH	Essex Critical	No	Please consider a review of the short clinical			Thank you very

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
	Care Network		assessment inclusion criteria i.e. how many days in Critical Care before an assessment becomes necessary - as the difficulty in completing all the assessments across all the areas is increased by the number of patients involved. Consider whether the guidance is too prescriptive about when and where the assessments should be carried out. A short-stay patient may be discharged from Critical Care before receiving any assessments and this seems like a failing. Is it better to direct the rehabilitation towards the most debilitated, rather than too many patients receiving a disjointed and perhaps unnecessary service?			much for your comments. . The current recommendation covers a critical care population and it is very difficult to put a threshold on the number of days before an assessment becomes necessary. However, if an assessment is not carried out and the patient is discharged to the ward, the current recommendation supports a further

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
						clinical assessment. This acts as a safety net for those patients who didn't have an initial critical care clinical assessment.
SH	Essex Critical Care Network	No	Please consider a review of the ward based assessments - greater flexibility is required to promote processes that could succeed on a ward. A solution would be a rehabilitation/step-down area where the patients are cared for by a dedicated team in a similar way to stroke units, but this would probably be financially impossible and therefore could not be recommended. However, whilst the patients are scattered around the hospital, the assessments and rehab plan is too difficult to monitor and achieve. The multi-disciplinary team is too large to educate for 3 or 4 patients on a ward, and many of the			Thank you very much for your comment. This information will be passed on to the implementation team and will also be considered in a future update review of this guideline.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
			disciplines rotate.			
SH	Essex Critical Care Network	No	In light of the PRACTICAL study, it was difficult to suggest follow-up clinics to carry out the 2-3 month assessments - but if this assessment is to be face-to-face with a healthcare professional experienced in Critical Care, then it is impossible to achieve without a follow-up clinic. Therefore greater clarity is required in how to achieve the 2-3 month functional assessment - suggest the use of expert opinion to recommend Follow-up clinics. By not recommending a Follow-up clinic as best practice, this has given hospitals a get-out clause, for not funding one.			Thank you very much for your comment. Your practical experience is e acknowledged. However, current recommendations are not intended to be prescriptive to allow different local service configurations based on local commissioning framework. .. . This information on implementation will be passed to the implementation team.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
SH	Essex Critical Care Network	No	The rehabilitation manual has been proven of benefit, but is not practical for many hospitals without support systems. Perhaps a comprehensive discharge information booklet would be more useful for all patients and separate exercise booklets for assessed patients could be considered as an alternative.			Thank you very much for your comment. This information will be passed on to the implementation team and will also be considered in a future update review of this guideline.
SH	Essex Critical Care Network	No	Giving a copy of the Critical Care discharge summary to the patient is difficult, it needs to be at a juncture when the patient is able to comprehend it (with explanation), and not be distressed by it. Suggest this would be by the GP or at a Follow-up clinic.			Thank you very much for your comment. The current guideline recommendations are evidence based and the review process did not reveal any new evidence in this area that would

