

Severe traumatic brain injury cost

The in-hospital treatment of patients with [traumatic brain injury \(TBI\)](#) is considered to be expensive, especially in patients with [severe traumatic brain injury](#). To improve future treatment decision-making, resource allocation and research initiatives, a study of van Dijck et al., from The [Netherlands](#) reviewed the in-hospital costs for patients with s-TBI and the quality of [study methodology](#).

A [systematic review](#) was performed using the following databases: [PubMed](#), [MEDLINE](#), [Embase](#), [Web of Science](#), [Cochrane library](#), [CENTRAL](#), [Emcare](#), [PsycINFO](#), [Academic Search Premier](#) and [Google Scholar](#). Articles published before August 2018 reporting in-hospital acute care costs for patients with s-TBI were included. [Quality](#) was assessed by using a 19-item checklist based on the [CHEERS](#) statement.

Twenty-five out of 2372 articles were included. In-hospital costs per patient were generally high and ranged from \$2,130 to \$401,808. Variation between study results was primarily caused by methodological heterogeneity and variable patient and treatment characteristics. The quality assessment showed variable study quality with a mean total score of 71% (range 48% - 96%). Especially items concerning cost data scored poorly (49%) because data source, cost calculation methodology and outcome reporting were regularly unmentioned or inadequately reported.

Healthcare consumption and in-hospital costs for patients with s-TBI were high and varied widely between studies. Costs were primarily driven by the length of stay and surgical intervention and increased with higher TBI severity. However, drawing firm conclusions on the actual in-hospital costs of patients sustaining s-TBI was complicated due to variation and inadequate quality of the included studies. Future economic evaluations should focus on the long-term cost-effectiveness of treatment strategies and use guideline recommendations and common data elements to improve study quality¹⁾.

¹⁾

van Dijck JTJM, Dijkman MD, Ophuis RH, de Ruiter GCW, Peul WC, Polinder S. In-hospital costs after severe traumatic brain injury: A systematic review and quality assessment. PLoS One. 2019 May 9;14(5):e0216743. doi: 10.1371/journal.pone.0216743. eCollection 2019. PubMed PMID: 31071199.

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