

**Benchmark No.1**  
**Neurological Observations**  
**3<sup>rd</sup> Edition**

**British Association of  
Neuroscience Nurses**



# Benchmark No.1

## Neurological Observations

### 3<sup>rd</sup> Edition

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## History

The Neuroscience Nursing Benchmarking Group (NNBG) was established in the 1990's as a result of increasing concerns over inconsistencies in practices as part of a subsidiary of BANN. The group aims to improve on the quality of care by comparing and sharing practice with each other, and set explicit standards for comparison of current practice against the ideal standard. The group is committed to searching for the best evidence related to specific areas of neuroscience practice. Membership of the group consists of representatives from neuroscience units within the UK and Ireland, together with educational colleagues from both the NHS/HSC and Higher Educational Institutes. The group is further subdivided into regions and this benchmark was developed by the North East group of the NNBG in 2007.

In 2016, the NNBG consolidated back into BANN and further information about NNBG can be found on the BANN website [www.BANN.org.uk](http://www.BANN.org.uk).

BANN would like to acknowledge the leadership and significant contribution made by the NNBG, and all its contributors, to neuroscience nursing over the years.

## Benchmark No.1

# Neurological Observations

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### Key Points

Neurological observations are used to monitor and evaluate changes in the central nervous system, monitoring the patient's level of consciousness to recognise signs of deterioration and identify trends in neurological status. Neurological observations encompass: -

1. Level of consciousness
  2. Pupillary function
  3. Motor function
  4. Sensory function
  5. Cardiovascular and respiratory signs
- Neurological observations must be performed by a trained and accountable practitioner, (a formal assessment of knowledge and competence should be documented according to local assessment processes).
  - The fifteen-point Glasgow Coma Scale (GCS) must be used to assess the patient's neurological status.
  - An individualised, documented care plan is available which meets needs of the patient, and demonstrates evidence of on-going reassessment.
  - When paper documentation is used, dots (•) not lines or ticks, must be used to fill out the GCS chart.
  - On handover staff must communicate where the neurological deficits arise with the aim of mapping changes in clinical presentation and ensuring consistency and maintaining continuity.
  - Student nurses must be supervised by a competent registered nurse whilst undertaking Glasgow Coma Scale observations.
  - Where possible the pre-injury baseline GCS should be established (for example, elective neurosurgical patient, patients with a learning disability or chronic neurological disorder).
  - A standardised approach applies to the application of painful stimulus appropriate to the GCS category that is being assessed.
  - Written guidelines are available to guide practitioners on the frequency of performing GCS observations.

## Benchmark Number: Neurological Observations

Date completed: Feb 2023  
Review Date: Feb 2025

### FACTOR 1 – Documentation

	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
1.0	Patients identified as being 'at risk' of neurological deterioration are assessed using the GCS assessment tool in conjunction with nationally and locally agreed early warning scoring tools.	Williams (2022) NICE (2014)			
1.1	Education is available on how to perform and document neurological observations which includes instruction on how to apply painful stimulus	Reith <i>et al</i> , (2017)  Braine & Cook, (2016)			
1.2	The neurological assessment should be documented and verbalised as a description of the three categories of the GCS a) Eye opening b) Verbal response c) Motor response	Teasdale, (2015)			
1.3	Dots (•) not lines or ticks are used to complete the GCS chart when using paper documentation.				

**FACTOR 2 – Protocol**

	<b>STATEMENT OF BEST PRACTICE</b>	<b>EVIDENCE &amp; REFERENCES</b>	<b>ACHIEVED</b>	<b>NOT ACHIEVED</b>	<b>VARIABLES</b>
2.0	The fifteen-point Glasgow Coma Scale should be used to assess the patient's neurological status.				
2.1	Neurological observations are performed by an accountable, trained and competent practitioner who can escalate their concerns where there is evidence of clinical change.				
2.2	Student nurses always undertake GCS observations under direct supervision of a trained and competent practitioner.				
2.3	Wherever possible the neurological assessment is performed by the same practitioner on the shift to maintain continuity and avoid any bias in decision making.	Reith et al, (2015)			
2.4	When giving verbal handover, the patient's neurological status is discussed with a focus on identifying changes from the patient's baseline.	Burton et al, (2016)			
2.5	All sections of the observation chart are completed. Any variances are documented in the patient's records.	Reith et al, (2017). Braine & Cook, (2016).			

**FACTOR 3 – Education**

	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
3.0	GCS observations are performed by a practitioner who has the required specialist knowledge and expertise.	NMC (2018)			
3.1	The ward/department has an evidence-based education available: this should include: <ul style="list-style-type: none"> <li>• Anatomy and physiology of the central and peripheral nervous system with reference to cranial nerve function and pupillary response.</li> <li>• Indications for performing neurological observations.</li> <li>• Importance of accurate recording and documentation</li> <li>• An understanding of the rationale for the application of appropriate painful stimuli</li> <li>• An understanding of the amount of time that stimulation should be applied to elicit a response.</li> <li>• An understanding of the clinical indicators suggestive of a neurological deterioration i.e.                             <ul style="list-style-type: none"> <li>a) changing respiratory patterns</li> <li>b) changing cardiovascular patterns</li> <li>c) changing motor and sensory patterns</li> <li>d) Assessment of pupil reactions (direct &amp; consensual).</li> </ul> </li> </ul>	Reith et al (2017)  Braine & Cook (2016)  Wijdicks <i>et al</i> (2005)  Leyden, P (2017)  Gill-Thwaites & Munday, 2004  Shiel <i>et al.</i> 2000  Giacino <i>et al</i> 2004			
3.2	Awareness of alternative tools for neurological assessment e.g., <ul style="list-style-type: none"> <li>• Full Outline for Unresponsiveness (FOUR)</li> <li>• National Institute of Stroke Scale (NISS)</li> <li>• Coma Recovery Scale</li> <li>• Sensory Modality Assessment Rehabilitation Technique (SMART)</li> <li>• Wessex Head Injury Matrix (WHIM)</li> </ul>	Kupas <i>et al</i> (2016)  Brennan <i>et al</i> (2018)			

