Monash Partners Falls Alliance

Falls mapping project report

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Executive summary

The Monash Partners Falls Alliance undertook a mapping activity in 2016/17 to measure the amount of time and resources each health services used in the prevention of falls and harm from falls. This included the activities that were health service wide and those in acute, subacute and mental health wards that were focussed on the prevention of patient falls during the hospital stay. Additional data were collected from paediatric wards within each service, but this was not the main focus of this study.

In each case, we started by mapping the activity of falls prevention committees, projects, education, risk management and risk reporting. We also collected data on the usage of falls prevention equipment and the usage of constant patient observers in falls prevention. In order to map ward activities, we randomly selected one acute, one subacute and one mental health ward to represent these areas of the health services. Data were collected in all areas by interviewing the relevant staff.

From the interview responses, we calculated the amount of time spent on each activity. Enterprise bargaining agreements were used to calculate the opportunity cost of each falls prevention activity. Opportunity cost refers to a benefit that a person (or organisation) could have received, but gave up, to take another course of action. The opportunity cost of a person's time is their wage (cost of employment). These costs were calculated for the 2016 calendar year.

Key findings

The average cost per bed and percentage of total falls prevention spend is listed below.

Activity	% of total spent	Cost per bed
Physiotherapy treatment aimed at falls prevention *	18%	$1482
Continuous patient observer †	14%	$1160
Falls prevention assessment/screen by professions other than nursing‡	12%	$1033
Purchase, obtain and respond to falls prevention alarms	11%	$909
Nursing risk screening/assessment	8%	$716
Informal falls prevention patient education	8%	$695
Moving patients to a ward are with higher visibility	6%	$541
Occupational Therapy treatment aimed at falls prevention	4%	$362

*Although clinicians were asked to specify the time they spent on falls prevention, the activities they undertook with patients also may have had other aims, such as improving mobility and / or balance.

†Not all organisations have reliable systems to estimate the cost of continuous patient observers or the reasons for the observer. This extra staff member may have been approved to reduced more than one risk or because of the mix of patients on the ward.

‡Falls risk assessments and screen performed by professionals other than nurses included activities such as balance and mobility assessments with multiple purposes.

Total spend on falls prevention activities at each health service

	A	B	C	D	E	F
Total	$3,945,129	$10,364,310	$10,297,016	$7,990,639	$7, 139,932	$6,217,866
$ per bed	$6,543	$11,940	$6,497	$9,662	$11,940	$8,745

Detailed figures for each service can be found in the body of the report.

A majority of resources allocated for the prevention of falls were consumed in the areas of physiotherapy treatment aimed at falls prevention, continuous patient observers and falls prevention assessment/screen by professions other than nursing and falls prevention alarms.

Several of these activities could be considered to be "multi-purpose" activities that address multiple aims simultaneously, of which falls prevention was one. Extracting the falls prevention specific amount from these activities was difficult for respondents to specify, thus some caution is required in the interpretation of these results. The largest resource allocation category that could be classified as being entirely specific to falls prevention was the use of falls prevention alarms.

Interpretation by key stakeholders and consumer reference group

The stakeholder and consumer reference group met to discuss the project results. Members identified key areas where there was a large amount of resources being directed towards activities with a high level evidence available indicating there is no benefit of this strategy for preventing falls. This included the costs associated with falls prevention alarms, including the cost of purchase, hire and time spent providing and responding to them. There were also areas identified where resources were being directed towards strategies with an absence of evidence indicating whether the strategies are effective or not.

The reference group concluded that steps should now be taken to disinvest from areas with known evidence of the ineffectiveness of the intervention and yet large resources being spent in the area. The group will now work on developing proposals to attract partnership funding to facilitate disinvestment in these activities.

1. Introduction

Monash Partners Academic Health Science Centre is an innovative Australian health industry, research and educational collaboration. It is an initiative of eight independent, world class providers of health services, health research and health education in the south and east of Melbourne. Monash Partners Falls Alliance was formed from the Monash Partners Falls Executive, a subcommittee of the Monash Partners Academic Health Science Centre

Representatives from six health services from this group, Alfred Health, Cabrini Health, Eastern Health, Epworth Health, Monash Health and Peninsula Health, agreed to form the Monash Partners Falls Alliance. Representatives from these organisations formed a committee to guide the work of the group. The Falls Alliance seeks to improve the effectiveness and efficiency of our collective efforts to prevent falls, one of the most common and harmful adverse events experienced by people receiving in-hospital care. Work groups were formed around the key priorities identified at the partnership wide forum held in July 2015.

Work group activity planning

Mapping Activity 1

To map specific policies/procedures/protocols, processes and measures used across Monash Partner's health services within inpatient units.

Mapping Activity 2

To map the amount of resource health services are allocating to the prevention of falls within acute and subacute inpatient units.

In November 2016, Professor Terry Haines provided funding for a project manager role to lead a Falls Prevention Mapping project across the six health services in the Alliance – Alfred Health, Cabrini Health, Eastern Health, Epworth HealthCare, Monash Health and Peninsula Health. The project was overseen by the Monash Falls Alliance Committee. This paper reports on that project.

2. Aims

1. To map specific policies/procedures/protocols, processes and measures used across Monash Partners Falls Alliance health services within acute and subacute inpatient units, including inpatient mental health units.

2. To map the amount of resource health services are allocating to the prevention of falls within acute and subacute inpatient units.

3. Methodology

Design

This study used a mixed methods design consisting of structured key informant interviews.

Phase 1: Mixed methods consisting of structured key informant interviews including:

1. Governance structure for falls (local to organisational)
2. What sort of data are available? E.g., quality data, bedside audits
3. Screening and assessment tools used
4. What interventions available/used in prevention of falls?
5. Protocols/procedure/policies aimed at preventing falls
6. Consumer brochures/information
7. Staff and consumer education aimed at falls prevention
8. Mapping of the quality assurance and research projects at each organisation aimed at preventing falls.

Phase 2: An economic analysis to explore the costs, in time, wages and opportunity cost of falls preventions strategies.

Setting

This research took place on acute medical and surgical, subacute and mental health wards at Alfred Health, Cabrini Health, Eastern Health, Epworth HealthCare, Monash Health and Peninsula Health. A random sample of wards from acute, subacute and mental health units at each health service were chosen for ward level key informant interviews.

Participants

There were seven participant groups, being:

1) Hospital falls and quality, safety and risk committee chairs at all levels.

These staff were sought to participate in key informant interviews to map out the falls governance and committee structures for each health service, and the research and quality assurance activities reported at each committee. These staff were also asked to provide copies of any policies, procedures or guidelines approved by the committee they chair. Written consent from staff was sought prior to their participation in each key participant interview.

2) Quality and risk managers

Each manager was sought to participate in key informant interview to ascertain the number of falls incident reports received in their area and the time spent in managing, trending and reporting on these incidents. They were also be asked about the time spent auditing compliance with falls procedures. Written consent from staff was sought prior to their participation in each key participant interview.

3) Nursing leaders with responsibility for falls prevention and management.

These staff were asked to participate in key informant interviews to measure the usage across each health service of constant patient observers, both paid and unpaid, when used as a falls prevention strategy. Written consent from staff was sought prior to their participation in each key participant interview.

4) Staff leading falls related quality assurance and research activities.

These staff were asked to participate in key informant interviews to measure the time committed to falls related quality assurance and research activities, the capital costs, funding allocated as well as the outputs from these activities such as publications. Written consent from staff was sought prior to their participation in each key participant interview.

5) Staff involved in staff education related to falls and falls prevention activities.

These staff were asked to participate in key informant interviews to measure the time committed to falls prevention educational activities aimed at clinician and non-clinical staff in each organisation. They were also asked about falls related educational activities aimed at patients and their carers. Written consent from staff was sought prior to their participation in each key participant interview.

