

AB080. SOH23ABS_044. Risk scoring models for patients with neck of femur fractures: qualitative systematic review assessing 30-day mortality and ease of use

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Background: Hip fractures are a common orthopaedic injury affecting particularly frail and vulnerable patients. They are at risk of many complications including prolonged length of stay and mortality. Identifying those at high risk may be beneficial. Over 25 risk prediction models are published for patients with hip fractures.

Methods: A qualitative systematic review was performed. A search was conducted on online databases, including PubMed, CINAHL, Clinical Trials.gov, Cochrane, DARE, Embase, Scopus, and Web of Science. Terms fragility hip fractures and risk prediction models were utilised. These were expanded using Boolean operators and similar terms. Search results were imported to covidence. Primary observational studies using one or more hip fracture mortality prediction model and 30-day mortality as an outcome were included.

Results: A total of 3,101 studies were screened following duplicate removal. Thirty-four papers were included, 23 scoring systems were reported. Six of these were pre-operative and reported in multiple studies. Most demonstrated appropriate fit and fair discrimination. Five of the six pre-operative scoring systems examined, displayed appropriate ease of use, allowing risk calculation at the time

of admission.

Conclusions: Nottingham Hip Fracture Score remains the most extensive reported scoring system and performs fair overall with area under the receiver operating characteristic curves (AUROCs) of 0.64–0.80 and good fit in calibration across studies. However, new systems utilise many similar predictors. There is a need for the standardisation of publications on scoring systems to allow further systematic review and meta-analyses.

Keywords: Trauma; hip fracture; fragility fracture; risk prediction; prognostic scores

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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