“Management of Trauma Patients with GCS≤13”

Explanatory Notes

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In Co-operation with the Northern Trauma Network

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Appendices

1.0 Introduction

1.1 The purpose of this document is to provide explanatory notes to the guidance entitled "The Management of Trauma Patients with GCS ≤13". The guidance is applicable to both adults and children in those hospitals that do not provide a neurosurgical service. It was written using process mapping techniques.

1.2 The guidance is supported by the following recommendations:

- SIGN Guideline 110 – Early Management of Patients with a Head Injury (2009)
- NICE Guideline CG56 - Triage, assessment, investigation and early management of head injury in infants, children and adults (2007)

1.3 The guidance forms part of the local response to the following report:

- NCEPOD - Trauma: Who Cares? (2007)

1.4 The guidance is presented in poster format and is intended to be displayed in all Emergency Medicine Departments. There are two posters, one for hospitals feeding into James Cook University Hospital, Middlesbrough and one for those feeding into the Royal Victoria Infirmary, Newcastle upon Tyne. The posters and ambulance request proforma can also be found in the transfer section of the NoECCN website (www.noeccn.org.uk).

1.6 Any individual or department requesting a copy of the guidance in a poster format should contact the North of England Critical Care Network.

2.0 Intended Outcomes

2.1 This guidance aims to assist in the achievement of the following objectives:

- Rapid airway assessment with expedited safe management of a head injured patient.
- Safe and rapid transfer for CT scanning.
- Early discussion and planning with neurosurgical colleagues.
- Safe and rapid preparation for transfer to a neurosurgical centre.

2.2 This guideline does not aim to cover all aspects of the management of neurosurgical pathology, but only those directly related to achieving these goals.

3.0 Local Context

3.1 This guidance supports the implementation of Major Trauma Centres, but aids management in cases such as when there has been incorrect pre-hospital triage or self-presentation.

3.2 Whilst triage systems are likely to reduce the number of head injured patients presenting to hospitals that are not Major Trauma Centres, the need for guidance increases as familiarity is reduced.

3.3 The guidance utilises recently revised requesting procedure agreed by the North East Ambulance Service (NEAS).

4.0 Explanatory Notes

4.1 Patients meeting the scope of this guidance should be triaged to the resuscitation room and initially assessed by a doctor of ST1 level or above. A senior doctor must direct the patient's care, and an Emergency Medicine Consultant must approve all patient transfers.

4.2 The initial ABCDE assessment should include determination of GCS as well as pupil size and responsiveness. Random blood glucose should be checked to exclude hypoglycaemia.

4.3 An early assessment should be made as to whether a neurosurgical diagnosis is likely, and also whether active treatment is appropriate. If a neurosurgical diagnosis is unlikely, or active treatment is inappropriate this guideline should not be used and management should be as per. local guidelines.

4.4 The decision as to whether intubation is required should be made by an appropriately trained and experienced doctor. The job role of this doctor will vary depending on each hospital's individual arrangements.

4.5 For the purpose of this guideline, the term “critical care doctor” is used to describe the doctor responsible for the safe conduct of anaesthesia if intubation is required.

4.6 The process of arranging an urgent CT scan will vary between centres. Each hospital should develop systems promoting urgent scans followed by immediate image transfer.

4.7 In the case of blood results (U&E, FBC, Coagulation Screen) being unavailable at the time of transfer, the receiving unit should be made aware and the results communicated as soon as possible.

4.8 A pre-rapid sequence induction of anaesthesia checklist is available for use (appendix 2). The decision as to whether this is used should be made by the critical care doctor.

4.10 Deviation from this guidance may be justified in selected cases; however such deviations should be made only after discussion with and involvement of a suitably trained and experienced Consultant.

4.11 The major change in the guidance from current practice is that hospitals are now able to decide whether an urgent transfer is required and act upon this decision.

4.12 The emergency medicine, critical care and neurosurgical teams should be notified of an urgent patient transfer. The RVI switchboard (tel 0191 2336161) will interrupt an ongoing call if the line is engaged to allow an emergency conversation with the neurosurgical registrar.

4.13 The determination of a ‘reasonable timeframe’ is at the discretion of the referring unit however as a guide 30 minutes has been suggested.

4.14 In the unlikely event of a dispute between the neurosurgical team and the referring team regarding the need for transfer that cannot be resolved at senior level, the trauma (referring) unit has the final say and remains empowered to send the patient.