6) Hospital procurement staff

These staff were asked to participate in key informant interviews to measure the type, number and cost of falls prevention equipment purchased by the organisation in 2016. Written consent from staff was sought prior to their participation in each key participant interview.

7) Staff on targeted wards – Nurse managers, nursing, medical, pharmacy and allied health staff on one mental health unit, one acute unit and one subacute unit at each health service.

These staff were asked to participate in key informant interviews to map the activities and measure the time staff spent in preventing and responding to falls, such as screening and assessment, education and management. They were also asked to provide copies of the falls screening tools, signage and educational material used on the ward. Nursing managers were also asked about the use of equipment aimed at falls prevention and the time required to manage the use of this equipment on their ward. Representatives of each clinician group on the targeted ward were asked to estimate the time spent in reporting and managing falls incident reports. They were also be asked about local, ward level falls prevention strategies and the time taken by staff to implement them. Written consent from staff was sought prior to their participation in each key participant interview.

Ethics and site specific authorisation

An application was made to the Monash Health Low Risk Ethics Committee and approval for the project was granted. Each site liaison facilitated the Site Specific Authorisation process at their site and all sites granted approval. A collaborative agreement was drawn up and approved for data sharing from each site.

Data collection methods

Meetings were held with key staff at each health service to map the interviews and strategies for collection of data such as protocols and their access. Site liaisons were asked to identify the key staff involved in falls prevention activities. Acute wards, subacute wards and mental health wards were identified by the site liaisons and the number of beds in each ward recorded. An investigator then randomly chose one acute, one subacute and one mental health ward to represent this type of ward for the staff to participate in interviews. Invitations were sent by email to the identified staff, requesting an interview time. Staff were informed in this email and at the start of each interview, verbally and in writing, that participation in the research project was voluntary, that their comments would be de-identified in any publications.

Interview questions for each type of organisation level interview were drafted: project managers, committee chairs, procurement manager, organisational lead for falls and staff educators. Ward interviews questions for the nurse manager, ward nurse, doctor, physiotherapist and / or occupational

therapist and pharmacist were also drafted. All question lists were loaded into Survey Monkey online survey tool.

Staff were asked to estimate the time they spent on each activity and how frequently they performed each task. For example, project leads were asked: "How much of the project time has been related to falls prevention activities over the past 12 months? (Include all people who are working on the project)". Ward Nurses were asked, when talking about their local falls risk assessment screening tool, "How long does it take to complete for each patient?" Staff were directed to use the calendar year 2016 as the timeframe for their replies.

Staff who agreed to be interviewed were met by a researcher. Questions were asked and responses recorded in online Survey Monkey. We asked participants to use the calendar year 2016 as their reference. Interviews were conducted between February and August 2017.

4. Data Analysis

Survey responses was downloaded from Survey Monkey into excel spreadsheets. Organisation wide costs, such as the cost of organisation wide meetings and projects and the cost of policy development were calculated for the whole organisation. The randomly chosen wards were used as examples of their ward type (acute, subacute or mental health). For example, each nurse managers was asked how much time they spend on investigating falls incidents in RiskMan, this time was then taken as typical of that type of ward, and the total ward cost per year and the time per bed per year was estimated. The time per bed was then multiplied by the number of that type of bed to obtain an estimate of the time spent of investigating RiskMan incidents by nurse managers across acute wards over the 2016 calendar year.

The cost of this time was then calculated for the each bed for the year. Opportunity cost refers to a benefit that a person (or organisation) could have received, but gave up, to take another course of action. The opportunity cost of a person's time is their wage (cost of employment). Enterprise Bargaining Agreements were used to estimate cost of staff time with on-costs included. (see Table 1)

Organisation wide cost of equipment were also calculated and the opportunity cost of each activity was estimated for the 2016 year.

Table 1 Data collection and analysis

Activity	Example question/s	Measures per year at health service	Valuation
Falls prevention committees	How many people attend the committee (average)? How long does the meeting go for? What level of staff attend?	Hours at each wage level per meeting multiplied by meetings per year.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Staff Education	What falls prevention education do you provide? How long did it take to produce? How many staff attended sessions and how long did the sessions take?	Hours to produce and facilitate falls prevention education. Hours to attend falls prevention education.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Falls prevention projects	How does the project related to falls prevention? How much time was spent on the project in 2016? What level were the staff involved? Were there any capital costs?	Hours spent on project management, meetings, project related education and travel.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Procedures and Guidelines	What falls prevention procedures does your organisation have? How much time was spent writing or updating them in 2016? How many times were they accessed?	Hours spent on document development and review. Hours spent on reading procedures.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Nursing falls risk assessment/management tool	How long does it take to complete a falls risk screen? How long do you spend documenting this? How many would you perform each day?	Hours spent on screening and documenting were multiplied by frequency and number of nurses on the ward to get a per day estimate. This was multiplied to estimate the time spend on the ward in a year and divided by the number of beds. Time then multiplied by number of this type of bed in the organisation to get annual cost.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Falls assessments by other professionals	How long does it take to complete a falls risk screen and/or assessment? How long do you spend documenting this? How many would you do each day/week?	Hours spent on screening and documenting were multiplied by frequency and number of doctors/physiotherapists/pharmacists on the ward to get a per day estimate. This was multiplied to estimate the time spend on the	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.

Activity	Example question/s	Measures per year at health service	Valuation
		ward in a year and divided by the number of beds. Time then multiplied by number of this type of bed in the organisation to get annual cost.	
Move patient to low low bed	How often do you move a move a patient to a low low bed for falls prevention? How long does this take? How many low low beds did the organisation purchase in 2016? What was the cost?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds. Money spent on beds in 2016 was recorded.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added. Cost of purchasing beds in 2016 was added
Move patient to supervised position	How often do you move a move a patient to a position with better supervision for falls prevention? How long does this take?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Supply non slip socks	How often do you provide non-slip socks? How long does this take? How much did your ward spend on non-slip socks in 2016?	Time taken in the randomly Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds. Money spent on socks in 2016 was recorded.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added. Cost of purchasing socks in 2016 was added.
Source falls prevention alarm	How often do you set up a falls prevention alarm? How long does that take? How often do you care for a patient with a falls prevention alarm? How much time do you spend answering alarms when caring for a patient with one?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds. Money spent on purchasing and hiring falls prevention alarms in 2016 was recorded.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added. Money spent on purchasing and hiring falls prevention alarms in 2016 was added.
Continuous patient observers	How much time do you spend each week organising and supervising continuous patient observers for falls prevention? What did your organisation spend on continuous patient observers for falls prevention in 2016?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds. Cost of employing continuous patient observers.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added. Cost of employing continuous patient observers was added.

Activity	Example question/s	Measures per year at health service	Valuation
Education of patient and family (informal)	What actions come out of a high score on a falls risk assessment screen? (nurses) What activities do you do to prevent falls on this ward? How long does that take? How often do you perform that task?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the total cost to the organisation by multiplying by the number of beds of this type e.g. acute beds. Education by different health professionals on the same ward was added.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Physiotherapy / Occupational therapy treatment aimed at falls prevention	What tasks do you do to prevent your patients from falling? How long does this take? How often do you perform that task?	Time taken in the randomly chosen ward was calculated per bed. This was used to calculate the cost per ward by multiplying by the number of therapists on the ward and a per bed time allocation was calculated. The total cost to the organisation was calculated by multiplying by the number of beds of this type e.g. acute beds.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
Post Falls Management	What happens on this ward after a fall? How long does that take?	Time was multiplied by the number of reported falls per month to calculate time taken by each profession in 2016 per bed on the randomly chosen wards.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added.
RiskMan reporting and management – ward level	How long does it take you to enter an incident in RiskMan after a fall? How much time do you spend each week investigating and following up falls incidents?	Time reported by each health professional was multiplied by the average number of falls incidents on the ward per month and the yearly time allocation calculated.	Time per year was multiplied by wages rates in relevant Enterprise Agreement and on-costs added

5. Results

Table 2 Number of Interviews at each health service

Organisation	Number of Interviews conducted
Alfred Health	34
Cabrini Health	26
Eastern Health	32
Epworth Healthcare	37
Monash Health	40
Peninsula Health	27
TOTAL	**196**

In total, 196 interviews were conducted between December 2016 and August 2017. The distribution of interviews can be seen in Table 2.

