



INPATIENT FALL RATE IN A PUBLIC REHABILITATION HOSPITAL

(NMRR-16-2594-30899 S1)

Rafidah Abd Ghani¹, **Low Lee Mei**¹, Noraidahayu Binti Mohd Sham¹,
Gowry Narayanan², Fathullah Iqbal Ab Rahim³

¹Hospital Rehabilitasi Cheras (HRC), Ministry of Health Malaysia

²Nursing Division, Ministry of Health Malaysia

³Institute for Health Systems Research (IHSR), Ministry of Health Malaysia

Background - What is “Fall”?

- Definitions

“Unintentionally coming to rest on the ground, floor or other lower level.”

(WHO, 2007)

“Near fall as the person seems to fall but can prevent the fall by catching or leaning on a person or a thing.”

(Lee et al.,2010)

Background - Introduction

- Patients on rehabilitation are one of the “most at risk population” for falls during hospitalisation. Inpatient falls is a major healthcare issue for rehabilitation setting.
- However, patient mobilisation is a key activity for rehabilitation. Patients on rehabilitation are encouraged for early mobilisation → higher risk of fall, as compared to general setting.

Background - Chronicle

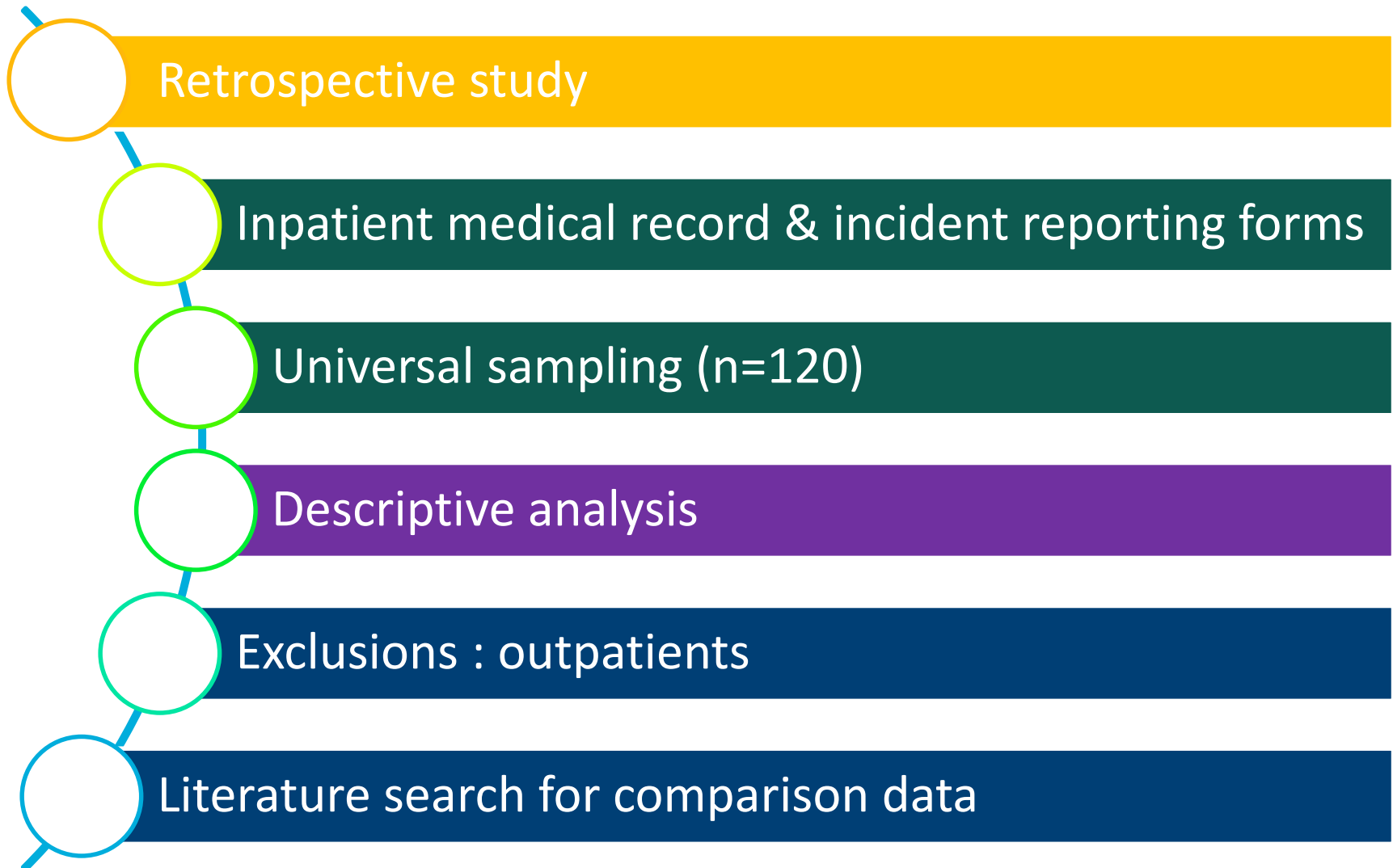
- Hospital Rehabilitasi Cheras (HRC), Kuala Lumpur
 - commenced operation on 2 July 2012
 - first for its kind in South East Asia.
 - Center of Excellence and National Referral Centre for comprehensive Rehabilitation Medicine services.
 - 6 wards (Neurology/Stroke, Acquired Brain Injury, Pediatric, Geriatric, Spinal Cord Injury, Amputee) with 132 beds.

