



# 2018 surveillance of rehabilitation after critical illness in adults (NICE guideline CG83)

Surveillance report

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## Surveillance decision

We will not update the NICE guideline on rehabilitation after critical illness in adults at this time; but will undertake an exceptional surveillance review of the guideline following publication of 2 scopes of closely related guidelines that have been referred to NICE on rehabilitation for chronic neurological disorders including traumatic brain injury and rehabilitation after traumatic injury (provisional date January 2020).

During surveillance editorial or factual corrections were identified, which will be addressed through [editorial amendments](#).

## *Reasons for the decision*

The guideline was developed to be a high-level, principle-based guideline. While there is some new evidence related to the scope of NICE guideline CG83 concerning mobilisation strategies, aiding sleep, early rehabilitation programmes, and reflecting changes to service specifications, there is a suite of closely related guidelines on rehabilitation that are due to be developed soon, which should be considered prior to any decision to update NICE guideline CG83. It is therefore proposed that an exceptional surveillance review is undertaken when these guidelines' scopes are published. This will ensure that there is no duplication between the new NICE guidelines and NICE guideline CG83, and to identify whether there are gaps which could be addressed by a potential update of NICE guideline CG83.

## Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in [rehabilitation after critical illness in adults](#) (NICE guideline CG83) remain up to date. The surveillance process for NICE guideline CG83 followed the static list review process. It consisted of:

- Feedback from topic experts and voluntary and community sector organisations via a questionnaire.
- A search for new or updated Cochrane reviews.
- A search for ongoing research.
- Examining related NICE guidance and quality standards.
- Consulting on the decision with stakeholders.

For further details about the process and the possible update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual.

## *Evidence considered in surveillance*

### Search and selection strategy

We searched for new Cochrane reviews related to the whole guideline. We found 4 relevant Cochrane reviews published between August 2011 and February 2018<sup>[1],[2],[3],[4]</sup>.

Topic experts identified 28 published studies, of which 10 were within the [scope](#) of the guideline<sup>[3],[5],[6],[7],[8],[9],[10],[11],[12],[13]</sup>.

We also considered the 6 studies identified in [previous surveillance in 2012](#)<sup>[14],[15],[16],[17],[18],[19]</sup>.

The [surveillance review in 2014](#) did not identify any new studies.

Evidence was identified on the following rehabilitation strategies which are not currently in the recommendations in NICE guideline CG83: mobilisation<sup>[1],[2],[5],[9],[10],[11],[12],[18],[19]</sup> and aiding sleep<sup>[3]</sup>. However, the evidence on the effectiveness of mobilisation strategies on physical and psychological outcomes was mixed; and conclusions concerning the effectiveness of strategies that aim to aid

sleep were restricted as opportunities to pool data and do a synthesis were limited, and the quality of the data was described as low/very low quality.

A small body of evidence was identified concerning early rehabilitation programmes in critical care that appear to be relevant to the research recommendation 'For patients at high risk of critical illness-associated morbidity, what is the clinical effectiveness and cost effectiveness of organised critical care rehabilitation versus usual care on physical and psychological functioning, participation and quality of life?'. The evidence did not fully address the research question<sup>[5],[6],[7],[8]</sup>.

## Ongoing research

A Cochrane review protocol was identified on assessing [follow-up services for improving long-term outcomes in intensive care unit survivors](#). This trial will be assessed for its impact on the guideline upon publication.

## Related NICE guidance

NICE guideline CG83 does not include clinical subgroups of patients whose specialist rehabilitation needs are already routinely assessed and delivered as part of their care pathway, including patients with conditions for which published guidelines already exists, see the NICE Pathways on [head injury](#), [myocardial infarction](#) and [stroke](#). Since the publication of NICE guideline CG83 in March 2009 there have been related NICE guidelines published which should be considered for cross-referencing to, these are detailed in the [editorial amendments](#) section.

## Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline and voluntary and community sector organisations.

Six topic experts responded about NICE guideline CG83. They all indicated that the guideline should be updated. Many of the areas identified as requiring an update were out of scope as they focused on areas already covered by existing NICE guidelines, in particular in relation to delirium, see the NICE guideline on [delirium: prevention, diagnosis and management](#) and post-traumatic stress disorder, see the NICE guideline on [post-traumatic stress disorder: management](#). Evidence was also identified by topic experts on research on specific interventions, rather than components of an overall rehabilitation strategy – the latter of which was the focus of the guideline.