Table 3 provides an overview of the funds spent on falls prevention activities across the participation health services. The details of how the falls prevention activities can be found in the section of the report dedicated to each health service.

Detailed results for each health service are then reported. Health services have been de-identified by being represented by letters.

Table 3 Overview of cost of falls prevention activities

	Health Service A		Health Service B		Health Service C		Health Service D		Health Service E		Health Service F	
	Total	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**
Committees	$31,146	$52	$60,242	$69	$39,657	$25	$85,557	$103	$23,094	$39	$54,976	$77
Staff Education	$59,801	$99	$77,360	$89	$77,216	$49	$241,189	$292	$73,034	$122	$110,461	$155
Projects	$79,479	$132	$71,404	$82	$93,226	$59	$103,509	$125	$20,864	$35	$122,247	$172
Procedures and Guidelines	$2,438	$4	$17,106	$20	$2,104	$1	$15,172	$18	$7,179	$12	$10,656	
Nursing falls risk assessment/ management tool	$371,520	$616	$897,374	$1,034	$1,102,214	$695	$454,618	$550	$246,627	$412	$535,434	$753
Falls assessments by other professionals	$474,597	$787	$1,832,644	$2,111	$497,460	$314	$623,046	$754	$1,110,211	$1,857	$711,579	$1,001
Move patient to low low bed	$0	0.00%	$13,266	$15	$22,853	$14	$109,692	$133	$112,970	$189	$233,772	$329
Move patient to supervised position	$844,200	$1,400	$1,039,184	$1,197	$626,367	$395	$39,638	$48	$112,970	$189	$64,329	$90

	Health Service A		Health Service B		Health Service C		Health Service D		Health Service E		Health Service F	
	Total	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**
Supply non slip socks	$125,820	$209		$0	$83,973	$53	$0	$0	$0	$0	$29,550	$42
Source alarm	$14,616	$24	$35,970	$41	$6,405	$4	$17,137	$21	$132,546	$222	$116,886	$164
Respond to alarms	$176,400	$293	$753,588	$868	$1,402,944	$885	$473,340	$572	$490,360	$820	$382,803	$538
Organise continuous patient observer (CPO)	$9,720	$16	$11,088	$13	$73,023	$46	$50,284	$61	$14,320	$24	$822	$1
Education of patient and family (informal)	$0	$0	$566,016	$652	$1,038,076	$655	$1,101,482	$1,332	$611,385	$1,022	$184,515	$260
Remove clutter							$883,521	$1,068			$319,305	$449
Supervise patients in the bathroom							$115,843	$140			$181,797	$256
Physiotherapy treatment	$873,000	$1,448	$1,242,120	$1,431	$1,756,297	$1,108	$1,085,129	$1,312	$1,425,517	$2,384	$1,084,368	$1,525

	Health Service A		Health Service B		Health Service C		Health Service D		Health Service E		Health Service F	
	Total	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**
aimed at falls prevention												
Occupational Therapy treatment aimed at falls prevention	$171,990	$285	$586,872	$676	$140,605	$89	$276,640	$335	$585,000	$978	$64,911	$91
Provide inpatient falls and balance program (untested)	$4,347	$7			$17,995	$11	$0	$0	$9,360	$16	$25,872	$36
Medication review			$29,674	$34			$154,942	$187	$35,712	$60	$22,932	$32
Falls champion (nursing)			$64,030	$74	$15,555	$10	$38,038	$46	$90,038	$151	$41,295	$58
Post Falls Management	$139,653	$232	$253,852	$292	$288,016	$182	$159,677	$193	$143,297	$240	$389,667	$548
RiskMan	$161,604	$268	$280,778	$323	$492,940	$311	$30,182	$26	$226,025	$378	$78,288	$110

	Health Service A		Health Service B		Health Service C		Health Service D		Health Service E		Health Service F	
	Total	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**	**Total**	**Cost per bed**
Falls prevention alarms	$31,104	$52	$126,740	$146	$111,000	$69			$138,519	$232	$150,800	$212
Low low/ Floorline beds			$24,198	$28	$77,800	$49			$23,800	$40		
Non- slip socks					$8,500	$5					$3,400	$5
Equipment							$115,008	$139				
Continuous Patient Observers	$340,740	$565	$444,062	$512	$1,299,700	$820	$1,429,427	$1,728	$1,255,151	$2,099	$913,935	$1,285
Other	$32,954	$55	$1,931,494	$2,070	$1,023,090	$646	$387,568	$483	$251,818	$410	$383,266	$538
TOTAL	**$3,945,129**	**$6,543**	**$10,364,310**	**$11,940**	**$10,297,016**	**$6,497**	**$7,990,639**	**$9,662**	**$7,139,797**	**$11,940**	**$6,217,866**	**$8,745**

5.1 Health Service A

Falls prevention activities are Health Service A are summarised below and followed by the opportunity cost estimation.

Committees

- Reducing harm committee – organisation wide committee with overarching responsibility for each of the National Standards.
- Falls prevention committee – organisation wide committee overseeing falls prevention and management.
- Cognition managing challenging behaviours and self-harm – organisation wide committee overseeing the management of altered cognition and challenging behaviours.
- Rehabilitation Falls Committee – falls prevention and management committee– overseeing falls prevention at two subacute sites.

Staff Education

- Online education – Case study style falls prevention education was developed in 2015 by Nursing Education. This was mandatory for nursing staff on commencement.
- Allied health staff completed a mandatory occupational health and safety online package which has falls and harm from falls prevention embedded in it.
- A learning package was developed as part of the Six Pack Falls Prevention project and was presented face to face with staff in weekly in services.
- Face to face in-services based on ward specific scenarios were developed by nursing education using incidents from local RiskMan incidents. It was provided to each ward.
- Medical staff did not have mandated falls prevention education provided at this health service.

Falls related Procedures and Guidelines

- Falls Prevention and Management
- Falls Minimisation Strategies in Procedural Areas
- Restraint – including the use of cot sides

- Cognitive Impairment Identification and Management
- Identification and Management of Delirium
- Incident Management – Clinical and Occupational Health and Safety
- Purposeful Rounding and Patient Safety Checks
- Patient Assessment and Care Planning Protocol – acute and subacute

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

Review of falls risk assessment tool

- Compliance with the tool was found to be high but prevention outcomes and clinical reasoning was less reliable.
- Literature review, assessment redesign and staff education.
- Piloting new tool with strategies without assessment.

Six pack falls prevention project

- In subacute wards, implemented six strategies: rounding, sensor mats; low low beds; cognitive assessment; traffic light assessment of mobility and staff education.

Cognitive impairment project

- Part of six pack project.
- Staff were educated to recognise and respond to cognitive impairment.
- Implemented in subacute wards.

Sensor mats

- A new type of sensor mat was investigated and implemented on subacute wards as the previous models had been unreliable.
- The new system allowed responses to be timed, calls and responses to be tracked. The mat alerted to a buzzing pager to reduce ward noise.

Team based nursing and rounding

- Implemented a change to the nursing model of care as care was previously allocated to individual patients.
- Introduced team based nursing before rounding as evidence suggested the need for teams to allow rounding.

- Rounding was piloted in three areas.
- Measured – occupational health and safety incidents, call bell wait times, patient satisfaction, staff satisfaction, falls rates, harm etc. Implementing in all areas.

Qlikview

- Surveyed clinical areas about data management and how it could be used to inform decision.
- A new data management system was implemented and ward managers were then able to drill into the ward incident data to better understand it.

