Beyond the Hip: Comparing the Burden of Injury between Cervical Spine Fractures and Neck of Femur Fractures in the Elderly at a Major Trauma Centre

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SHEFFIELD SPINE

Background

Fractures of the cervical spine and neck of femur (NOF) represent a high burden of injury and mortality in the elderly population.

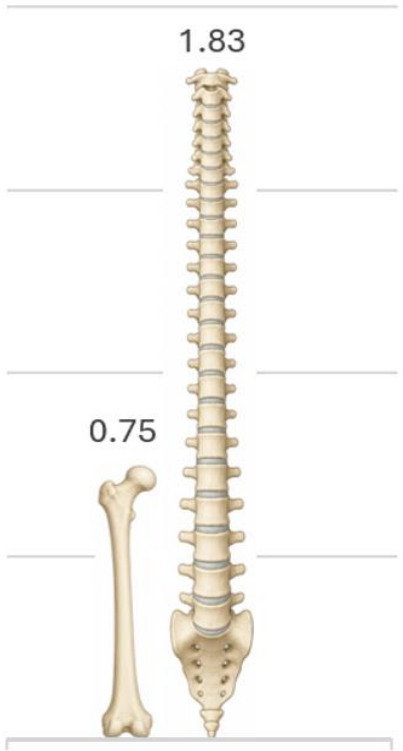
Disability adjusted life years lost (**DALY**) is a measure of how many years of full health are lost across a population due to an injury.

Methods

Retrospectively between Jan-Dec 2023 from Sheffield Teaching Hospitals:

- 51 cervical fracture patients over 65
- 551 NOF fracture patients over 65
- Local population data from 2016 census

An open-source burden of injury calculator was used



NOF fractures	C-spine fractures
449 DALYs per 100,000	100 DALYs per 100,000
250 DALYs per 100,000	74 DALYs per 100,000
170 DALYs per 100,000	130 DALYs per 100,000
6% (30-day mortality)	21% (30-day mortality)
0.75 DALYs per NOF	**1.83 DALYs per C-spine**

Conclusion

Overall burden of cervical fractures is lower at a population level than NOF fractures, however per injury sustained **an individual cervical fracture is associated with more than double the burden of injury than that of a NOF fracture.** 30-day mortality rate was higher in cervical fractures than a NOF fracture.

References

- Bhalla K, Harrison JE: Burden Calculator: a simple and open analytical tool for estimating the population burden of injuries *Injury Prevention* 2016
- Office for National Statistics: How Life has Changed in Sheffield: Census 2021