

The 6-PACK falls prevention project

Snapshot Report

The 6-PACK project incorporated 3 key stages:

Stage 1

A prospective mapping of falls prevention practice and outcomes

The initial stage of the project involved collecting data on fall events that occurred on participating hospital wards from September-December 2011. This data was collected to gain an understanding of the rate and type of falls and fall injuries that occurred on wards prior to implementation of the 6-PACK program. Daily data were collected from more than 8,000 patients.

Stage 2

A cluster randomised controlled trial (RCT) testing the effectiveness of the 6-PACK program

The cluster randomised controlled trial took place over a 12 month study period and involved over 30,000 patients from six Australian hospitals. The 6-PACK program was implemented on wards allocated to the intervention group while control wards continued with standard care practices over the 12 month study period. Data collected from this stage of the study also contributed to economic and program evaluations.

Stage 3

A longitudinal assessment of sustainability of practice change and outcomes

The final stage of the project was conducted from April to December 2013. During this time, researchers continued to monitor fall and fall injury rates on each of the participating hospital wards after the RCT had ended. This stage allowed researchers to determine whether the use and impact of the 6-PACK program was sustained.



This leaflet provides a snapshot of key information collected as part of stages 1 and 2 of the 6-PACK project.



Table 1: Hospital, ward and patient characteristics of the 6-PACK project

	Hospital 1	Hospital 2	Hospital 3	Hospital 4	Hospital 5	Hospital 6
Hospital type	Regional health service, University teaching hospital	Metropolitan university teaching	Metropolitan university teaching	Metropolitan university teaching and major referral centre	Metropolitan university teaching	Metropolitan university teaching
Bed size	<400	≥400	<400	≥400	≥400	<400
Total number of wards	4	4	6	4	2	4
Ward types	General surgical (2) General medical (2)	General surgical (2) General medical (2)	Short stay medical (1) Medical/Respiratory (1) Medical/Gastroenterology (1) Medical/Oncology (1) General surgical (1) Surgical/Orthopaedic (1)	Medical/Respiratory (1) Medical/Oncology (1) Cardiac/Vascular surgical (1) Transplant surgical (1)	General medical (2)	General medical (2) Medical/Oncology (1) Medical/Neurology (1)
Average ward LOS	6	9	8	11	11	8
Age, mean	62	62	61	60	75	67
Number of hospital admissions	9,109	8,109	14,323	7,414	2,818	8,330
Patient hospital admissions with cognitive impairment, n (%)	408 (4)	653 (8)	572 (4)	329 (4)	837 (30)	737 (9)
Patient hospital admissions which were an emergency admission, n (%)	6,424 (71)	6,791 (84)	11,652 (81)	4,222 (57)	2,230 (79)	6,660 (80)
Reason for primary admission, n (%)						
Cancer	992 (11)	327 (4)	681 (5)	1,445 (19)	82 (3)	628 (8)
Circulatory system diseases	1,318 (14)	296 (4)	1,187 (8)	1,450 (20)	284 (10)	1,665 (20)
Digestive system diseases	1,518 (17)	1,905 (23)	2,261 (16)	779 (11)	138 (5)	895 (11)
Injuries	767 (8)	1,201 (15)	3,203 (22)	514 (7)	587 (21)	487 (6)
Respiratory system diseases	912 (10)	1,504 (19)	1,739 (12)	1,471 (20)	345 (12)	804 (10)

Falls and fall injuries

The 6-PACK project aimed to capture all in-hospital fall events by using multiple data sources:

1. Daily audits of the patient medical record;
2. Daily verbal reports from the ward Nurse Unit Managers;
3. Monthly extracts from the hospital incident reporting databases; and
4. Quarterly extracts from the hospital administrative databases.