Stroke manual handling program

- "Just in time" model of one-on-one nursing education on the wards when the nurse manager identified patients at high risk of falls.
- Project also covered pressure injury prevention.
- Falls role was discontinued as few knowledge gaps were identified.

Redesign of medical wards

- Falls prevention and care of the elderly were included in the design of new aged care wards that are planned.

Point prevalence of peripheral IVs

- Concerned that peripheral IVs were related to nocturia and increasing falls risk. Audit was undertaken.

Non-Slip socks

- RiskMan data trends suggested poor footwear as a cause of falls.
- Following a literature review, non-slip socks were trialled.

Cot side project

- Cot sides are known to increase harm from falls.
- Aimed to reduce the use of cot sides and educate patients and families and allow patient to take understand the risks of using cot sides when they request them.

Risk rounding, delirium screening and an audit of falls prevention equipment were also underway.

Screening tools and assessments

Organisation was using a falls risk assessment tool in 2016. This is now being replaced with a combined assessment focusing on implementing falls prevention strategies.

Paediatric wards use the Little Schmidy Falls Risk Assessment Scale.

Health Service A - Costs

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Committees	$27,306				$3,840			**$31,146**	**0.79%**	$52	
Staff Education	$39,321				$20,480			**$59,801**	**1.52%**	$99	
Projects	$44,825				$34,654			**$79,479**	**2.01%**	$132	$45,000 project funding
Procedures and Guidelines	$2,438							**$2,438**	**0.06%**	$4	
Nursing falls risk assessment/management tool		$583	$314,820	$900	$56,700			**$371,520**	**9.42%**	$616	
Falls assessments by other professionals		$676	$365,040	$1,739	$109,557			**$474,597**	**0.79%**	**$787**	
Screening tools and Assessments - totals		$1,259	$679,860	$2,639	$166,257						
Move patient to low low bed								**$0**	**0.00%**		Patients are often moved to low low bed and a supervised position at the same time
Move patient to supervised position		$1,400	$756,000	$1,400	$88,200			**$844,200**	**21.40%**	**$1,400**	
Supply non slip socks		$233	$125,820		$0			**$125,820**	**3.19%**	**$209**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Source falls prevention alarm		$0	$0	$232	$14,616			**$14,616**	**0.37%**	**$24**	
Respond to falls prevention alarms		$0	$0	$2,800	$176,400			**$176,400**	**4.47%**	**$293**	
Organise continuous patient observer (CPO)		$18	$9,720		$0			**$9,720**	**0.25%**	**$16**	
Education of patient and family (informal)			$0		$0			**$0**			Not mentioned by nurse, included in PT treatment time
Physiotherapy treatment aimed at falls prevention		$800	$432,000	$7,000	$441,000			**$873,000**	**22.13%**	**$1,448**	
Occupational Therapy treatment aimed at falls prevention			$0	$2,730	$171,990			**$171,990**	**4.36%**	**$285**	
Provide inpatient falls and balance program (untested)		$0	$0	$69	$4,347			**$4,347**	**0.11%**	**$7**	
Interventions Total		2461	$1,328,940	14324	$902,412			**$2,231,352**	**56.56%**	**$3,700**	
Post Falls Management		241	$130,140	151	$9,513			**$139,653**	**3.54%**	**$232**	
RiskMan		261	$140,940	328	$20,664			**$161,604**	**4.10%**	**$268**	
Risk Management	32954							**$32,954**	**0.84%**	**$55**	Cost probably higher - difficult to map risk management

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Falls prevention alarms	31104	Not used	Not used		$31,104	Not used	Not used	**$31,104**	**0.79%**	**$52**	
Low low/ Floorline beds	Data not available										Data not available
Non- slip socks	Data not available										Data not available
Equipment used								**$31,104**	**0.79%**	**$52**	
Continuous Patient Observers			$340,740	N/A				**$340,740**	**8.64%**	**$565**	Ward costs used in estimation
TOTAL								**$3,945,129**	**100.00%**	**$6,543**	

Beds

Acute 540, Subacute 63, Mental Health 0 Total 603

Wards

Acute 15, Subacute 2

5.2 Health Service B

Falls prevention activities are Health Service B are summarised below and followed by the cost estimation.

Committees

Committees with a primary focus of falls prevention and incidents

- Standard 10 committee - organisation wide committee overseeing falls prevention and management.
- Site skin and falls actions group (2016) – since 2017 falls are now discussed at Site clinical review committee
- Site falls and bariatric committee
- Site physiotherapy falls committee – under review at time of data collection
- Mental health falls committee

Committees where falls are a smaller part of the agenda

- Organisation wide clinical council
- Clinical risk meeting – risk team
- Site quality and safety committees

Staff Education

- Preventing falls and harm from falls – online package developed by medical and nursing education.
- Clinical practice review meetings – face to face education sessions based on clinical incidents. Repeated at different sites across the organisation.
- Graduate education falls session – for all new graduate clinicians
- April falls month – education developed and delivered by nursing education delivered across sites.
- Graduate nurses education – education developed and delivered by nursing education
- Preventing falls in medical imaging - online package.
- Falls and Neurological observations – education developed and delivered by nursing education
- Ward falls education – education developed and delivered by nursing education

- Falls and teamwork - organisation wide committee overseeing falls prevention and management.

Falls related Procedures and Guidelines

- Falls Prevention (Adult) Procedure
- Mobility Chart Falls Prevention Implementation Tool
- Falls prevention standard care Implementation Tool
- Bed rails decision support - Implementation Tool
- Falls prevention and management Background
- Falls Risk and Medications Implementation Tool
- Medical Falls risk assessment (Adult) Procedure
- Post fall Procedure
- Delirium in hospital Clinical Guideline
- Dementia in hospital Clinical Guideline
- Preliminary Investigation Fall: ISR 1 or 2 injury or sentinel event Implementation Tool
- Falls and falls harm prevention in older people - Clinical Guideline
- Medical Special Intervention request and responsibilities Procedure
- Medical special intervention handover – implementation tool
- Falls prevention (neonates and paediatrics) Procedure
- Falls Prevention - Little Schmidy Falls Risk Assessment Scale - Implementation Tool
- Restraint excluding Mental Health and Residential Aged Care Procedure

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

Falls week 2016

- Falls week was coordinated by nursing education and aimed to raise awareness and engagement in the strategies to prevent falls. Included videos, suppliers and audit data.
- The same roadshow was taken to each site to prevent staff having to travel and included displays, activities and education.

Falls champions

- The aim was to have local based clinicians - nurses and allied health- from wards and departments to meet and address local falls issues, to make strategies relevant to each area.
- There was a monthly meeting for each site facilitated by nursing education.
- All sites were using a framework of organisation values to discuss ideas which were then fed back to sites and ratified by the groups.

Falls prevention consumer engagement

- Mapping brochures was underway, with a plan to develop easier to understand brochures using pictures.
- A working group had been convened focussing on inpatient education and what to do when patients go home.
- Pladned to use patients' and carers' stories and develop short vignettes to show staff.

Falls toolbox

- A summary of national standards and international literature on falls related issues that arise for nurses clinically.
- Aimed to assist staff to think about why a person may be at risk of falling and then allow tailoring prevention interventions. The resource tool was available online.

Delirium and dementia project

- This project resulted from a number of incidents which coincided with the release of the Delirium clinical care standard and dementia clinical practice recommendations which will be part of part of Version 2 of the National Quality and Safety Standards.
- A cross site steering group was convened and use the CHOPS - care of confused hospitalised older persons - principle based approach from NSW.
- Working groups were convened, including; screening and assessment, environment, non-pharmaceutical, pharmaceutical, food, families and carers.
- A validated screening tool was chosen.
- An education, environmental, cognition clinical lead was appointed for 2 years, whose role will be to support the staff on the wards and role model solutions.
- Also undertaking benchmarking and a gap analysis.
- Key outcomes measures: 1) reduced length of stay as a results of reduced harm; 2) increased coding of delirium and dementia.