**FACTOR 4 – Patient Information**

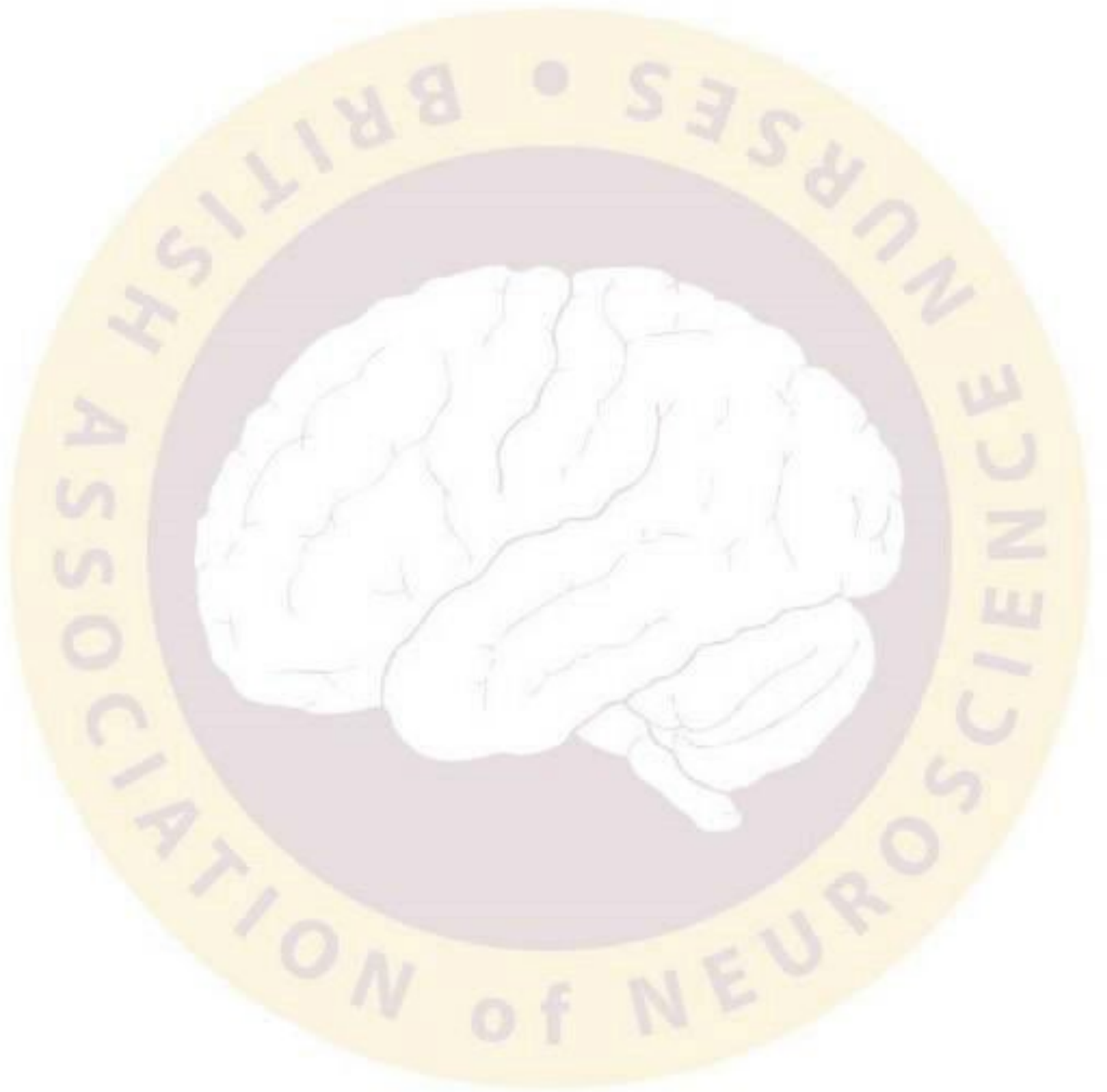
	<b>STATEMENT OF BEST PRACTICE</b>	<b>EVIDENCE &amp; REFERENCES</b>	<b>ACHIEVED</b>	<b>NOT ACHIEVED</b>	<b>VARIABLES</b>
4.0	<p>Patients / carers have received information on the importance of performing frequent neurological observations including: -</p> <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Frequency</li> <li>• Rationale for noxious stimuli</li> <li>• Level of consciousness</li> <li>• Effect on sleep disturbance</li> </ul>	Reith et al (2017)			
4.1	Any information given to patients / carers is documented in the patient's nursing records.	NMC (2018)			



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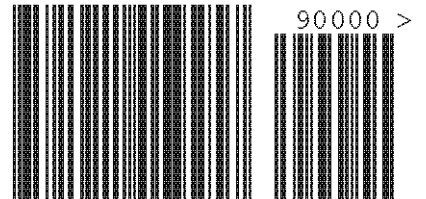
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