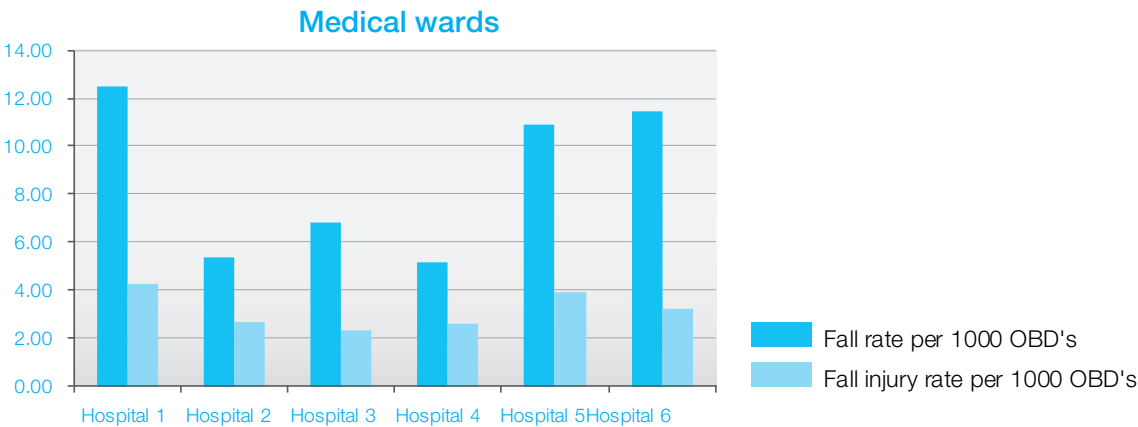
The collection of falls data from stages 1 and 2 of the 6-PACK project show a total of 1,578 fallers, 2,213 falls and 757 fall injuries. These figures highlight that falls remain a common incident on hospital wards.

An overview is provided below of falls and fall injury rates at participating hospitals.

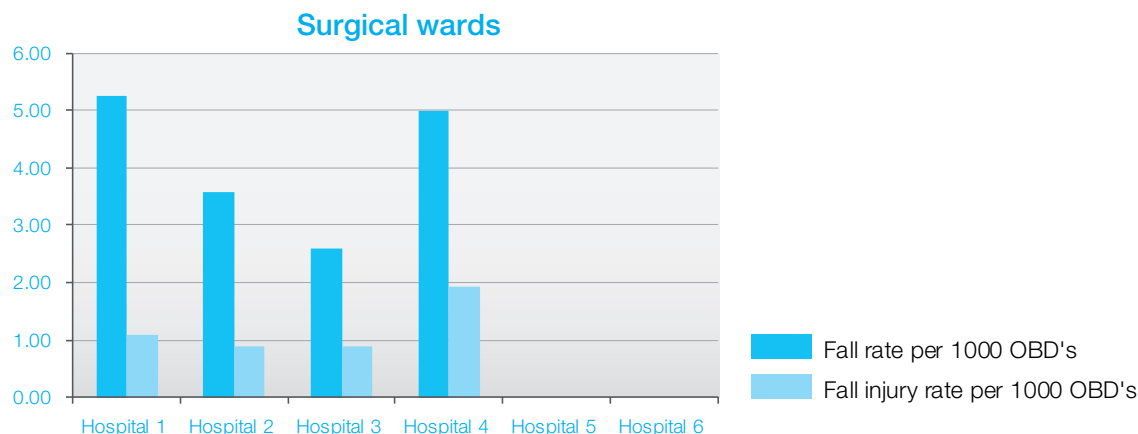
Table 2: Hospital admissions with a fall

		Hospital 1	Hospital 2	Hospital 3	Hospital 4	Hospital 5	Hospital 6
Hospital admissions, n (%)	0 falls	8,846 (97.1)	7,913 (97.6)	13,957 (97.4)	7,175 (96.8)	2,621 (93.0)	7,984 (95.8)
	1 fall	183 (2.0)	154 (1.9)	307 (2.1)	196 (2.6)	154 (5.5)	265 (3.2)
	2 falls	47 (0.5)	35 (0.4)	38 (0.3)	34 (0.5)	32 (1.1)	47 (0.6)
	≥3 falls	33 (0.4)	7 (0.1)	21 (0.1)	9 (0.1)	11 (0.4)	34 (0.4)