Post falls medical review – Mental Health

- Introduced form for both aged mental health inpatient units. Developed form to be completed by nursing, physiotherapy and medical staff.
- Aimed to ensure a systematic assessment post falls was completed and documented. Implemented across all of mental health after a fall where neurological observations were not completed when indicated.

Mental health - care planning

- 80% of mental health patients were deemed to be at high risk of falling.
- Audited medical records to ascertain if there was an updated care plan, looking for specific information that would assist that patient not to fall.
- No specific strategies were being recorded.
- Educated staff on the importance of recording specific strategies.
- Nurse Managers began reviewing care plans every week.

Mental health - mapping of falls

- Mapping falls in aged acute mental health unit.
- Recorded where and when falls were occurring.
- Aimed at developing a map of the ward that was colour coded as to where and when falls happen, to build up the patterns.
- Unit is a large spread out unit, with all single rooms, so aimed to increase staff awareness of where falls had occurred in the past.

Moving safely on cardiac ward

- Quality improvement project which aimed to use the health belief model to change patient knowledge and behaviour around falls prevention.
- Education sheet was given to each patient for six months.
- Measured retention of information using a patient audit.

Gait aid identification project

- Review of coloured mobility charts and gait aids to indicate mobility status and falls risk. Started in 2015 and a survey in 2016 found staff were not using it well.
- Planned education and then reassessment.

Team nursing model

- In response to a number a fractures resulting from patient falls, a team nursing model was implemented on one ward. Instead of 1:4 ratio, 3:12. Aimed to increase patient contact with nursing staff.
- Also implemented nurses giving handovers and writing up notes in the patients' rooms to increase the time nurses spent with patients.

Screening tools and assessments

Organisation B used a falls risk assessment screening tool based the Ontario Modified STRATIFY (Sydney Scoring) in adult wards.

Paediatric wards use Little Schmidy Falls Risk Assessment Scale.

Health Service B – Costs

	Organisation wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls cost	Cost per bed	Notes
Committees	$35,993		$10,966		$8,894		$4,389	**$60,242**	**0.59%**	**$69**	
Staff Education	$49,638		$11,662		$12,964		$3,096	**$77,360**	**0.76%**	**$89**	
Projects	$55,300		$3,436		$2,064		$10,604	**$71,404**	**0.70%**	**$82**	$300,000 grant
Procedures and Guidelines								**$17,106**	**0.17%**	**$20**	
Nursing falls risk assessment/ management tool		$1,213	$640,464	$1,167	$231,066	$182	$25,844	**$897,374**	**8.81%**	**$1,034**	
Falls assessments by other professionals		$3,015	$1,591,920	$1,200	$237,600	$22	$3,124	**$1,832,644**	**0.59%**	**$2,111**	AAU probably spend more time on assessment than other wards
Screening tools and Assessments - totals		**$4,228**	**$2,232,384**	**$2,367**	**$468,666**	**$204**	$28,968				

	Organisation wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls cost	Cost per bed	Notes
Move patient to low low bed			$0	$67	$13,266		$0	**$13,266**	**0.13%**	**$15**	
Move patient to supervised position		$1,816	$958,848	$400	$79,200	$8	$1,136	**$1,039,184**	**10.21%**	**$1,197**	Includes moving to Low low bed
Supply non slip socks			$0		$0				**0.00%**	**$0**	
Source fall prevention alarm		$43	$22,704	$67	$13,266			**$35,970**	**0.35%**	**$41**	
Respond to falls prevention alarms		$1,038	$548,064	$1,038	$205,524			**$753,588**	**7.40%**	**$868**	
Organise continuous patient observer		$21	$11,088	$0	$0			**$11,088**	**0.11%**	**$13**	
Education of patient and family (informal)		$847	$447,216	$600	$118,800			**$566,016**	**5.56%**	**$652**	
Physiotherapy treatment aimed at falls prevention		$1,040	$549,120	$3,500	$693,000			**$1,242,120**	**12.20%**	**$1,431**	
Occupational Therapy treatment aimed at falls prevention			$0	$2,964	$586,872			**$586,872**	**5.76%**	**$676**	

	Organisation wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls cost	Cost per bed	Notes
Provide bedside mobility card and/or staff education re patient mobility		$607	$320,496			$9	$1,278	**$321,774**	**3.16%**	**$371**	
Medication review			$0	$147	$29,106	$4	$568	**$29,674**	**0.29%**	**$34**	Pharmacist
Organise investigations and follow up		$2,548	$1,345,344	$420	$83,160	$13	$1,846	**$1,430,350**	**14.05%**	**$1,648**	Includes medication review by medical staff
Falls champion (nursing)		$87	$45,936	$67	$13,266	$34	$4,828	**$64,030**	**0.63%**	**$74**	
Interdisciplinary risk rounds/Safety Huddle/Harm Free Round				$186	$36,828			**$36,828**	**0.36%**	**$42**	
Post Falls Management		$285	$150,480	$431	$85,338	$127	$18,034	**$253,852**	**2.49%**	**$292**	
RiskMan		$392	$206,976	$367	$72,666	$104	$1,136	**$280,778**	**2.76%**	**$323**	

	Organisation wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls cost	Cost per bed	Notes
Falls prevention alarms			$11,580	$582	$115,160			**$126,740**	**1.24%**	**$146**	
Low low/ Floorline beds	$24,198							**$24,198**	**0.24%**	**$28**	
Hip protectors											
Equipment used	$38,198		$11,580		$131,594			**$150,938**			
Continuous patient observer (CPO)s		$738	$389,664	$269	$53,262	$132	$1,136	**$444,062**	**4.36%**	**$512**	
							TOTAL	**$10,364,310**	**100.00%**	**$11,940**	

Beds

Acute 528, Subacute 198, Mental Health 142 Total 868

Wards

Acute 24, Subacute 9, Mental Health 6

5.3 Health Service C

Falls prevention activities are Health Service B are summarised below and followed by the cost estimation.

Committees

Committees with a primarily focus of falls prevention and incidents

- Organisation wide prevention falls and harm from falls committee
- Site falls committee
- Site falls, pressure, medication risk committee
- Site falls and pressure prevention committee
- Site National Standards preventing falls and harm from falls committee

Committees where falls are a smaller part of the agenda

- Organisation wide quality committee

Staff Education

- Falls month education and awareness campaign – cross site falls awareness and education led by nursing education
- Falls Month - face to face education – led by nursing education
- Falls month physiotherapy and occupational therapy facilitated education – local ward education
- Online quiz falls month – organisation wide – developed by nursing education
- Risk Assessment education – ward based education

Falls related Procedures and Guidelines

- Fall minimisation protocol
- Clinical risk assessment and care planning policy
- Incident management protocol

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

Development of the combined risk assessment tool

- Risk assessments were all completed on different forms - falls, pressure, deep vein thrombosis and nutrition.
- Aimed to pull all of the validated tools together into one form, to encourage clinical decision making. Also added a box for when clinical judgement did not match the score to allow the score to be increased.
- Review started in 2015. Protocol review was 2016, as was finalisation, development of education pack and roll out of education.
- Compliance has been measured by audit.

Delirium screening project

- Aimed to assess the usability for a delirium screening tool. Tried 4AT and CAM on one ward at three sites.
- Assessed by meeting with nursing staff and analysing the advantages and sensitivity of each tool and the feasibility for screening for both dementia and delirium.

Roll out of acute risk screening tool on subacute wards

- Subacute wards previously used a different process for falls risk screening.
- Aimed to make the process consistent across the organisation.
- Involved education and changes to processes.

Point prevalence audit

- Quality team reviewed the audit questions.
- The audit is approximately 10% falls related.
- A report and action plan were developed in response to the results.

