

# **The management of the Decreased Consciousness Level Guideline Update**

## **Scope**

### **Guidance title**

The management of children and young people with an acute decrease in conscious level: A nationally developed evidence-based guideline for practitioners.

#### **1.1. Short title**

Children's decreased conscious level guideline (DeCon).

### **The remit**

To update the guideline (The management of a child with a decreased conscious level) which is funded by The National Reyes Syndrome Foundation, UK.

### **Clinical need for the guideline**

#### **3.1 Background**

Reduced conscious level in children is a common and concerning clinical presentation with a range of potential causes, from trauma to severe medical conditions such as encephalitis. For non-traumatic causes, a UK epidemiological study estimated 30/100,000 children aged 0-16 per year presented to hospital with a reduced conscious level, which lasted for six hours or more<sup>1</sup>. Although non-traumatic causes of reduced consciousness are less frequent than traumatic causes, the associated morbidity and high mortality rates (50%) highlight the ongoing need for clear, evidence-based guidance.<sup>1,2</sup>

#### **3.2 Need for guideline update**

- (a) The original guideline was developed in 2005. A partial update in 2015 retained some of the 2005 recommendations and added guidance on alcohol intoxication, which had been highlighted as a key gap by the 2011 audit.
- (b) Further revisions followed in 2016 and 2019 to correct details in the measurement of ammonia levels, clarify procedures for obtaining samples, and address transportation risks linked to the lack of hyperammonaemia screening sample analysis.

- (c) In 2020, a revision process was initiated, including a pre-scope exercise, stakeholder consultation, and expert meetings, but progress was paused due to the COVID-19 pandemic.
- c) A partial update is now planned to start end of 2025 to focus on reviewing and updating key recommendations from the 2015 version and ensure that the guidance reflects current evidence and clinical priorities.

### **The guideline**

- d) The guideline will be developed according to RCPCH standards for guideline development (2020).<sup>3</sup>
- e) This document is the draft scope. It defines exactly what this guidance will (and will not) examine, and what the guidance developers will consider.
- f) The areas to be addressed by the guideline are in the following sections.

### ***Populations***

#### **Groups that will be covered**

Children aged 4 weeks to 18 years who have a decreased conscious level, defined as a Glasgow Coma Score or modified Glasgow Coma Score of 14 or less or being responsive only to voice, or pain, or being unresponsive on the AVPU scale.

#### **Groups that will not be covered**

- (a) Neonates (28 days or younger)
- (b) Pre-term infant survivors on neonatal intensive care unit
- (c) Children with a previously diagnosed condition which may decompensate causing a reduced conscious level (e.g. epilepsy, ventriculo-peritoneal shunt, previously diagnosed metabolic condition), who already have an agreed management plan for acute illness.
- (d) Children who on a day-to-day basis score 14 or less on the Glasgow Coma Scale or Modified Glasgow Coma Scale (e.g. with dementia, epileptic encephalopathy, minimally responsive state following acquired brain injury)

(e) The following conditions will be considered outside of the scope of the Guideline, and are already addressed by existing Guidelines:

- Non-ketonic hyperglycaemia
- Peri-arrest management

#### **4.2 Healthcare setting**

Any setting where a health professional may be presented with a child with a decreased conscious level.

#### **4.3 Clinical issues that will be covered**

This is a partial update of the 2015 guideline. Only key recommendations that contribute to variation in clinical practice will be included.

Each recommendation will be informed by an updated evidence review; where evidence is lacking, recommendations will be developed using structured consensus methods (e.g. Delphi process or expert discussion). Recommendations covered by new external guidelines will be updated, while those whose content remains valid and reflective of current clinical practice will not be changed.

Areas under consideration include:

- **Initial assessment and monitoring**
  - Observations to support management
  - Assessment of capillary glucose
  - Key features in the clinical history
- **Airway, breathing, and circulation**
  - Assessment of airway and airway protection
  - Assessment of breathing and oxygen requirements
  - Management of circulatory shock
- **Identifying and investigating causes**
  - Sepsis and trauma
  - Metabolic illness (e.g. hypoglycaemia, hyperammonaemia, non-hyperglycaemic ketoacidosis)
  - Intracranial infections (bacterial meningitis, encephalitis, intracranial abscess, TB meningitis)
  - Raised intracranial pressure

- Hypertensive encephalopathy
- Prolonged convulsion (neurological outcome, investigations, treatment)
- Post-convulsion state (incidence, duration, investigations, treatment)
- Cases where no clinical clues are apparent

**New topic:** The updated guideline will also include recommendations on the assessment and management of intoxication in children, extending beyond alcohol-related causes. This broader scope was identified as a gap by experts during the pre-scope meeting and has not been addressed in previous versions of the guideline.

#### ***4.5 Clinical issues that will not be covered***

The partial update will exclude duplicated content (recommendations repeated or paraphrased across sections with the same meaning) and areas of established standard practice where management is consistent, evidence is well established, and variation in practice is minimal.