Note: This study was a collaborative consultancy effort between the Nursing Division and the Institute for Health Systems Research (IHSR); agencies under the Ministry of Health Malaysia.

Background - Objectives

- Objectives:
 1. To **compare** fall rate **locally** and **internationally** on a public rehabilitation setting.
 2. To **identify** the **characteristics** associated with inpatient falls.

Methodology



Methodology

Fall Incidence Rate

Unit = Count (No. of falls per 1000 inpatient days in a particular year)

$$\frac{\text{TOTAL NUMBER OF FALLS}}{\text{TOTAL LENGTH OF STAY (LOS)}} \times 1000$$

Results

- 1st objective: To **compare** fall rate locally and internationally on a public rehabilitation setting.

Hospital Rehabilitasi Cheras (HRC)	1.3 - 3.0 per 1000 inpatient days
MOH Hospitals	0.24 per 1000 inpatient days
International rehabilitation hospitals (Rosario et al, 2013)	4-6 per 1000 inpatient days

Results

- 2nd objective: To **identify** the characteristics associated with inpatient falls.

Human Factors

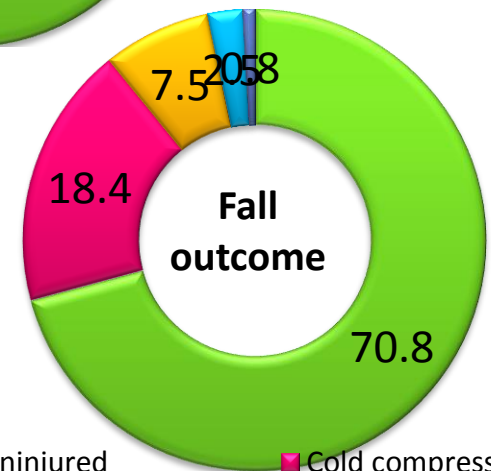
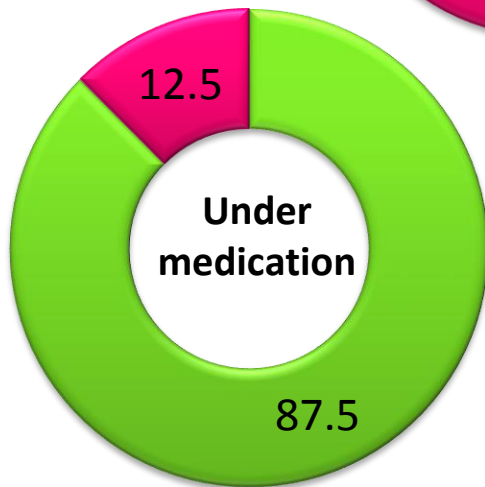
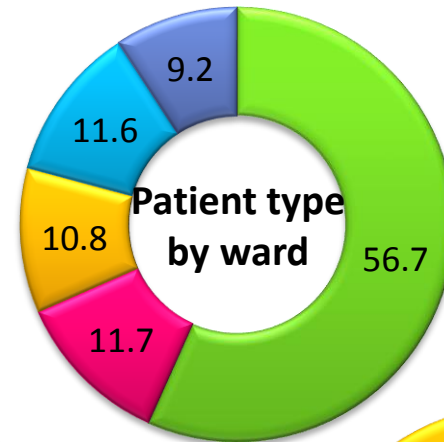
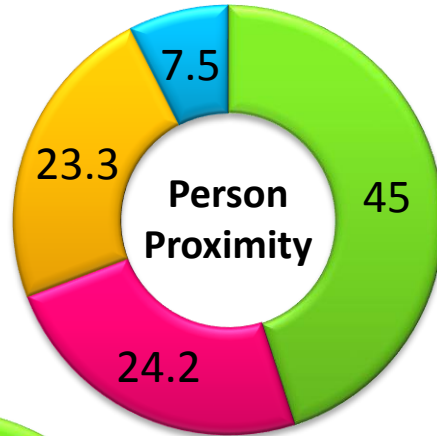
- Neurology patients 56.7%
- Length of Stay 8-30 days 58.3%
- in Caretaker's Presence 45.0%
- under >1 medications 87.5%
- sustained no injuries 70.8%