Topic experts also highlighted that the uptake and implementation of the recommendations is low, partly due to changes in service configurations and possibly due to the guideline providing mostly

high-level, principle-based recommendations. Low uptake of the guidance recommendations was also identified in a published study which identified that in April 2013 only 27.3% of organisations reported follow-up of patients at 2–3 months following hospital discharge (recommendation 1.23); and only 6.8% reported that a rehabilitation programme was available following hospital discharge for post critical illness patients (recommendation 1.25)<sup>[13]</sup>. However, there was nothing to suggest that the low uptake was because of unclear or controversial recommendations.

One voluntary and community sector organisation responded. They indicated that the guideline should be updated due to there being new published evidence on rehabilitation, however no references were provided.

## Views of stakeholders

Stakeholders are consulted on all surveillance decisions except if the whole guideline will be updated and replaced. Because this surveillance decision was to not update the guideline, we consulted on the decision.

Overall, 6 stakeholders commented: 1 agreed with the decision; 2 noted that they had no comments on the proposals; and 3 disagreed with the decision. However 2 of the stakeholders that disagreed, said that they agreed with the decision not to update the guideline at present, but were concerned that the guideline should be updated in the future in relation to the following areas:

- Information given to GPs after discharge and promoting routine GP follow-up post-discharge. This is already covered in the recommendations in NICE guideline CG83.
- Information for supporting children with relatives in critical care. This will be considered in the exceptional surveillance review if evidence is available and if it is not covered within the scopes of the NICE guidelines on rehabilitation for chronic neurological disorders including traumatic brain injury and rehabilitation after traumatic injury.
- Returning to work following critical care. There is a NICE guideline on [workplace health: long-term sickness absence and incapacity to work](#) which addresses the needs of employees who have been absent due to any type of long-term illness.
- Measuring and collecting data on outcomes in physical function, neurocognitive function, psychological wellbeing, patient-reported quality of life and patient experience. Physical and psychological wellbeing outcomes are included in the recommendations, and the editorial amendment to include a cross reference in NICE guideline CG83 to the NICE guideline on

[intermediate care including reablement](#) covers patient-reported quality of life and experience outcomes. No evidence was provided to support assessing outcomes.

- Commissioning. This is not within NICE's remit.

One stakeholder was concerned that NICE guideline CG83 does not adequately address the nutritional support needs of patients in critical care. However there is a cross reference to the NICE guideline on [nutrition support for adults](#).

See [appendix A](#) for full details of stakeholders' comments and our responses.

## Equalities

Stakeholders expressed a concern that the guideline does not support access to specialist rehabilitation services following critical illness, especially if the illness is not due to a traumatic injury. The guideline provides recommendations to refer to a specialist service on the basis of functional assessment, not on whether or not an injury is traumatic.

## Editorial amendments

During surveillance of the guideline we identified editorial or factual corrections which should be actioned, a cross-reference to:

- [Intermediate care including reablement](#) (NICE guideline NG74) should be added to recommendation 1.21
- [Transition between inpatient hospital settings and community or care home settings for adults with social care needs](#) (NICE guideline NG27) should be added to recommendation 1.20
- [Patient experience in adult NHS services: improving the experience of care for people using adult NHS services](#) (NICE guideline CG138) should be added to recommendation 1.1
- [Delirium: prevention, diagnosis and management](#) (NICE guideline CG103) should be added to recommendation 1.9
- [Decision making and mental capacity](#) should be added when it is published.

## Overall decision

After considering the impact on current recommendations of the evidence, views of topic experts and stakeholders, and other intelligence, we decided not to update at this time. An exceptional

surveillance review will be scheduled following the publication of the scopes for the NICE guidelines on rehabilitation for chronic neurological disorders including traumatic brain injury and rehabilitation after traumatic injury.

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<sup>[1]</sup> Connolly B, Salisbury L, O'Neill B et al. Exercise rehabilitation following intensive care unit discharge for recovery from critical illness. *Cochrane Database of Systematic Reviews* 2015, Issue 6. Art. No.: CD008632. DOI: 10.1002/14651858.CD008632.pub2.

<sup>[2]</sup> Mehrholz J, Pohl M, Kugler J, Burridge J, Mückel S, Elsner B. Physical rehabilitation for critical illness myopathy and neuropathy. *Cochrane Database of Systematic Reviews* 2015, Issue 3. Art. No.: CD010942. DOI: 10.1002/14651858.CD010942.pub2.