5.0 Documentation

5.1 Documentation should be of a standard acceptable to each hospital and department.

5.2 To ensure adequate documentation and to clarify communication, referral and handover, this guidance recommends use of the neurosurgical referral proforma attached as Appendix 1.

5.3 The transfer should be documented using the North of England Critical Care Network Transfer Record. This is available in paper format in each centre, and can also be found on the network website: www.noeccn.org.uk/Transfer_Group_resources

Neurosurgical Referral Proforma

Referring Hospital		**Consultant**		
A&E Number		**Hospital No.**		
Name		**Sex**	Male □	Female □
Age		**Date of Birth**		

Date of Incident		**Time of Incident**	:	**Time of Admission**	:
History					

Physiological Observations	Time	HR	BP	RR	SpO_2	GCS			R. Pupil		L. Pupil	
						E	M	V	Reacts	Size	Reacts	Size
On Arrival												
On Transfer												

CT Scan at Referring Hospital	Yes □	No □	Time Requested	:	Time Performed	:
Cranial Injuries						
Spinal Injuries						
Date and time of referral to Neurosurgery						

Extracranial Injuries (Proven or Suspected)	
Pelvis	
Limbs	
Chest	
Abdomen	
Face/Neck	
Other (Specify)	

Past Medical History	
Current Medications	
Anticoagulants	

Interventions					
Airway	Guedel □	ETT □	Oro/Nasogastric Tube	Yes □	No □
Ventilation	Spontaneous □	IPPV □	Urinary Catheter	Yes □	No □

Drugs Given	Dose	Time
Tetanus toxoid		
Vitamin K		
Beriplex		

IV Fluids	Volume
Crystalloid	
Colloid	
Blood	

Time			
pO_2			
pCO_2			
H^+			
HCO_3^-			

Time		**Time**	
Hb		Na^+	
WCC		K^+	
Platelets		Urea	
PT		Creat	
APTT		Glucose	

Next of Kin		Tel no:		Notified	Yes □	No □

Transfer with the Patient				
Observation Charts □	Medical Notes □	Imaging □	Linked □	Hard Copies □

Signed		**Print**		**GMC No.**	
Receiving Neurosurgeon		**Grade**		**Transfer Time**	:

Pre - RSI Checklist

Pre-oxygenation taking place
Baseline observations (ECG, SpO_2, BP)
2x IV access 1 connected to fluid and runs easily
Suction working
Airway adjuncts (OP/ NP)
Endotracheal tube size chosen, cuff tested
Syringe 10mls for cuff
Tape or tie
Elastic bougie
Laryngoscopes: Two working
Alternative laryngoscope blades available (Airway trolley)
Heat and Moisture Exchange Filter (HMEF)
Catheter mount
LMA and Emergency cricothyroidotomy kit available (Airway trolley)
Induction agent & suxamethonium prepared Maintenance of paralysis & sedation agents prepared Drug giver briefed
Ventilator and BVM connected to oxygen
Monitoring, including ECG, NIBP, SpO_2, $ETCO_2$
Stethoscope
Premedication if required
In-line immobiliser briefed
Cricoid pressure person briefed

Adult Critical Care R1 Transfer Request Proforma	
Patient name	
Patient Number	
Consultant Requesting transfer	
Identify and confirm bed with receiving hospital and receiving Consultant	
Hospital:	
Unit:	
Consultant:	
When the patient is stable on the transfer trolley inform NEAS that you need a Critical Care transfer:	
0191 4143144	
"This is a Critical Care Transfer using the Transfer Trolley requiring a R1 response.	
A paramedic crew is not required"	
Dispatch NEAS job number:	
Time:	
Person Requesting Ambulance	**Name:**
Operator	**Name:**
Referring Department	
Picking up point	
Receiving Hospital	
Receiving Department	
Name of Patient	
Principle diagnosis	
Who is accompanying the patient.	
How much Oxygen is required	
Ambulance Arrived:	**Time:**
Ambulance Delayed – Follow-up Calls	
Time:	
Person Requesting Ambulance	**Name:**
Speak to Duty Manager	**Name:**
Problem - ETA	
Time:	
Person Requesting Ambulance	**Name:**
Operator	**Name:**
Problem - ETA	

NoECCN Transfer Group 08.12.15