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
						invalidate them.
SH	Essex Critical Care Network	No	Official Feedback above but at a more personal level, I have been trying to implement this guideline across Essex Critical Care network since its publication (full time for initial 12 months), so feel I have a good understanding. For hospitals with Follow-up clinics, the Critical Care and the 2-3 month assessments are not too difficult to achieve, but it is the general ward care that all hospitals agree is impossible to capture. I am still hopeful, at some point in the future, for some step-down rehabilitation beds in one trust, to address this problem. I have also attached my article which has been accepted for publication. The first revision has been completed and it is currently awaiting further decisions, it may need further work and therefore has not been published in time for the guideline review decision. I would be delighted to come and discuss any of my comments further with members of the guideline development group.			Thank you very much for your comment and attachment. The review process does not consider unpublished evidence, therefore, once published it will be considered in a future update review of this guideline.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
SH	St Helens & Knowsley Hospital Trust	Yes	Insufficient reliable new evidence to contravene current recommendation. Design of several recent studies has been poor such that they would not be able to show an effect. In particular studies that look generally at broad non specific measures in such a heterogeneous population especially including short ICU stay patients (< 7 days) are likely to be negative. Benefits are only likely to be readily demonstrated and testable in longer stay ICU patients. The current guidance has been slow to be adopted because of clinical inertia and not because of resource. That is a false excuse. The guidance was built around using existing resources and getting them better and more timely focussed. It is therefore wrong to suggest that the guidance is an aspiration. It merely requires willingness of ICU and hospital staff to engage and its application should be considered	Insufficient focus on specific applications and therapies within ICU that could improve recovery (eg avoidance of immobility and early mobilisation techniques and ICU diaries)		Thank you very much for your comments.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
			a benchmark of quality.			
SH	RCN	Yes				Thank you very much for your comment.
SH	Department of Health		the Department of Health has no substantive comments to make, regarding this consultation.			Thank you very much for your comment.
SH	Critical Care National Network Lead Nurse Forum (CC3N)	No	We would like to offer points for consideration having recently undertaken an audit of compliance to CG83 through the Critical Care Networks National Nurse Lead Forum. The results reflect audit from 59 trusts across England. It is recognised that the evidence based standards quite rightly determine the most effective clinical pathway for patients, but we feel consideration needs to be given to some of the detail relating to parts of the pathway that are currently failing. From the audit, which included each element of			Thank you very much for your comments. This information will be passed to the implementation team.

<table>
<tr><th>Type</th><th>Stakeholder</th><th>Agree?</th><th>Comments

Please insert each new comment in a new row.</th><th>Comments on areas excluded from original scope</th><th>Comments on equality issues</th><th></th></tr>
<tr><td></td><td></td><td></td><td>the CG83 guidance, it is clear that the further the patient moves away from the critical care environment, the likelihood of compliance to the pathway was reduced.

The results of compliance:

<table>
<tr><th>Standard achieved</th><th>Action plan agreed</th><th>Standard never achieved</th></tr>
<tr><td colspan="3">During Critical Care Stay</td></tr>
<tr><td>52.17%</td><td>27.93%</td><td>11.99%</td></tr>
<tr><td colspan="3">Before Discharge from Critical Care</td></tr>
<tr><td>50.34%</td><td>28.23%</td><td>14.54%</td></tr>
<tr><td colspan="3">During Ward Based Care</td></tr>
<tr><td>30.06%</td><td>26.35%</td><td>28.94%</td></tr>
<tr><td colspan="3">Before Discharge to Home or Community Car</td></tr>
<tr><td>35.75%</td><td>18.02%</td><td>27.59%</td></tr>
<tr><td colspan="3">2-3 months after discharge from Critical Care</td></tr>
<tr><td>30.55%</td><td>8.23%</td><td>39.15%</td></tr>
</table></td><td></td><td></td><td></td></tr>
<tr><td>SH</td><td>Critical Care</td><td>No</td><td></td><td></td><td></td><td>Thank you very</td></tr>
</table>

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
	National Network Lead Nurse Forum (CC3N)		It's evident that the most difficult part of the pathway to achieve is the 2-3 month post critical care phase. We now understand that the trusts who were able to demonstrate compliance have in fact had follow up services in place for a number of years – it was difficult to demonstrate any increase in follow services post CG 83 publication in 2009. It is understood in light of the PRACTICAL study that it was difficult to suggest follow-up clinics to carry out the 2-3 month assessments - but if this assessment is to be face-to-face with a healthcare professional experienced in Critical Care, then it is impossible to achieve without a follow-up clinic. Therefore greater clarity is required in how to achieve the 2-3 month functional assessment - suggest the use of expert opinion to recommend Follow-up clinics. By not recommending a Follow-up clinic as best practice has given hospitals a get-out clause, for not funding one.			much for your comment. Your practical experience is e acknowledged. However, current recommendations are not intended to be prescriptive to allow different local service configurations based on local commissioning framework. This information on implementation will be passed to the implementation team.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
SH	Critical Care National Network Lead Nurse Forum (CC3N)	No	More general point of feedback: It may be more effective to review the Short Clinical Assessment criteria to determine the number of days a patient will have been in critical care prior to the need for assessment,. This would allow for resources to be directed at the appropriate patient group. In many cases short stay critical care patients are discharged without assessment thereby failing to comply with the guidance.			The current recommendation covers a critical care population and it is very difficult to put a threshold on the number of days before an assessment becomes necessary. However, if an assessment is not carried out and the patient is discharged to the ward, the current recommendation supports a further clinical