Reducing falls – ward project

- Following an unusually high number of falls on the ward and a fall with harm, the ward reviewed its falls processes.

- Developed a falls safety walk tool where a nurse manager randomly picked patients to review. The manager reviewed the falls prevention strategies documented and asked the patient if they are being used.
- Real time feedback was given to the nurses.

Falls prevention action plan – ward project

- Following an unusually high number of falls on the ward and a fall with harm, the ward reviewed its falls processes.
- All patients who scored a 3 on the risk tool, and/or were confused or if they were admitted following a fall, were automatically given a lo lo bed and rails and falls prevention alarm for 24 hours.

Falls Cheat sheet – ward project

- Ward reviewed its falls strategies and developed a risk fact sheet. It was then made available across the site and will be developed into a poster.

Equipment register

- An equipment register of falls prevention and occupational health and safety equipment was developed to measure what was equipment was available and to ensure equipment had been checked for safety by Engineering.

Inpatient falls education program

- A weekly hour of inpatient falls education for inpatients on 3 rehabilitation wards was developed and implemented.
- 6-10 patients attend each session.

Screening tools and assessments

Organisation C used a falls risk assessment screening tool adapted with permission from the ACSQHC. The risk assessment flow chart used is The Northern Modified STRATIFY in adult wards. These were then combined into an integrated risk assessment tool, which was being implemented.

Paediatric ward was in the process of developing a falls risk screening tool.

Health Service C – Costs

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Cost per bed	Notes
Committees	$36,167		$3,490					**$39,657**	**0.39%**	**$25**	
Staff Education	$57,128		$17,288		$2,800			**$77,216**	**0.75%**	**$49**	
Projects	$77,786		$0		$15,440			**$93,226**	**0.91%**	**$59**	
Procedures and Guidelines	$2,104							**$2,104**	**0.02%**	**$1**	
Nursing falls risk assessment/management tool		$607	$738,719	$1,167	$355,935	$120	$7,560	**$1,102,214**	**10.70%**	**$695**	Integrated assessment tool is being rolled out
Falls assessments by other professionals		$100	$121,700	$1,232	$375,760		$0	**$497,460**	**4.83%**	**$314**	Medical staff not available in MH
Move patient to low low bed				$75	$22,853			**$22,853**	**0.22%**	**$14**	
Move patient to supervised position		$416	$506,272	$390	$119,024	$17	$1,071	**$626,367**	**6.08%**	**$395**	
Supply non slip socks		$69	$83,973		$0			**$83,973**	**0.82%**	**$53**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Cost per bed	Notes
Source falls prevention alarm			$0	$21	$6,405			**$6,405**	**0.06%**	**$4**	
Respond to fall prevention alarms		$832	$1,012,544	$1,280	$390,400			**$1,402,944**	**13.62%**	**$885**	
Organise continuous patient observer (CPO)		$59	$71,803	$4	$1,220			**$73,023**	**0.71%**	**$46**	
Education of patient and family (informal)		$582	$708,294	$1,067	$325,435	$69	$4,347	**$1,038,076**	**10.08%**	**$655**	
Physiotherapy treatment aimed at falls prevention		$981	$1,193,877	$1,844	$562,420			**$1,756,297**	**17.06%**	**$1,108**	
Occupational Therapy treatment aimed at falls prevention				$461	$140,605			**$140,605**	**1.37%**	**$89**	
Provide inpatient falls and balance program (untested)				$59	$17,995			**$17,995**	**0.17%**	**$11**	
Provide bedside mobility card and/or staff education re patient mobility				$1,098	$334,890			**$334,890**	**3.25%**	**$211**	
Falls champion (nursing)				$51	$15,555	$17	$1,071	**$15,555**	**0.15%**	**$10**	
Source falls prevention equipment		$416	$506,272	$41	$12505	$20	$1260	**$520037**	**4.99%**	**$328**	
Refer to inpatient allied health		$139	$169163					**$169163**	**1.62%**	**$107**	
Post Falls Management		$186	$226,362	$185	$56,425	$83	$5,229	**$288,016**	**2.80%**	**$182**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Cost per bed	Notes
RiskMan		$358	$435,686	$184	$56,120	$18	$1,134	**$492,940**	**4.79%**	**$311**	
Risk Management											Poor data
Falls prevention alarms			$88,000		$22,000			**$110,000**	**1.07%**	**$69**	Used bed distribution to allocate cost
Low low/ Floorline beds			$62,240		$15,560			**$77,800**	**0.76%**	**$49**	
Non- slip socks			$6,800		$1,700			**$8,500**	**0.08%**	**$5**	
Equipment used			$157,040		$39,260			**$196,300**	**1.91%**	**$124**	
Continuous patient observer (CPO)*								**$1,299,700**	**12.62%**	**$820**	*Data not available. Used average of other health services
				1,585			TOTAL	**$10,297,016**	**100.00 %**	**$6,497**	

Beds

Acute 1217, Subacute 305, Mental Health 63 Total 1585

Wards

Acute 19, Subacute 10, Mental Health

5.4 Health Service D

Falls prevention activities are Health Service D are summarised below and followed by the cost estimation.

Committees

Committees with a primarily focus of falls prevention and incidents

- Falls prevention committee – organisation wide
- Ward falls committee – one ward only

Committees where falls are a smaller part of the agenda

- Subacute Clinical Governance and Critical Incident Review Committee
- Subacute Interdisciplinary Quality, Patient Safety and Risk Committee
- Organisation wide Acute Clinical Incident Outcome Review Committee (CORC)
- Ward level governance meetings

Staff Education

- Online falls prevention package
- Management of the acute surgical patient, medical patient, neurological patient – led by nursing education
- Post falls response – package developed to safely help patients up from the floor following a fall
- Graduate nurses study day includes falls prevention education
- Falls inservices on ward developed by Falls clinical nurse consultant in response to request and incidents
- Use of the hovermat post fall to prevent patient and staff injury
- One on one education on the ward by ward nurse educator
- Ward falls prevention education
- Victorian Geriatric Medicine Training Program – training and education for medical trainees
- Geriatric Medicine Journal club

Falls related Procedures and Guidelines

- Falls: prevention, assessment & management guideline

- Falls: Prevention, Assessment & Management policy
- Guidance on the discontinuation of high - falls risk psychotropic medications in the elderly
- Delirium guideline
- Delirium in intensive care unit guideline

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

Streamline risk assessment

- A review of risk assessment screening tools. Looked at latest evidence and found organisation had an inconsistent approach. Evidence that strategies work, but not the assessment.
- Wanted to concentrate on ensuring an appropriate plan for the patient.
- Mandated an assessment and plan within 8 hours of admission. Added the ability to increase risk ratings if risk assessment scores were judged clinically to be too low.
- Changed protocol to require staff to review the plan rather the assessment. The risk screens are repeated only in in particular circumstances, such as an inpatient fall.

Harm Free

- Projects run on each ward to upskill ward teams to understand and respond to data. Improvement projects were developed and implemented on each ward.

Delirium project

- Local concerns and the Delirium clinical care document was released by the ACSQHC.
- Organisation wide project commenced in July 2016 with the formation of a steering group with six working groups; environment and equipment, pharmacy, model of care, alerts and monitoring, staff education and engagement, and consumer engagement.
- Point prevalence 18-20% via a notes audit which was below the rates found in research.
- Coding showed only 2% of patients were coded with delirium as a diagnosis.
- 30% of patients with falls had delirium.
- Implementing NSW CHOPS program (care of confused hospitalised older persons).

Rapid falls response service

- Aimed to prevent hospital admission due to falls.

- Allied health advanced practice role developed to screen, refer and respond within 24 hours of referral.
- Measuring client impact factors – quality of life, falls confidence, timing of falls using a validated tool and healthcare utilisation.
- The team replaces or is an adjunct to the ambulance visit. They implement a post falls screen; check patient is safe at home. Then provide a targeted intervention depending on outcome of assessment.
- Primarily single visit, provide equipment; gait aids; falls and balance exercises. Follow up phone calls weekly.

