

Predictors of Institutionalization

in Hong Kong Chinese Elderly after Hip Fracture

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Hip fractures in elderly

- Hip fracture is associated with 20% mortality and 50% permanent loss in function (WHO 2003)
- Risk of institutionalization is up to 5 times higher
- Risk factors or predictors (overseas data):
 - Poor cognitive function
 - older age
 - lower post-fracture physical function
 - reduced pre-injury mobility
 - impaired ability to perform ADL
 - unmarried

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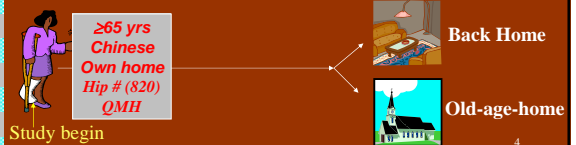
Objective of study

- Consideration of risk factors at the time of admission is important to facilitate an early planning and arrangement of discharge destination
- **Objective:** To find out the predictors of institutionalization of Hong Kong Chinese elderly after hip fracture

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Methods

- A prospective observational study.
- Period: 18th November 2003 and 17th April 2004
- Endpoint is discharge to an old-age-home or back home.
- Approved by Institutional Review Board of HKU & informed consent was obtained
- SPSS 11.5



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Data collection

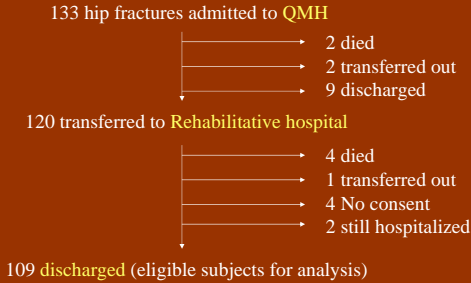
Groups of Data	Details of data	Strategies
Socio-demographic data	Age, sex, marital, caregiver, living alone, education	Interview
Comorbidities	Type & number	Interview, case notes
Mobility/ ADL/mental function	EMS, BI, Lawton, AMT	PT, OT, Nx
Hip fracture & surgery	Cause, type, side	Interview, case notes
Length of stay in hospital	QMH, FYKH, MMRC	Case notes
Discharge destination	Home vs OAH	Case notes

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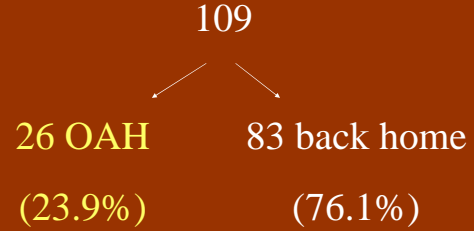
Result

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Flowchart of patients with hip fracture discharged from QMH to a rehabilitative hospital (FYKH/ MMRC)



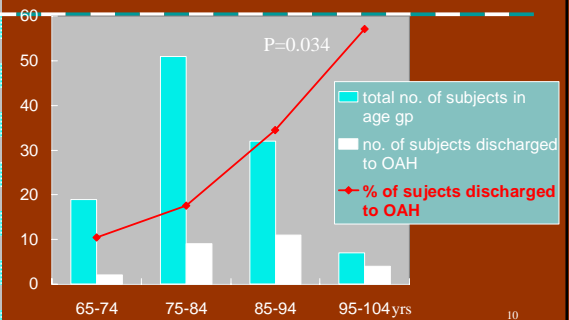
~1/4 of hip fracture subjects moved to OAH after hip fracture



Risk factors on-admission (univariate analysis)

Variables	Back Home (n=83)	To OAH (n=26)	P
Age	81.1±7.4 years	84.7±7.6 years	0.036*
Gender (Female)	66.3%	80.8%	0.222
Married	41.0%	26.9%	0.197
Living alone	14.5%	26.9%	0.144
Dementia (yes)	3.6%	26.9%	0.002*
AMT score 0-10	7.4±2.4	4.7±3.1	<0.001*
EMS 0-20 (admission)	6.4±3.6	4.4±3.1	0.014*
BI 0-100 (admission)	57.0±14.6	42.5±19.6	<0.001*
Lawton 0-8 (admission)	1.7±1.2	0.6±0.9	<0.001*

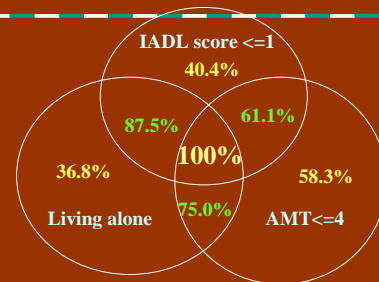
Risk of institutionalization with increasing age in elderly after hip fracture (n=109)



Multivariate independent risk factors of institutionalization after hip fracture

Variables on adm	p	O.R. (95% C.I.)
Living alone	0.011*	6.190 (1.524-25.140)
Lawton on adm	0.018*	0.482 (0.263-0.881)
AMT on adm	0.032*	0.796 (0.646-0.981)

Prediction of risk of institutionalization after hip fracture



Conclusion

- One in four (23.9%) of HK Chinese elderly would move to an old-age-home after hip fracture.
- Older age, living alone, having a low Lawton IADL score and a low AMT score on admission put an elderly at a higher risk of institutionalization upon discharge from a rehabilitative hospital.
- Knowing this information on admission may predict the risk of institutionalization on discharge and hence allow prompt referral to appropriate discipline to facilitate discharge arrangement.

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Limitations of study

1. Small sample size
2. Elderly from the HKWest and may not represent the whole HK population
3. Those discharged directly from QMH and those transferred out were not studied
4. Intrarater or interrater reliabilities of assessors were not tested

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Thank you

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