

Acute Orthogeriatrics- Inpatient Care and beyond

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- Hip fracture is one on the most serious injuries sustained by older individuals
- Most likely secondary to a fall
- In community dwelling older individuals, hip fractures reduce life expectancy by 25%, compared to matched individuals from general population

Braithwaite, R., Col, N., and Wong, J., *Estimating hip fracture morbidity, mortality and costs*. Journal of the American Geriatrics Society, 2003. 51: p. 364-370.



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Nation wide data

- Each year 17,000 hip fractures in 65 years and over
- \$579 million in direct hospital costs
- Days of admission ranges from 9-35 days
- Mean length of stay (LOS)- 10.3 days & median 8 days

- In 2010 , 13% (1.1million) people were over 65 years
- In 2050, 23% (8.1 million) will be over 65 years

Australian Bureau of Statistics, *Population Projections, Australia, 2006 to 2101. Cat. no. 3222.0.* 2011, Canberra: ABS.

Table 3.5: Number and proportion of NSW residents aged 60 years and over hospitalised with a hip fracture by year and age group, 2000-01 to 2011-12

Year	Age group												TOTAL
	60-64		65-69		70-74		75-79		80-84		85+		
	n	%	n	%	n	%	n	%	n	%	n	%	
2000-01	164	3.0	247	4.4	504	9.0	959	17.1	1,396	24.9	2,347	41.8	5,617
2001-02	171	3.0	208	3.6	525	9.1	1,043	18.2	1,303	22.7	2,498	43.5	5,748
2002-03	133	2.3	266	4.6	479	8.2	946	16.2	1,474	25.2	2,551	43.6	5,849
2003-04	147	2.5	281	4.8	500	8.5	973	16.5	1,462	24.9	2,518	42.8	5,881
2004-05	150	2.6	256	4.4	464	8.0	896	15.5	1,504	26.1	2,504	43.4	5,774
2005-06	166	2.8	228	3.9	437	7.4	941	16.0	1,509	25.7	2,593	44.1	5,874
2006-07	173	2.9	257	4.2	431	7.1	910	15.0	1,495	24.6	2,808	46.2	6,074
2007-08	228	3.7	289	4.7	466	7.5	924	14.9	1,440	23.2	2,854	46.0	6,201
2008-09	217	3.5	265	4.3	436	7.0	874	14.1	1,458	23.5	2,964	47.7	6,214
2009-10	188	2.9	304	4.7	467	7.3	892	13.9	1,468	22.9	3,104	48.3	6,423
2010-11	187	2.9	273	4.2	501	7.7	786	12.1	1,457	22.4	3,300	50.7	6,504
2011-12	253	3.9	318	5.0	479	7.5	806	12.6	1,397	21.8	3,164	49.3	6,417
TOTAL	2,177	3.0	3,192	4.4	5,689	7.8	10,950	15.1	17,363	23.9	33,205	45.8	72,576

ANZHFR. Australian & New Zealand Hip Fracture Registry, [updated 14 November 2012; cited 5 February 2012]. See: Available from: <http://www.anzhfr.org/>.

Figure 3.6: Number of hip fractures for individuals aged 60+ years in NSW by age group, 2000-01 to 2011-12