<sup>[3]</sup> Hu RF, Jiang XY, Chen J et al. Non-pharmacological interventions for sleep promotion in the intensive care unit. *Cochrane Database of Systematic Reviews* 2015, Issue 10. Art. No.: CD008808. DOI: 10.1002/14651858.CD008808.pub2.

<sup>[4]</sup> Ullman AJ, Aitken LM, Rattray J et al. Diaries for recovery from critical illness. *Cochrane Database of Systematic Reviews* 2014, Issue 12. Art. No.: CD010468. DOI: 10.1002/14651858.CD010468.pub2.

<sup>[5]</sup> McWilliams D, Jones C, Atkins G et al. Earlier and enhanced rehabilitation of mechanically ventilated patients in critical care: A feasibility randomised controlled trial. *Journal of Critical Care* 2018(44):407-412.

<sup>[6]</sup> McWilliams D, Weblin J, Atkins G et al. Enhancing rehabilitation of mechanically ventilated patients in the intensive care unit: A quality improvement project. *Journal of Critical Care* 2015(30):13-18.

<sup>[7]</sup> Gruther W, Pieber K, Steiner I et al. Can Early Rehabilitation on the General Ward After an Intensive Care Unit Stay Reduce Hospital Length of Stay in Survivors of Critical Illness?: A Randomized Controlled Trial. *Am J Phys Med Rehabil* 2017(96):607-615.

<sup>[8]</sup> Jones C, Eddleston J, McCairn A et al. Improving rehabilitation after critical illness through outpatient physiotherapy classes and essential amino acid supplement: A randomized controlled trial. *Journal of Critical Care* 2015(30):901-907.



- <sup>[9]</sup> Denehy L, Skinner EH, Edbrooke L et al. Exercise rehabilitation for patients with critical illness: a randomized controlled trial with 12 months of follow-up. *Critical Care* 2013(17):R156.
- <sup>[10]</sup> McWilliams DJ, Benington S, Atkinson D. Outpatient-based physical rehabilitation for survivors of prolonged critical illness: A randomized controlled trial. *Physiother Theory Pract* 2016(32):179-90.
- <sup>[11]</sup> Walsh TS, Salisbury LG, Merriweather JL et al. Increased Hospital-Based Physical Rehabilitation and Information Provision after Intensive Care Unit Discharge. The RECOVER Randomized Clinical Trial. *JAMA Intern MED* 2015(175):901-910.
- <sup>[12]</sup> Wright SE, Thomas K, Watson G et al. Intensive versus standard physical rehabilitation therapy in the critically ill (EPICC): a multicentre, parallel-group, randomised controlled trial. *Thorax* 2018(73):213-221.
- <sup>[13]</sup> Connolly B, Douiri A, Steier J et al. A UK survey of rehabilitation following critical illness: implementation of NICE Clinical Guidance 83 following hospital discharge. *BMJ Open* 2014;4:e004963. DOI: 10.1136/bmjopen-2014-004963.
- <sup>[14]</sup> Blackwood B, Alderdice F, Burns-Karen EA et al. Protocolized versus non-protocolized weaning for reducing the duration of mechanical ventilation in critically ill adult patients. *Cochrane Database Syst Rev*. 2010 May 12;(5):CD006904. DOI:10.1002/14651858.CD006904.pub2.
- <sup>[15]</sup> Cuthbertson BH, Rattray J, Campbell MK et al. The PRaCTICaL study of nurse led, intensive care follow-up programmes for improving long term outcomes from critical illness: A pragmatic randomised controlled trial. *BMJ* 2009(339):1016.
- <sup>[16]</sup> Elliott D, McKinley S, Alison J et al. Health-related quality of life and physical recovery after a critical illness: A multi-centre randomised controlled trial of a home-based physical rehabilitation program. *Critical Care* 2011(15;3): R142.
- <sup>[17]</sup> Jones C, Backman C, Capuzzo M et al. Intensive care diaries reduce new onset post traumatic stress disorder following critical illness: a randomised, controlled trial. *Critical Care* 2010(14):R168.
- <sup>[18]</sup> Schweickert WD, Pohlman MC, Pohlman AS et al. Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial. *Lancet* 2009(373):1874-1882.

<sup>[19]</sup> Burtin C, Clerckx B, Robbeets C et al. Early exercise in critically ill patients enhances short-term functional recovery. *Critical Care Medicine* 2009(37):2499-2505.