3.8 Hip fracture hospital admissions 65 years and over

Context

This data item examines hospital admissions for hip fracture for people aged 65 years and over. Hospital admission data are sourced from the Admitted Patient Care National Minimum Data Set. This includes both public and private hospitals. Rates are described as the number of admissions per 100,000 people. Repeat admissions for one person and transfers between hospitals are both counted as separate admissions.

A hip fracture is a break occurring at the top of the thigh bone (femur), near the pelvis. The rate of hip fracture increases significantly after the age of 50. In Australia, 91 per cent of hip fractures occur in people aged over 65.¹

The vast majority of hip fractures are associated with falls.² The major risk factors for falls are impaired balance and mobility, use of multiple medicines (polypharmacy)³ and a history of previous falls. Decreased bone strength – due to osteoporosis, for example – increases the risk of fracture among people who fall.

As the Australian population ages, the incidence of fragility fractures is rising. Fragility fractures have characteristic fracture patterns and most hip fractures are associated with osteoporosis or osteopenia. Although a fragility fracture provides an important opportunity for secondary prevention of osteoporosis, most patients are not being investigated.

The Commission has developed a Clinical Care Standard⁴ for acute hip fracture care. This is an important national strategy to improve the timely assessment and management of patients with a hip fracture. The standard aims to optimise outcomes for hip fracture patients and reduce their risk of another fracture.

Strategies put in place by hospitals and other health services are likely to be contributing to a decrease in the rate of hip fracture in older people. These include falls prevention programs, balance and strength training, and promoting the appropriate use of medicines for osteoporosis (for example, bisphosphonates).^{5,6} However, the total number of people admitted to hospital with hip fractures is expected to increase annually as the Australian population continues to age.^{7,8} In addition, the rate of hip fracture among Aboriginal and Torres Strait Islander people is higher and increasing. Indigenous men are twice as likely to fracture their hip as non-Indigenous men. Indigenous women also have an increased risk of hip fracture.^{9,10}

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Accurately counting the rate of hip fractures in Australia brings many challenges. This data shows acute admission rates to hospital for hip fracture. There is potential over-counting of cases, which may artificially inflate the rate of admissions. This is because some patients are transferred from one hospital to another. If the length of stay of the acute admission was less than 48 hours, the admission was removed from analysis. However, some patients who stay in hospital for more than 48 hours and are then transferred may be counted more than once in the rate (that is, multiple admissions could be counted for one hip fracture).

Eighty four per cent of hospital admissions for hip fractures in Australia are to public hospitals.⁹

Magnitude of variation

In 2012–13, there were 21,502 hip fracture admissions to hospital, representing 610 admissions per 100,000 people aged 65 years and over (the Australian rate).

The number of hip fracture admissions to hospital across 87* local areas (SA4s) ranged from 484 to 787 per 100,000 people aged 65 years and over. The number of admissions was **1.6 times higher** in the area with the highest rate compared to the area with the lowest rate. The average number of admissions varied across states and territories, from 533 per 100,000 people aged 65 years and over in Tasmania, to 727 in the Northern Territory.

After excluding the highest and lowest results, the hip fracture hospital admission rate across the 79 remaining local areas was **1.5 times higher** in one local area compared to another.

Interpretation

Potential reasons for the variation include differences in:

- issues with potential over-counting due to transfers, as described earlier
- distribution of people with a higher risk of hip fracture, such as people in aged-care facilities who may be more frail
- levels of access to and participation in community-based falls prevention programs
- prescribing and uptake of medicines for osteoporosis (for example, bisphosphonates).

To explore this variation, further analysis could focus on:

- investigating the over-counting of hip fracture admissions due to patient transfers from one hospital to another for acute care
- investigating hip fracture admission rates for both acute and subacute episodes of care
- using PBS data to investigate regional variations in prescribing bisphosphonates.

^{*}There are 88 SA4s. For this item, data were suppressed for 1 SA4. This is because of confidentiality requirements given the small numbers of admissions in this area.



Figure 56: Number of hip fracture admissions to hospital per 100,000 people aged 65 years and over, age standardised, by local area, 2012–13

Notes:

The cohort for this item is different to the cohort used for the Hip fracture average length of stay item. Refer to the Technical Supplement for details.

Rates are standardised based on the age structure of the Australian population in 2001. State/territory and national rates are based on the total number of admissions and people in the geographic area. The term local area refers to an ABS standard geographic region known as a Statistical Area Level 4 (SA4). Includes all public hospitals, private hospitals and day hospital facilities.

For more technical information please refer to the Technical Supplement.

Sources: National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Figure 57: Number of hip fracture admissions to hospital per 100,000 people aged 65 years and over, age standardised, by local area, 2012–13

Sources: National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.



Figure 58: Number of hip fracture admissions to hospital per 100,000 people aged 65 years and over, age standardised, by local area, state and territory, 2012–13

Notes:

Rates are standardised based on the age structure of the Australian population in 2001.

State/territory and national rates are based on the total number of admissions and people in the geographic area.

Sources: National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Resources

- Australian and New Zealand Hip Fracture Registry Steering Group. Australian and New Zealand guideline for hip fracture care: improving outcomes in hip fracture management of adults.
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- Joanna Briggs Institute. Interventions to reduce the incidence of falls in older adult patients in acute care hospitals. Best Practice: evidencebased information sheets for health professionals. 2010;14(15):1–4. Available at: http://connect. jbiconnectplus.org/ViewSourceFile.aspx?0=5394.
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- 2 Hindmarsh DM, Hayen A, Finch CF, Close JCT. Relative survival after hospitalisation for hip fracture in older people in New South Wales, Australia. Osteoporosis Int 2009;20:221–9.
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- 4 Australian Commission on Safety and Quality in Health Care. Hip Fracture Care Clinical Care Standard. 2015. (Accessed 8 September 2015 at www.safetyandquality.gov.au/our-work/clinical-care-standards/hip-fracture-care-clinical-care-standard).
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- 8 Australian and New Zealand Hip Fracture Registry Steering Group. Australian and New Zealand guideline for hip fracture care: improving outcomes in hip fracture management of adults. Sydney: ANZHFR Steering Group, 2014.
- 9 Australian Institute of Health and Welfare. The problem of osteoporotic hip fracture in Australia. Bulletin no. 76. Cat. no. AUS 121. Canberra: AIHW, 2010.
- 10 Wong YYE, Flicker L, Draper G, Lai MMY, Waldron N. Hip fractures among Indigenous people in Western Australia from 1999–2009. IMJ 2012.