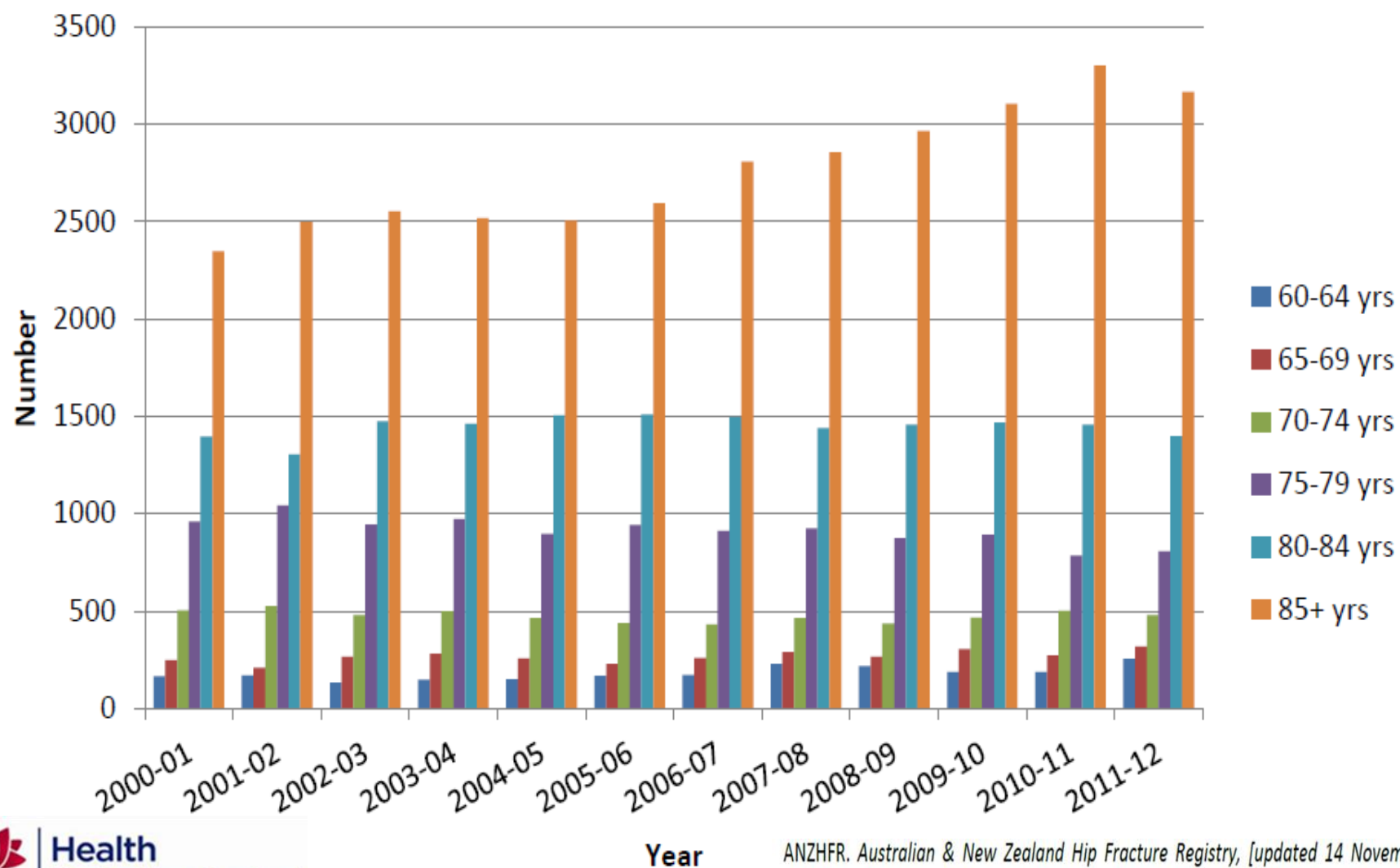
