Trauma: Who cares?

NCEPOD 2007

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Society of British Neurological Surgeons

Headlines

Less than half of patients with trauma have a good standard of care

Poor airway and ventilation before hospital

Failure to recognise injuries

Delay to investigate and treat

Lack of co-ordination and senior input

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Headlines

Head Injury is major cause of long-term disability
Head Injury present in 62% of severely injured
Half of these in coma (GCS<9)
50% GCS3 dead by 72hrs

Majority (54%) taken to non-specialist unit first
Most common need for transfer is HI
Two-fold mortality if stay in DGH
Mean time for transfer 6hrs

Direct admission seems sensible but
pre-hospital ABC poor and priority

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Saddening but not surprising!

Recognise the difficulties and deficiencies

Timely, in tune with, and builds on NICE guidance

Trauma unpredictable, uncommon, high demand,

High resource, low reward (clinical and tariff)

Trauma is only 5-10% neurosurgical workload

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Head injury
Come a long way in a life-time

1950s Head injury care rudimentary

1960s Appreciation importance of surgery for clots
Angiography at 6+hrs, delayed operations

1970s Real beginnings of head injury management
GCS, Skull Xray (few CTs), ICP, rule based mgt

1980s National head injury recommendations
some improvements, recognition residual problems
cross cutting collaboration, step investments required
out of hospital care, regional reorganisation
resources, facilities to match

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NICE Says	NCEPOD Shows
ABC/GCS	A 85%, B 90%, C 91%, GCS 97%
GCS<9. Standby call	60%, only 27% intubated pre-hosp
GCS<13. CT within 1hr	30% , 75% in 2hrs, 10% not at all
GCS<13. discuss with NS	82%, 10% in 1hr, 60% in 4hrs
GCS<9. Transfer to NS	Not analysed but occurred, and not
Operation within 4hrs	66% on site, 14% off site, 84% ok but 10/13 delayed ops were for ICH
Consultant involvement	19% EDH, SDH, Contusions (all ok)

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NICE Asks	NCEPOD Shows
NS unit vs DGH	
Admit direct or transfer	Mean transfer time 6hrs
Outcomes for “non NS”	Operations timely in 83%
Rx ICH	
Consensus on significant	Prediction of decline
Watch, monitor, or do	Transfer 9-13/contusions
Validate child specific rules	Few children in study
Predict longterm sequelae	Not specifically addressed

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Some UK Official Reports

- Harrogate Seminar 1983
- Royal College of Surgeons 1986, 1999, 2000
- British Association of A&E Medicine 2000
- Scottish Intercollegiate Guidelines Network 2000
- House of Commons 3rd Health Committee Report 2001
- Department of Health 2001, 2004
- British Society of Rehabilitation Medicine 2002
- Royal College of Physicians 2002, 2003
- NICE 2003, 2007
- National Audit Office 2004
- NSF for Longterm Neurological Conditions 2005
- NCEPOD 2007