To ensure focus on the most clinically relevant recommendations, the following areas are excluded:

- Trauma-related reduced consciousness: Covered comprehensively by existing trauma and neurotrauma guidelines.
- Detailed neuroimaging protocols (e.g. CT, MRI): Addressed in specialist radiology and neurotrauma guidance.
- Long-term management and rehabilitation: This update is limited to acute assessment and management.
- Chronic neurological or neurodegenerative conditions: Outside the scope of acute presentations of reduced consciousness.
- Adult populations: The guideline applies only to children and young people (0–18 years).

#### ***4.5 Main Outcomes***

##### **4.5.1 Outcomes**

- (a) To improve and standardise assessment, investigation and treatment of the child presenting with a decreased conscious level.

- (b) Reduce the risk of misdiagnosing and delayed lifesaving treatment.

## **4.6 Status**

### **4.6.1 Scope**

This is the draft scope to be agreed by the guideline development group and stakeholders.

### **4.6.2 Timing**

The development of this guideline has now commenced, beginning with the pre-scoping stage and early stakeholder engagement in 2025. The process will continue through 2026, with completion and publication of the updated guideline planned for 2027.

## **5 Related guidance**

The updated guideline will replace the management of a child with a decreased conscious level guideline (2019).

There is currently a range of existing guidance updated by NICE covering some of the underlying causes of decreased conscious level as well as related areas on the management of care which will need to be considered as part of the update.

- Epilepsies: diagnosis and management (2025): <https://www.nice.org.uk/guidance/ng217>
- Head injury: assessment and early management (2023): <https://www.nice.org.uk/guidance/ng232>
- Fever in under 5s: assessment and initial management (2021): <https://www.nice.org.uk/guidance/ng143>
- Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management (2024): <https://www.nice.org.uk/guidance/ng240>
- Diabetes (type 1 and type 2) in children and young people: diagnosis and management (2023): <https://www.nice.org.uk/guidance/ng18>
- Suspected sepsis in people aged 16 or over: recognition, assessment and early management (2025): <https://www.nice.org.uk/guidance/ng253>

- Tuberculosis (2024): <https://www.nice.org.uk/guidance/ng33>
- Child maltreatment: when to suspect maltreatment in under 18s (2017): <https://www.nice.org.uk/guidance/cg89>
- Sedation in under 19s: using sedation for diagnostic and therapeutic procedures (2010): <https://www.nice.org.uk/guidance/cg112>
- Head injury (2023): <https://www.nice.org.uk/guidance/ng232>
- Transient loss of consciousness ('blackouts') management in adults and young people (2023): <https://www.nice.org.uk/guidance/cg109>

## References

- 1 Wong, C, Forsyth R, Kelly, T, Eyre, J. Incidence, aetiology, and outcome of non-traumatic coma: a population-based study. Archives of Disease in Childhood 2001; 84(3):193-9.
- 2 RCPCH. Clinicians survey of the use and perception of the management of a child with a decreased conscious level guideline. Decreased consciousness level multi-site audit 2010-2011, London; 2011.
- 3 RCPCH. Setting standards for the development of clinical guidelines in paediatrics and child health 5th Edition, March 2020

## Appendix 1: Working Group Expertise and Stakeholders Organisations

The working group consists of experts on the topic (multidisciplinary) and parent and children and young people (CYP) representation.

Stakeholders are organisations or relevant associations (i.e., specialty groups, speciality interest groups) that will be identified by the working group as having an interest in the topic, or who represent people whose practice or care may be affected directly.

They will be formally invited, informed at different stages of the development and will be invited to provide their views during the scope and draft consultation.

Working Group	Stakeholder Group
<ul style="list-style-type: none"> <li>• Paediatric emergency</li> <li>• Paediatric metabolic medicine</li> <li>• Paediatric intensive care</li> <li>• Paediatric Neurology</li> </ul>	<ul style="list-style-type: none"> <li>• Association of Paediatric Emergency Medicine</li> <li>• Royal College of Emergency Medicine</li> <li>• Royal College of Radiologists</li> </ul>

<ul style="list-style-type: none"> <li>• Paediatric Gastroenterology/dietitian</li> <li>• Paediatric Advanced Clinical Nurse Practitioner</li> <li>• Trainee General Paediatrician</li> <li>• ST4 Paediatrician</li> <li>• Advocate representative – patient support group</li> </ul>	<ul style="list-style-type: none"> <li>• British Inherited Metabolic Disease Group</li> <li>• British Paediatric Neurology Association</li> <li>• British Society for Paediatric Endocrinology &amp; Diabetes</li> <li>• Paediatric Critical Care Society</li> <li>• Royal College of Nursing</li> <li>• The Association of Paediatric Anaesthetists of Great Britain and Ireland</li> <li>• British Association of General Paediatricians</li> <li>• The Society of British Neurological Surgeons</li> <li>• Neonatal and Paediatric Pharmacy Group</li> <li>• British Society of Paediatric Radiology</li> <li>• The Encephalitis Society</li> <li>• Children Living with Inherited Metabolic Diseases</li> <li>• Royal College of Psychiatrists</li> <li>• British Academy of Childhood Disability</li> <li>• British Society of Paediatric Radiology</li> <li>• Wellchild charity</li> <li>• CDC national children's bureau</li> <li>• Bernardos</li> <li>• SIGN health - deaf families, families with hearing loss</li> <li>• Contact – for families with children with disabilities</li> </ul>
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