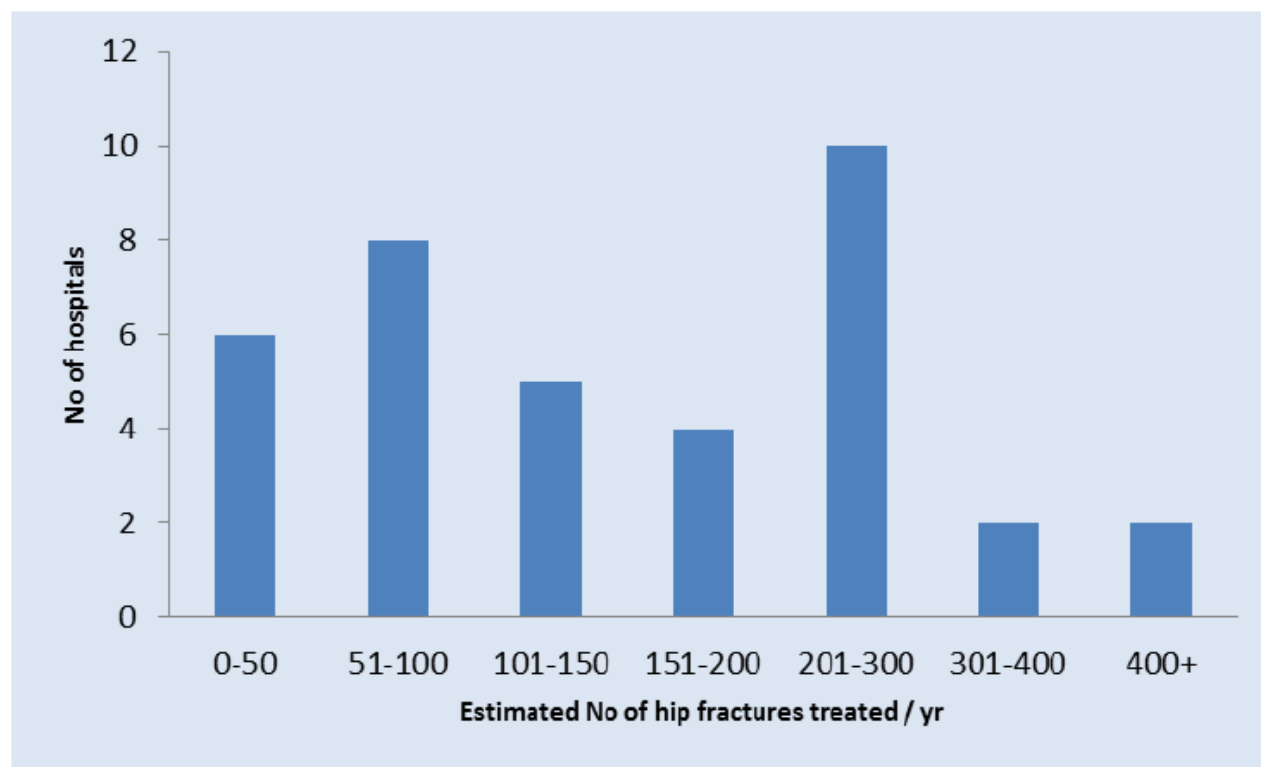