SBNS has been trying for ~25 years to improve overall neurosurgical standards

1984, 1993, 2000, 2001, 2003, 2005

Largely regarded as self-serving wish lists

Best shot so far is standards document 2002

scoring system for national comparison

gaps for business case construction

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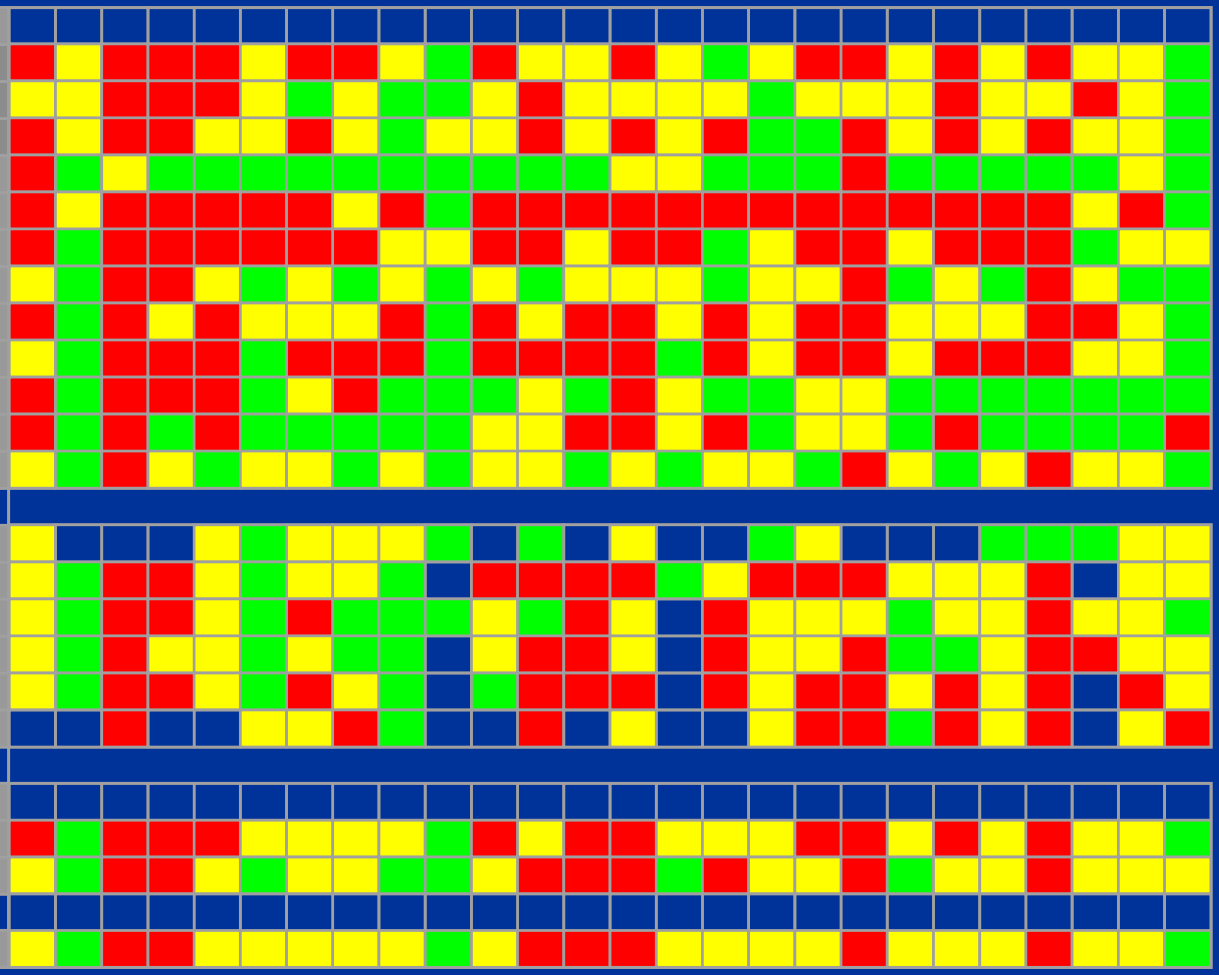
General	m
Pt Centred	61%
Organisation	70%
Communication	65%
Management	89%
Access	43%
Neurosurgery	50%
Critical care	73%
Follow up	62%
Rehabilitation	49%
Educate / train	77%
R&D	72%
Audit	73%
Specialty	
Paediatrics	79%
Head injury	64%
Oncology	74%
Vascular	66%
Spinal	58%
Functional	65%
Summary	**m**
General	65%
Specialty	68%
Overall	67%



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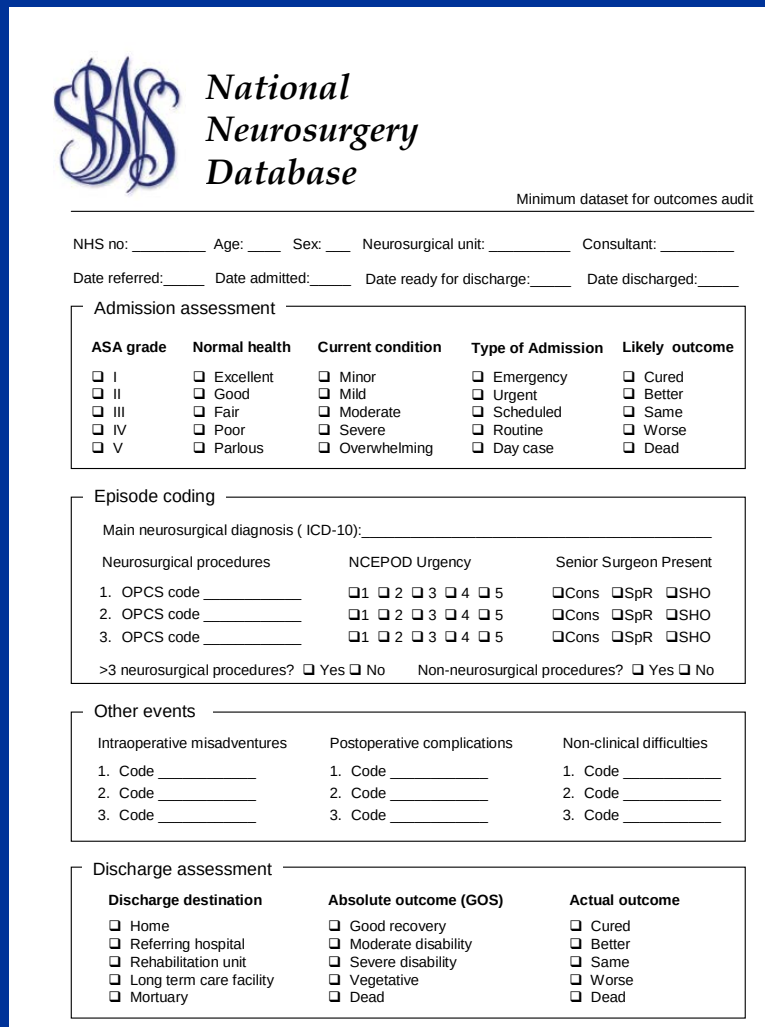

