Ambulation of Hospitalized Older Adult Patients

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Background

- About 17% of hospitalized older adults will lose their ability to independently ambulate during their hospital stay.
- Loss of independent ambulation is associated with increased length of stay, falls, new nursing home placement, and higher mortality rates.
- Research has demonstrated that hospitalized older adults spend 83-95% of their time in bed.

Purpose

To describe the frequency of ambulation in hospitalized older adults.

Methods

Design

A descriptive, correlational study

Eligibility Criteria

- Aged 65 or older
- Able to walk with or without assistance
- At least 24 hour hospital stay

Procedure

- Monitored patients' steps using research-grade accelerometers during hospitalization
- EMR review for demographic and clinical information
- Data analyzed using regression and t-test

Results

Sample Characteristics (N=38)

	Mean (SD)	Range	Frequency	%
Age	81 (8.93)	65-94		
BMI	28.45 (7.74)	15.4-49.6		
Gender (Female)			23	60
Length of stay (Day)	2.52 (1.88)	1-6.99		
Walking device use			24	63
Person assistive walking			29	76
Resided home prior admission			30	79
Discharge to home			27	71

Patient Ambulation

- Daily steps decreased during hospitalization from 505 steps (1st 24-hour stay) to 472 (2nd) and 351 (3rd) (Figure 1).
- The mean steps had a quadratic hour effect during the day (Figure 2).
- Peak time periods for ambulation were 12-1pm (113.5 steps/hr) and 1-2pm (90.217 steps/hr).
- The highest gait speed among participants was 58 steps/minute.

Figure 1

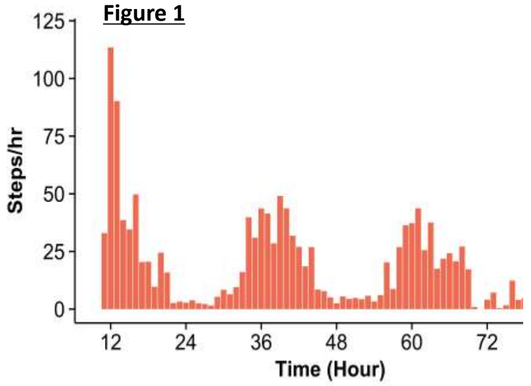
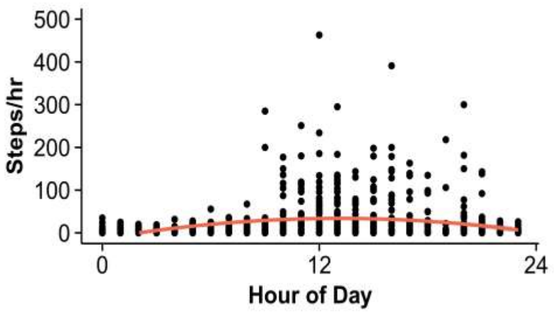
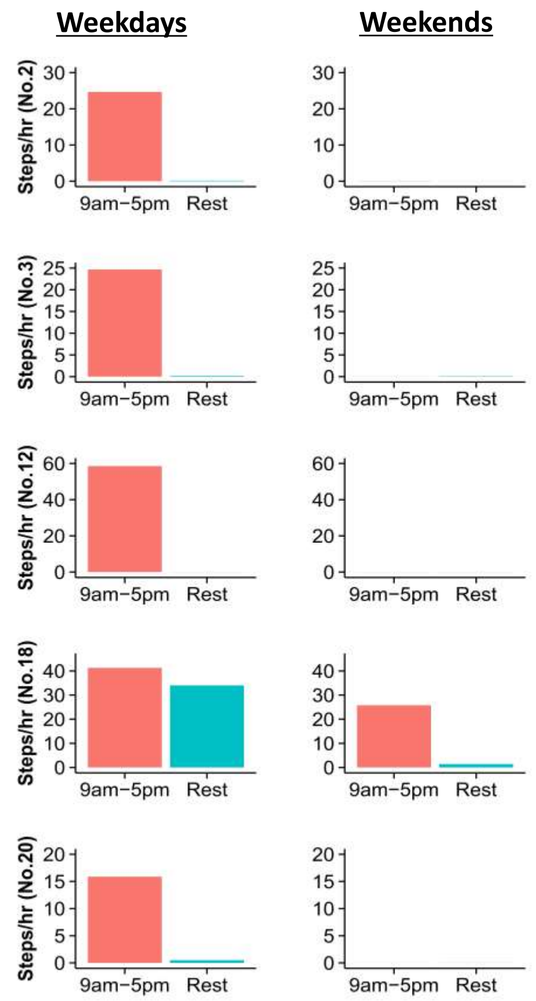


Figure 2



Comparison in Weekdays/Weekends

Of 15 patients who included both weekdays and weekends, 5 had significantly decreased steps during weekends compared to weekdays (p=0.00 - 0.027).



Conclusion and Implication

- Compared to prior research, patients in this study displayed lower step counts.
- Certain time periods during shifts may indicate increased opportunity for patient ambulation during hospitalization.
- A substantial decrease in ambulation during weekends may be related to staffing ratios.
- Additional research is needed to identify factors within hospitals which may impact frequency of patient ambulation during their hospital stay.