Figure 2. Estimated number of hip fractures treated in NSW public hospitals in 2013



ANZHFR. Australian & New Zealand Hip Fracture Registry, [updated 14 November 2012; cited 5 February 2012]. See: Available from: <http://www.anzhfr.org/>.

‘Orthogeriatrician’

‘Holistic care of the older person, using a person-centred approach, bringing specialist care and services to them, avoiding unnecessary moves’

British Geriatrics Society

Orthogeriatrics Model of care

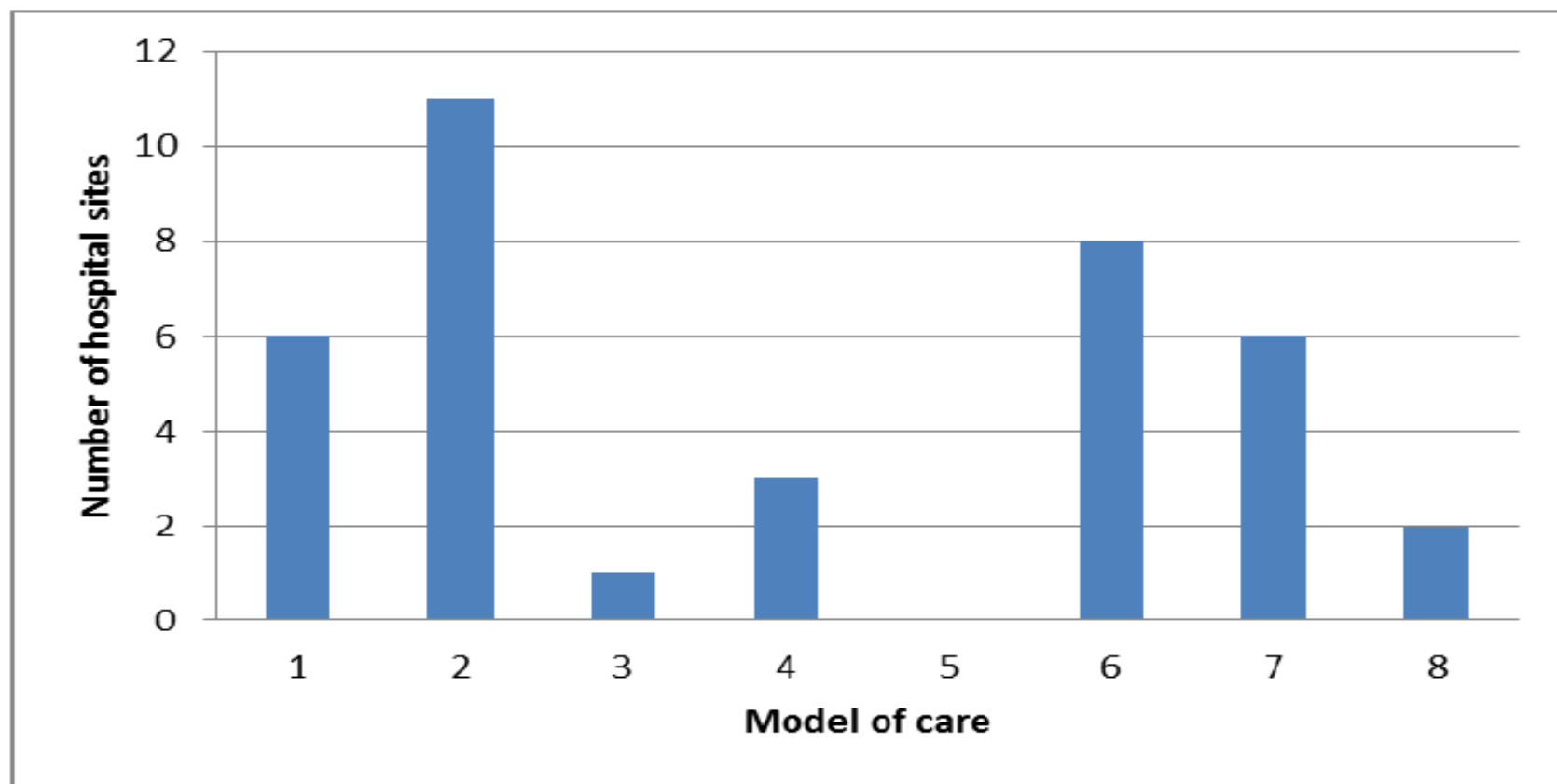
- Agency for Clinical Innovation (NSW)
- **Orthogeriatric Model of Care**

‘Every patient over the age of 65 with a fractured neck of femur is under the care of an Orthopaedic team and a Geriatrician’

Role of the Orthogeriatrician

- Preoperative assessment- Analgesia, delirium screen, medical stability for surgery etc
- Immediate post operative care
- Facilitate early rehabilitation
- Plan discharge destination
- **Multi disciplinary team**

Figure 3. Model of care that describes the service provided for hip fracture patients.



For more detailed explanation of model description – see text, p9.

1. Shared care
2. Daily (weekday) orthogeriatric liaison service
3. Daily (weekday) medical liaison service
4. Intermittent orthogeriatric liaison service (2-3 times weekly)
5. Intermittent medical liaison (2-3 times weekly)
6. Orthogeriatric liaison service using consult
7. Medical liaison service using consult system
8. No formal service exists

ANZHF. Australian & New Zealand Hip Fracture Registry, [updated 14 November 2012; cited 5 February 2012]. See: Available from: <http://www.anzfr.org.au>

- Part of Geriatrics Training curriculum
- 'Acute Geriatrics' Rotation for Geriatrics Advanced Trainee
- Scope in other sub specialities....

Orthogeriatric services associated with lower 30-day mortality for older patients who undergo surgery for hip fracture

Abstract

Objective: To examine the impact of orthogeriatric services on 30-day mortality and length of stay (LOS) for hip fracture patients undergoing surgery in public hospitals in New South Wales.

Design, setting and patients: A retrospective analysis of patients aged 65 years and older who had a fractured hip and received surgical intervention between 1 July 2009 and 30 June 2011 at one of the 37 NSW public hospitals operating on hip fracture patients.

Main outcome measures: 30-day mortality and LOS.

Results: During the study period, there were 9601 hip fracture cases for which surgery was done. Mean age, sex and comorbidity distribution were similar for hip fracture patients treated in hospitals with an orthogeriatric service compared with those treated in hospitals without an orthogeriatric service. There were 706 deaths within 30 days of hip fracture surgery, and the overall unadjusted 30-day mortality rate was 7.4%. The median adjusted 30-day mortality rate for hospitals with an orthogeriatric service was significantly lower than that for hospitals without an orthogeriatric service (6.2% v 8.4%; $P < 0.002$). Median total LOS was longer at hospitals with an orthogeriatric service compared with hospitals that did not have an orthogeriatric service (26 days v 22 days; $P < 0.001$).