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						assessment. This acts as a safety net for those patients who didn't have an initial critical care clinical assessment.
SH	Critical Care National Network Lead Nurse Forum (CC3N)	No	N.B. We would be very happy to share the detail of the CG 83 audit should this be of interest.			Thank you very much for your comment.
SH	BSRM/RCP	Agree	The BSRM/RCP are grateful for the opportunity to comment on this draft proposal. The following comments are based on the views received from experts who have reviewed CG83 and the consultation document. Overall, our experts agree with the proposal but would like to make the following comments.			Thank you very much for your comments.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
SH	BSRM/RCP	Agree	Page 7 of CG83 - 'Critical illness polyneuropathy and myopathy are related and important problems.' Perhaps section 1.1.2 could specifically mention that identifying (or being aware of) critical care polyneuropathy and myopathy would be important if physical recovery was less than expected. It might also be usefully added on page 23 under the review of physical problems with an indication in the guidance that these patients are likely to need specialist rehabilitation medicine services			Thank you very much for your comment. This information will be considered in a future update review of this guideline.
SH	BSRM/RCP	Agree	Section 1.1.6 mentions nutritional needs and links to NICE CG 32. Table 1 should explicitly mention malnutrition under the physical problems list			Thank you very much for your comment. This information will be considered in a future update review of this guideline.

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SH	BSRM/RCP	Agree	Any update should include specific mention of the role of the rehabilitation medicine consultant in CC rehabilitation (further than mentions on pages 22 and 39).			Thank you very much for your comment. No new evidence was identified on the role of the rehabilitation medicine consultant in CC rehabilitation. However, this area will be considered in the future update review of this guideline.
SH	BSRM/RCP	Agree	Our experts are aware of a number of RCTs of various interventions in the CC environment which are in the pipeline. This evidence will be key to an update.			Thank you very much for your comment. This information and forthcoming evidence will be considered in a

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						future update review of this guideline.
SH	Patients' & Relatives' Committee	No	The comment that the guideline is aspirational (page 11) should be removed. The reasons given that lack of additional resources is preventing implementation is an excuse and not true. Implementation requires discussion and agreement across current institutional boundaries (Secondary Care/Primary Care/ Social Services).We warned this would be the biggest problem facing implantation of the guidelines and it should be pointed out to senior management in the NHS that it is their responsibility to initiate and guide these discussions to meet the requirements of the guidelines.	None	None	Thank you very much for your comment. This information will be passed on to the implementation team and will also be considered in a future update review of this guideline.
SH	United Kingdom Clinical Pharmacy Association		We have no comments to make at this time.			Thank you very much for your comment.

Type	Stakeholder	Agree?	Comments Please insert each new comment in a new row.	Comments on areas excluded from original scope	Comments on equality issues	
	(UKCPA)					
SH	British Association of Critical Care Nurses	YES	BACCN agree that at this time the guideline does not need updated			Thank you very much for your comment.
SH	Hertfordshire & Bedfordshire Critical Care Network HBCCN	Yes.	The guideline still represents a broad clinical and MDT view of the needs and issues faced by patients after critical illness and the inputs, standards of care and processes that are of *perceived* benefit to that patient population, by those healthcare professions working in that area. Although it is disappointing that further empirical evidence is not available, overall the guidance still provides a concurrent & reasonable guide for services to benchmark themselves against and improve and redesign services from.			Thank you very much for your comments.