Graph 1: Fall and fall injury rates (medical wards)



Graph 2: Fall and fall injury rates (surgical wards)



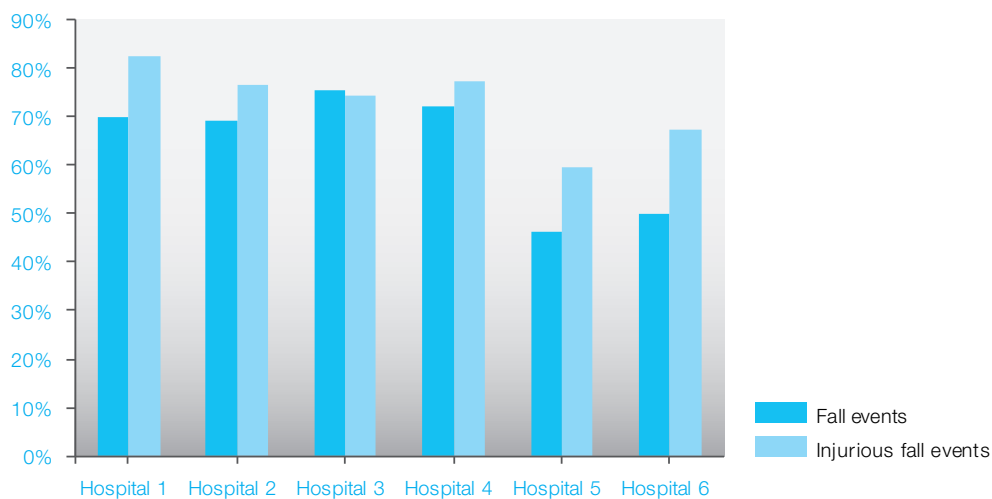
Are all falls being recorded in hospital incident reporting databases?

The reporting of falls data is critical for effective monitoring of hospital adverse events and planning of fall prevention strategies. Hospital incident reporting databases are the most commonly used source for reporting on falls and should ideally capture every fall and injurious fall event. However, previous studies suggest that the capture of falls in hospital incident reporting databases is not complete. As a consequence, the incidence of falls and injurious fall events are substantially under-reported.¹

Throughout stages 1 and 2 of the 6-PACK project, the research team provided all participating wards with regular reminders, feedback and education on the reporting of fall events. Hospital incident reporting systems were found to capture 64% of all falls and 74% of all injurious falls.

Graph 3 provides an overview of the percentage of fall and injurious fall events captured by each participating hospital's incident reporting database.

Graph 3: Fall and injurious fall events captured in the hospital incident reporting database



Key findings

Falls are a common problem in the acute hospital setting. There was found to be substantial variability in fall rates between participating wards. This may reflect the differences in patient case mix and ward practices.

Recent investigations suggest that incident reporting databases do not provide accurate indications on all incidences of fall and injurious fall events. Ongoing improvements in incident reporting practices are required if this data source is to be used for decision making regarding the management and prevention of fall events within hospitals.

Where to from here?

Many useful insights have evolved as a result of the 6-PACK project. We aim to ensure that all findings are communicated to our project stakeholders to allow for effective translation into policy and practice.

The effectiveness of the 6-PACK program in reducing falls and fall injuries is planned to be reported in a separate publication. Findings from stage 3 of the project will also be addressed in future reports.

¹ Hill, A.M., et al., Measuring falls events in acute hospitals-a comparison of three reporting methods to identify missing data in the hospital reporting system. *J Am Geriatr Soc*, 2010. 58(7): p. 1347-52.