Conclusions: The presence of an orthogeriatric service was associated with a reduction in 30-day mortality but a longer LOS. More research is required to understand the key aspects of care that determine health outcomes. The recently launched Australian and New Zealand Hip Fracture Registry will provide data that will enable improvements in care.

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What happens post- discharge?



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Table 2. Presence of services available in NSW hospitals following surgery and discharge comparison in 2013 compared to data collected in 2012.

Services availability	2012	2013
Access to in-patient rehabilitation.	Onsite only – 5/37 (13%) Offsite only – 11/37 (30%) Both On/Off site – 21/37 (57%)	Onsite only – 12/37 (32%) Offsite only – 12/37 (32%) Both On/Off site – 13/37 (35%)
Access to early support home based rehabilitation services.	22/37 (60%)	21/37 (57%)
Access to a public Falls clinic?	21/37 (57%)	20/37 (54%)
Access to a public Osteoporosis clinic?	16/37 (43%)	15/37 (41%)
Access to a public combined Falls and Bone Health clinic? →	7/37 (19%) →	4/37 (11%)
Access to a public Orthopaedic clinic?	29/37 (78%)	31/37 (84%)
Fracture liaison Service	8/37 (22%)	10/37 (27%)

‘Acute Orthogeriatrics- Inpatient care and beyond’

Hunter New England Area LHD

- ~450 fracture neck of femur over 65 years in a year
- About 35% are from nursing homes (data from JHH)
- Acute Orthogeriatrics Model of Care followed.
- Orthogeriatrics Clinical Nurse Consultant – Discharge Coordinator

Discharge destinations

- **Home** 3-4 days post op- Transitional Aged care Package (TACP)- SW guides level of care
- **Rehabilitation** 2-3 weeks and discharge home
- **Nursing home** – High vs Low care

Patients directly discharged home or after rehabilitation

- Reviewed in **Orthogeriatrics Clinic** within 2 weeks of discharge- Rehabilitation OP Clinic
- Revisit analgesia, return to pre morbid functioning
- Falls assessment- manage treatable causes
- ***Falls prevention programme***
- Role of Orthogeriatrics CNC

- Osteoporosis work up- service linked to this clinic
- Liaison with community based services
- Review again if needed

Patients discharged to Nursing Home

- Nursing home visit by Geriatrician within 2 weeks
- Medications/analgesia revisited
- Institution based physiotherapy, MDT liaison
- Osteoporosis management

Mrs AB

- 74, from home, lives with her husband, 4 dogs and 2 cats
- Fracture Lt NOF following a fall
- Multiple falls in the past
- Fracture Rt NoF 2 years ago
- Fracture Lt wrist 4 years ago
- Cannulated screws, discharged 3 days post op with TACP

Seen in Orthogeriatrics clinic 1 week post discharge with husband

- L4-5 spinal canal stenosis – corrected 5 years ago
- ‘Falls started after that surgery’
- T2 DM on Insulin and Metformin
- Thorough clinical examination revealed B/L sensory peripheral neuropathy- DM
- Nerve conduction study/ podiatry/ optometrist

- Osteoporosis- BMD organised, started on Ca and Vit D, aim anti resorptive therapy
- Dept of Housing accomodation
- Needs railings at front entry
- Orthogeris CNC discussed with case manager- will expedite

- Husband has Hodgkin's Lymphoma in remission
- GP and ACAT alerted about possible need for services in the future after TACP expires
- ?Review in 6 months/ sos
- Dogs and the cats are under the care of daughter now..!

Aim of the Orthogeriatrics Clinic

- Mean length of stay in # NOF is about 10 days
- Mrs AB stayed for 3 days
- Expedite community based rehabilitation in selected patients
- Geriatrician and MDT input **post discharge**
- On going holistic care..

Aim of Nursing home visit post discharge

- Assist return to premorbid levels of functioning- ASAP
- Prevent acute deconditioning
- Prevent readmission
- Ongoing holistic care, liaising with NH MDT and GP

Is it cost effective?

(Yes!)