National Neurosurgery Database

Minimum dataset for outcomes audit

NHS no: _____ Age: ____ Sex: ___ Neurosurgical unit: _____ Consultant: _____

Date referred:_____ Date admitted:_____ Date ready for discharge:_____ Date discharged:_____

Admission assessment

ASA grade	Normal health	Current condition	Type of Admission	Likely outcome
❑ I	❑ Excellent	❑ Minor	❑ Emergency	❑ Cured
❑ II	❑ Good	❑ Mild	❑ Urgent	❑ Better
❑ III	❑ Fair	❑ Moderate	❑ Scheduled	❑ Same
❑ IV	❑ Poor	❑ Severe	❑ Routine	❑ Worse
❑ V	❑ Parlous	❑ Overwhelming	❑ Day case	❑ Dead

Episode coding

Main neurosurgical diagnosis (ICD-10):_____

Neurosurgical procedures	NCEPOD Urgency	Senior Surgeon Present
1. OPCS code _____	❑1 ❑ 2 ❑ 3 ❑ 4 ❑ 5	❑Cons ❑SpR ❑SHO
2. OPCS code _____	❑1 ❑ 2 ❑ 3 ❑ 4 ❑ 5	❑Cons ❑SpR ❑SHO
3. OPCS code _____	❑1 ❑ 2 ❑ 3 ❑ 4 ❑ 5	❑Cons ❑SpR ❑SHO

>3 neurosurgical procedures? ❑ Yes ❑ No Non-neurosurgical procedures? ❑ Yes ❑ No

Other events

Intraoperative misadventures	Postoperative complications	Non-clinical difficulties
1. Code _____	1. Code _____	1. Code _____
2. Code _____	2. Code _____	2. Code _____
3. Code _____	3. Code _____	3. Code _____

Discharge assessment

Discharge destination	Absolute outcome (GOS)	Actual outcome
❑ Home	❑ Good recovery	❑ Cured
❑ Referring hospital	❑ Moderate disability	❑ Better
❑ Rehabilitation unit	❑ Severe disability	❑ Same
❑ Long term care facility	❑ Vegetative	❑ Worse
❑ Mortuary	❑ Dead	❑ Dead

Assessment by 5 point descriptive scales
Commended by CHI for use in wider NHS

Patient, Unit, Consultant ID
Access times

Severity scores and anticipated outcome

Diagnostic and procedure codes
Urgency of Rx and seniority of staff

Mishaps, complications

Place of discharge and actual outcome

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Access

Ambulance, A&E, Scan, Neurosurgery, Transfer, Theatre, Critical care, Repatriation, Rehabilitation, Home

Outcomes

Place of discharge, LOS, GOS, Actual outcome, healthgain

Mishaps, complications, re-ops, returns

Data, Interpretation, Acceptance, Organisation, Resources

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Overall

40% good care, 45% could be better, 5% unsatisfactory

What cost to achieve 100% good care for ~1 patient per week?

Dr at roadside, 24hr cons delivered trauma care, trauma centres?

For head injuries, to take all appropriate cases might displace 25%

Great improvements since 1980s, 25% to 5% mortality from clots.

Final 5% hardest to do, costs highest

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Conclusions

- "Trauma: who cares" is an invaluable account of current acute care of trauma inc. head injured patients in England, Wales, NI.
- It has immense potential to improve the care of trauma.
- It should stimulate better strategic planning and development of services to improve the process, and care, and outcomes.
- Neurosurgery in particular welcomes this independent confirmation of the concerns voiced by the SBNS during the last 25 years, and recognition of the scale of re-organisation and resources required for head injury in particular but NS in general.

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