Environment Factors

- Fall in toilet 46.7%
- Fall during night shift 38.3%

Results – Human Characteristics

- Presence of Caretaker
- Patient Alone
- Neurology
- Amputee
- Paediatric
- Presence of Staff
- Multiple involvement
- Spinal
- Geriatric



- under >1 medication
- ≤1 medication

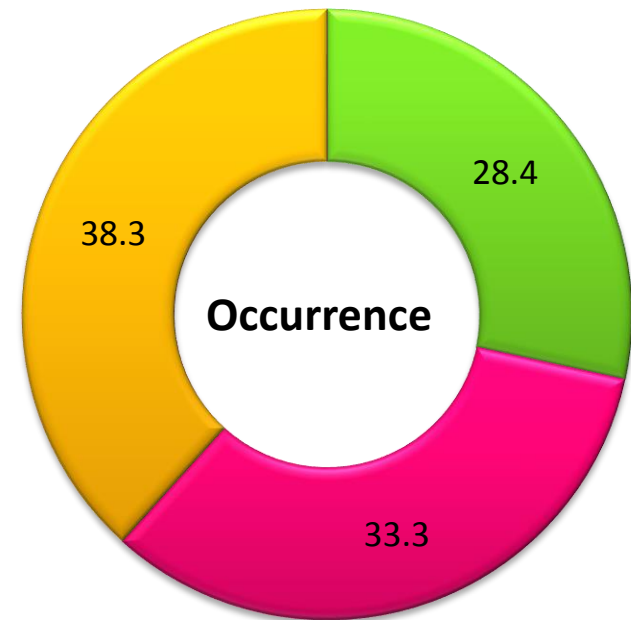
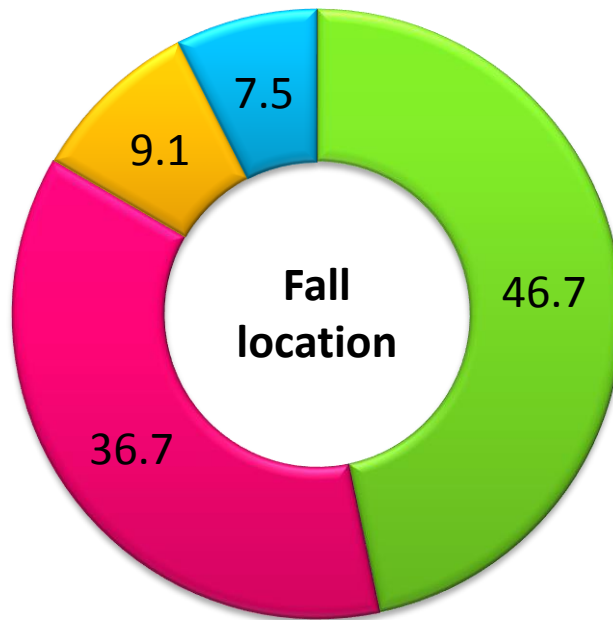
- 8-30 inpt days
- 31-40 inpt days
- >40 inpt days
- <7 inpt days

- Uninjured
- Dressing
- Transferred out
- Cold compression
- X-Ray

Results – Environment Characteristics

■ Toilet ■ Bedside ■ Dining Hall ■ Others

■ AM shift ■ PM shift ■ Night shift



Discussion & Conclusion

- Falls could happen at any time and anywhere, despite the caretaker's presence.
- Risk factors identified from this study highlighted the areas for improvement in HRC, to facilitate patients in achieving maximal functional independence.
- Patient safety is an utmost concern.
- Limitation: Only on reported fall or near fall.

Recommendation

- Our results warranted **further investigation** on the reported falls.
- Findings can be used as a baseline evidence to develop a more appropriate and comprehensive **fall risk protocol**, especially for HRC.
- **Fall risk assessment** upon admission for inpatients with the identified characteristics to prevent fall.
- All fall or near fall **incidents must be reported** to prevent under-reporting – prioritise patient safety.

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THANK YOU