Allied Health staff occupational health and safety training

- Allied health staff package was developed with a training matrix for different clinician tasks and settings aimed at the prevention of harm from falls.
- Teaching staff how to immobilise and evacuate a patient safely after a fall.

Non-slip socks in GEM

- One ward had several patients who refused shoes and so investigated and purchased non-slip socks. Shoes and socks are preferred.

Call Don't Fall Signage

- Implemented across wards to remind patients to use call bells.

Incorporating risk into the journey boards

- Reviewed journey boards in 8 wards and plan to implement a standardised model. These are to be managed locally.

Subacute Falls Benchmarking

- Subacute falls benchmarking was led by the organisation for the state.
- Involved benchmarking between health services to measure responses to the implementation of strategies.

Environmental audit

- National Aging Research Institute (NARI) refreshed the better care guidelines, which will be piloted to test the revision to the audit tool to see they make sense.

Point of care audit

- Covers 9 standards; Each ward completes 8 per month.

Screening tools and assessments

Locally developed fall risk assessment tool was incorporated into a combined risk assessment plan used in the acute setting. Subacute used the same tool incorporated into the electronic medical record. The tool had been validated in the subacute setting.

There were no paediatric wards at this health service.

Health Service D – Costs

	Org wide	Acute per bed per year	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Committees	$14,223		$29,790		$40,815		$729	**$85,557**	**1.07%**	**$103**	
Staff Education	$136,549		$89,280		$15,360			**$241,189**	**3.02%**	**$292**	
Projects	$59,978		$17,768		$25,763			**$103,509**	**1.30%**	**$125**	$340,000 project funding
Procedures and Guidelines	$15,172							**$15,172**	**0.19%**	**$18**	Writing, updating and reading
Nursing falls risk assessment/management tool*		$570	$287,850	$619	$152,893	$185	$13,875	**$454,618**	**5.69%**	**$550**	
Medical Falls Risk Assessment				$105	$25,935			**$25,935**	**0.32%**	**$31**	
Falls assessments by other professionals		$522	$263,610	$1,233	$304,551	$146	$10,950	**$579,111**	**7.25%**	**$700**	
Move patient to low low bed		$92	$46,460	$256	$63,232		$0	**$109,692**	**1.37%**	**$133**	
Move patient to supervised position		$46	$23,230	$64	$15,808	$8	$600	**$39,638**	**0.50%**	**$48**	
Source falls prevention alarm		$31	$15,655	$6	$1,482		$0	**$17,137**	**0.21%**	**$21**	
Respond to falls prevention alarms		$749	$378,245	$385	$95,095		$0	**$473,340**	**5.92%**	**$572**	
Organise continuous patient observer (CPO)		$13	$6,565	$177	$43,719		$0	**$50,284**	**0.63%**	**$61**	

	Org wide	Acute per bed per year	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Education of patient and family (informal)		$1,496	$755,480	$1,341	$331,227	$197	$14,775	**$1,101,482**	**13.78%**	**$1,332**	
Remove clutter		$1,142	$576,710	$1,213	$299,611	$96	$7,200	**$883,521**	**11.06%**	**$1,068**	
Supervise patients in the bathroom			$0	$469	$115,843		$0	**$115,843**	**1.45%**	**$140**	
Physiotherapy treatment aimed at falls prevention		$881	$444,905	$2,592	$640,224		$0	**$1,085,129**	**13.58%**	**$1,312**	
Occupational Therapy treatment aimed at falls prevention			$0	$1,120	$276,640		$0	**$276,640**	**3.46%**	**$335**	
Provide inpatient falls and balance program (untested)			$0		$0		$0	**$0**	**0.00%**	**$0**	
Provide bedside mobility card and/or staff education re patient mobility			$0	$693	$171,171	$112	$8,400	**$179,571**	**2.25%**	**$217**	
Medication review		$23	$11,615	$566	$139,802	$47	$3,525	**$154,942**	**1.94%**	**$187**	
Organise investigations and follow up		$33	$16,665	$188	$46,436		$0	**$63,101**	**0.79%**	**$76**	
Falls champion (nursing)			$0	$154	$38,038		$0	**$38,038**	**0.48%**	**$46**	
Interdisciplinary risk rounds/Safety Huddle/Harm Free Round		$33	$16,665	$562	$138,814		$0	**$155,479**	**1.95%**	**$188**	
Post Falls Management		$147	$74,235	$311	$76,817	$115	$8,625	**$159,677**	**2.00%**	**$193**	
RiskMan		$34	$17,170	$46	$11,362	$22	$1,650	**$30,182**	**0.38%**	**$36**	

	Org wide	Acute per bed per year	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total falls spend	Per bed per year	Notes
Risk Management	**$6,067**							**$6,067**	**0.08%**	**$7**	Difficult to estimate
Falls prevention alarm	$20,074										
Low low/ Floorline beds	$89,573										
Non- slip socks	$1,200				$1,200						
Patriot collars	$2,356.05										
Call Bell - Buddy Buzzer/ Jelly Bean	$1,805										
Equipment used	**$115,008**							**$115,008**	**1.44%**	**$139**	
Continuous patient observers	**$1,429,427**							**$1,429,427**	**17.89%**	**$1,728**	
TOTAL								**$7,990,639**	**100.00%**	**$9,662**	

*FRASS is part of an integrated nursing assessment in acute; separate in mental health and completed by medical staff in subacute, including a medication review

Beds

Acute 505, Subacute 247, Mental Health 75 Total 827

Wards

Acute 18, Subacute 18, Mental health 3

5.5 Health Service E

Falls prevention activities are Health Service E are summarised below and followed by the cost estimation.

Committees

Committees with a primarily focus of falls prevention and incidents

- Falls Steering committee – organisation wide falls prevention committee
- In patient clinical nurse consultant meeting with Falls lead – planning meeting
- Subacute ward falls risk assessment review – weekly meeting to review falls risk assessment scores on ward.

Committees where falls are a smaller part of the agenda

- Geriatric evaluation and management quality committee
- Rehabilitation operational quality and risk committee
- Palliative care operational quality and risk committee
- Subacute executive quality committee

Staff Education

- Online falls prevention education – mandated to be completed by all staff every 2 years
- Falls prevention education was included at new staff orientation each month
- Falls education was provided for physiotherapists rotating into aged care by senior physiotherapists
- Portfolio holders day – clinical nurse consultants provided education to ward portfolio holders
- Ward based education – provided by falls champions on the wards
- Ward based education – provided by senior physiotherapists
- Ward based education registrars - by senior physiotherapists
- Ward based falls in service – provided by clinical nurse consultants

Falls related Procedures and Guidelines

- Falls prevention and Management
- Delirium Prevention and Management
- Fall out mats
- Falls prevention physiotherapy subacute/Transition care program
- Immediate management of consumers following a fall including therapeutically anticoagulated consumers
- Lap restraint to prevent falls
- Low low beds
- Hip protectors
- Bed and chair sensor use

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

New patient assessment and risk screen*

- Developed a combined risk assessment tool.
- Falls risk assessment tool only to be completed if “yes” to one of three screening questions.
- Stepped wedge randomised controlled trial of tool is underway.

Simulation training on prevention of falls*

- This research evaluated the effectiveness, cost-effectiveness and student experience of health professional students undertaking simulation training for the prevention of falls amongst hospitalised inpatients.
- Health professional students were trained in the safe recovery program and falls rates were measured.

Patient Companion volunteers

- Ongoing program of volunteers providing assistance and companionship to patients on one acute general medical ward.

Improving the bathrooms in subacute care

- Bathrooms in the ward were small and not designed for patients with gait aids and / or needing assistance.
- Funding was sourced to renovate bathrooms to reduce risk of falls.

Bedside and documentation audits

- Audits of compliance with protocols, including falls prevention.

