

The Danish Headtrauma Database

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Background and aim

The Danish Headtrauma Database is a clinical quality database established to monitor and improve the quality of neuro-rehabilitation for patients with severe traumatic brain injury (TBI). The Database is run by the two national hospitals offering highly specialised neurorehabilitation (HS-rehabilitation) after severe TBI. The database covers \approx 84% of all patients surviving severe TBI in Denmark.

Here we present the latest quality assessment and a comparison with previous years.

Study population

- Patients with severe TBI (Initial Glasgow Coma Scale score \leq 8)
- Admitted to highly specialized neurorehabilitation
- Injured between 2011 and 2015

Methods

Three national structure and process indicators (Table 1) and four national outcome indicators (Table 2) were assessed for patients injured 2014/2015 (n=154) and compared to patients injured 2011/2013 (n=269).

Results

- Indicators meeting the quality standard indicate, that patients admitted to HS-rehabilitation (PTA) are within the target group, receive adequate prevention of contractures during HS-rehabilitation, and half of patients acquire good recovery one year post-injury (GOS-E)
- Indicators not meeting the quality standard, but with improvement compared to previous years indicate that waiting time for HS-rehabilitation is still too long (ventilation cessation) and that a large proportion of patients still do not acquire functional independence one year post-injury (FIMTM)
- Indicators not meeting the quality standard and with decline compared to previous years indicate that patients are not sufficiently screened for malnutrition, and do not receive adequate prevention of pressure ulcers.



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Table 2: Results from the assessment of outcome quality indicators

Indicators and standards	Standard met?	Missing ¹ in 2014/2015, %	Proportion of patients meeting the indicator, % (95% CI)		
			2014/2015	2012/2013	2011
Proportion with a one year post-injury FIM™ score \geq 108 (Standard \geq 75%)	☹️	27	64 (54–73)	60 (51–69)	59 (46–71)
Proportion of patients with a one year post-injury GOS-E score \geq 5 (Standard \geq 50%)	😊️	27	50 (41–60)	58 (49–67)	52 (39–65)
Proportion discharged with joint contractures acquired during HS-rehabilitation (Standard < 5%)	😊️	15	4 (1–9)	6 (2–11)	9 (4–18)
Proportion with pressure ulcers during HS-hospitalization (Standard < 5%)	☹️	12	10 (5–16)	10 (6–16)	4 (1–10)

Abbreviations: CI, Confidence Interval; FIMTM, Functional Independence Measure; GOS-E, Glasgow Outcome Scale Extended; HS-rehabilitation, Highly Specialised rehabilitation

¹ Proportion of patients with missing data related to the indicator in 2014/2015

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Conclusion

The Danish Headtrauma database is a valuable resource for improving quality of neurorehabilitation after severe TBI.