



Hospital readmission within 30 days of discharge – in older adults

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Conclusions

Factors increasing the risk of readmission within 30 days of discharge include:

- comorbidity
- using 10 medications or more
- living in own home with home care
- being discharged after a long hospital stay
- being discharged on a Friday
- being discharged from general surgery

Introduction

Hospital readmission within 30 days of discharge is extensively researched but few studies look at the whole process, from admission to follow-up.

This study aimed to identify patients, 65 years and older, at risk of readmission, as well as processes in need of improvement.

Method

This comparative retrospective study included 720 patients in total. The study group ($n=360$) was readmitted to hospital within 30 days of discharge whereas the comparison group ($n=360$) was not. Variables were collected according to Figure 1. Either a Student's t-test, χ^2 -test or Fishers' exact test was used for comparison between groups. A multiple logistic regression analysis was conducted to identify variables associated with readmission.

Results

The final model (Table 1) showed increased odds of readmission in patients with a higher Charlson Comorbidity Index (OR 1.12, p-value 0.002), excessive polypharmacy (OR 1.66, p-value 0.007) and living in the community with home care (OR 1.61, p-value 0.025).

The odds of readmission within 30 days increased if the length of stay was five days or longer (OR 1.72, p-value 0.005) and if being discharged on a Friday (OR 1.88, p-value 0.003) or from general surgery (OR 2.09, p-value 0.001).

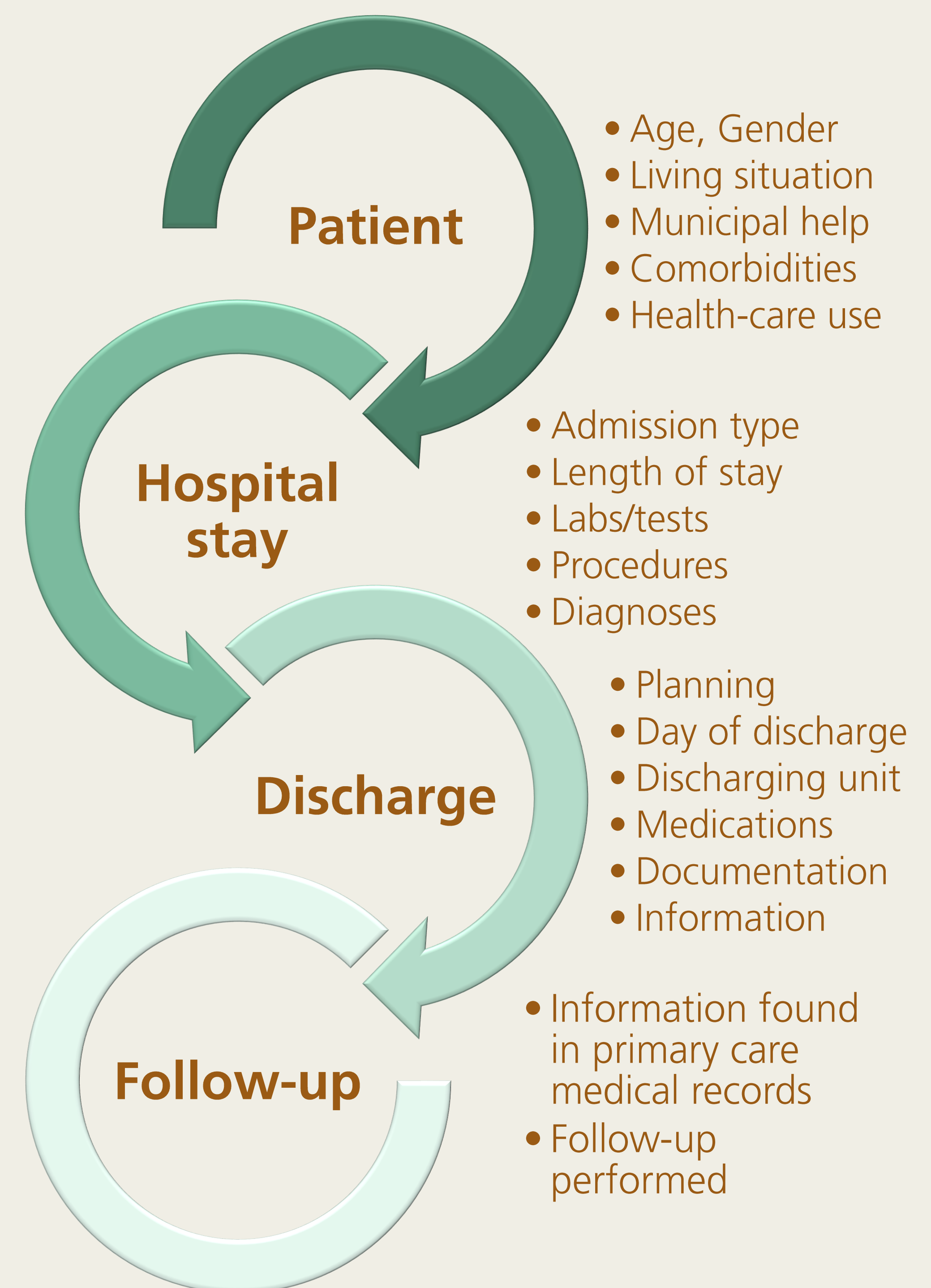


Figure 1. The chain of events covered in the data collection includes patient characteristics prior to and events during the initial hospital stay as well as factors concerning the processes of discharge, transition of care and follow-up.

Table 1 - Variables associated with readmission to hospital within 30 days of discharge^a

Variable	OR	95% CI	p-value
Charlson Comorbidity Index	1.12	1.04-1.20	0.002
No of hospitalisations 12 months	1.41	1.19-1.68	<0.001
Length of stay 5 days or longer	1.72	1.18-2.49	0.005
Day of discharge (ref: Mon-Thurs)			0.007
Friday/Day before weekend/holiday	1.88	1.24-2.87	0.003
Discharging unit (ref: Internal med)			0.004
General surgery	2.09	1.34-3.24	0.001
Living in own home with home care	1.61	1.06-2.45	0.025
Excessive polypharmacy ^b	1.66	1.15-2.40	0.007

Abbreviations: OR – Odds Ratio, CI – Confidence Interval. ^aAdjusted for gender, type of admission and Charlson Comorbidity Index (incl age) ^bDefined as a regular intake of 10 medications or more. Hosmer Lemeshow goodness of fit test p-value: 0.457. Nagelkerke R²: 0.228. Significant p-values indicated in bold.



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