Orange sock trial

- Literature review, met with products representative.
- Wrote protocol.
- Surveyed staff and patients.

*Randomised controlled trial

Screening tools and assessments

Health Service E have developed a combined risk assessment tool. Falls risk assessment tool only to be completed if "yes" to one of three screening questions. The falls risk assessment tool was developed and validated at Health Service E in 1999.

Humpty falls assessment tool was used in paediatrics.

Health Service E – Costs

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total spend	Cost per bed 2016	Notes
Committees	$14,401		$0		$8,693			**$23,094**	**0.32%**	**$39**	
Staff Education	$56,244		$7,038		$9,752			**$73,034**	**1.02%**	**$122**	
Projects	$14,360				$6,504			**$20,864**	**0.29%**	**$35**	750,000 funding and capital works
Procedures and Guidelines	$7,179							**$7,179**	**0.10%**	**$12**	
Nursing falls risk assessment/management tool		$586	$209,788	$121	$23,660	$293	$13,179	**$246,627**	**3.45%**	**$412**	
Falls assessments by other professionals		$2,530	$905,851	$1,033	$201,435	$65	$2,925	**$1,110,211**	**15.55%**	**$1,857**	
Move patient to low low bed		$260	$93,080	$102	$19,890			**$112,970**	**1.58%**	**$189**	
Move patient to supervised position		$260	$93,080	$102	$19,890			**$112,970**	**1.58%**	**$189**	
Supply non slip socks		$0	$0		$0			**$0**	**0.00%**	**$0**	
Source falls prevention alarm		$87	$31,146	$520	$101,400			**$132,546**	**1.86%**	**$222**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total spend	Cost per bed 2016	Notes
Respond to falls prevention alarms		$520	$186,160	$1,560	$304,200			**$490,360**	**6.87%**	**$820**	
Organise continuous patient observer (CPO)		$40	$14,320	$0	$0			**$14,320**	**0.20%**	**$24**	
Education of patient and family (informal)				$3,133	$610,935	$10	$450	**$611,385**	**8.56%**	**$1,022**	
Physiotherapy treatment aimed at falls prevention		$2,674	$957,292	$2,400	$468,000	$5	$225	**$1,425,517**	**19.97%**	**$2,384**	
Occupational Therapy treatment aimed at falls prevention			$0	$3,000	$585,000			**$585,000**	**8.19%**	**$978**	
Provide inpatient falls and balance program (untested)			$0	$48	$9,360			**$9,360**	**0.13%**	**$16**	
Medication review		$54	$19,332	$84	$16,380			**$35,712**	**0.50%**	**$60**	
Organise investigations and follow up		$321	$114,918		$0			**$114,918**	**1.61%**	**$192**	
Falls champion (nursing)		$206	$73,748	$78	$15,210	$24	$1,080	**$90,038**	**1.26%**	**$151**	
Interdisciplinary risk rounds/Safety Huddle/Harm Free Round				$59	$11,505			**$11,505**	**0.16%**	**$19**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total spend	Cost per bed 2016	Notes
Source falls prevention equipment				$433	$84,435			**$84,435**	**1.18%**	**$141**	
Post Falls Management		$149	$89,102	$274	$53,430	$17	$765	**$143,297**	**2.01%**	**$240**	
RiskMan		$335	$200,330	$120	23400	$51	$2,295	**$226,025**	**3.17%**	**$378**	
Risk Management	$40,960		$0					**$40,960**	**0.57%**	**$68**	
Falls prevention alarm	$138,519							$138,519	**1.94%**	**$232**	Hire and purchase
Low low/ Floorline beds	$23,800							**$23,800**	**0.33%**	**$40**	
Equipment used		Per ward		Per ward				**$166,795**	**2.34%**	**$279**	
Continuous patient observers*		$133,680	$1,203,120	$7,433	$52,031			**$1,255,151**	**17.58%**	**$2,099**	
							TOTAL	**$7,139,797**	**100.00%**	**$11,940**	

*50% of CPOs for "increased patient acuity" and "behavioural"

Beds

Acute 358, Subacute 195, Mental Health 45 Total 598

Wards

Acute 9, Subacute 7, Mental Health

5.6 Health Service F

Falls prevention activities are Health Service F are summarised below and followed by the cost estimation.

Committees

Committees with a primarily focus of falls prevention and incidents

- Cognition, mobility and continence expert advisory committee – organisation wide committee
- Falls working party – subcommittee of advisory committee.
- General medicine falls committee - aimed as a weekly quick review of all falls in the program

Committees where falls are a smaller part of the agenda

- Clinical executive committee – falls with harm reported
- Clinical practice committee – falls with harm reported
- Emergency Department and General medicine quality committee – program falls with harm reported

Staff Education

- iLearn package –online falls prevention package
- Patients with Challenging Behaviours and Falls Prevention – developed and delivered by nursing education on wards
- Use of hoverjack post falls – nursing education presented on ward
- Post fall response - nursing education presented on ward
- Delirium recognition and assessment staff education

Falls related Procedures and Guidelines

- Falls prevention for Bed based services clinical practice guideline
- Falls risk assessment tool
- Over bed alert
- Mobility status chart
- Mobility status chart guideline

- Orientation to environment and falls education Cue Card
- Patient information handbook
- Falls action list
- Canadian head injury rule
- Nexus neck injury rules
- Recognising and responding to Delirium
- Mental health falls prevention

Falls Prevention Projects

Capital works and externally generated project funding (grants) were not included in the cost of projects.

Falls risk Assessment and management plan

- Previously had used the six pack program but evidence showed it had little impact.
- Local data showed the falls risk assessment and management plan with interventions that were dictated, was not effective.
- Planning to stop using the FRAT. A new tool was developed and is being piloted in 2017.

Cognitive screening algorithm

- Clinical staff flagged that there was not a standardised process for cognitive screening. Some patients were not being screened and there were delays and duplications.
- Staff couldn't have a comparative discussion because there was not a framework for assessment and understanding.
- Trialled and then decided on a tool, wrote training packages and implemented new tool on the wards.

Establishing the gap in practice around delirium and dementia

- Developed a point prevalence survey to assess the level of delirium and dementia across the organisation.
- Survey showed that delirium and dementia were not being recognised consistently.
- Will be published.

Delirium guidelines

- Two thirds of falls are in people who have cognitive impairment.
- A new delirium guideline was drafted.

Mobility status charts

- A chart at patient bedside that outlines a guide for the patient's bed mobility, transfers and mobilisation had been used in subacute.
- It should be consistent with what is documented in the medical record. Decided to implement it organisation wide.
- Made changes to the previous chart to include smart moves and occupational health and safety Implementation – trialled on subacute wards.
- Nurses were to complete on admission and review daily and allied health can also review and ensure it matches the tags on the frames.

Post falls response

- A gap was identified in objective guidance of what to do after a patient fall for junior medical staff.
- A 2015 survey showed junior doctors didn't know what to do. Previous guideline wasn't well known.
- Team reviewed the guidelines added a flow chart for the doctors' actions, with input from emergency and neurology. Based on models from interstate models.

Falls equipment audit

- Developed a falls equipment audit. Consisted of an equipment stocktake, a clinician survey to assess ordering processes and a sustainability plan.

Falls Audit - General medicine

- General medicine wards undertook an extra audit of compliance with procedures due to high falls rate.

Falls fact sheet involving consumers

- Developed a new consumer brochure with the consumer education committee.

Blast falls - evaluation - see project report and brief

- "By leadership action support and teamwork" Rapid improvement to implement practice guidelines.
- Consisted of a launch where VHIMS and compliance data was presented to the ward. The redesign team facilitated improvement strategies with the ward team.
- Staff then planned and implemented their local compliance to practice guideline.
- This project was completed early 2016 and evaluated in 2016.

Blast falls on Central ward (Subacute)

- Blast falls – ward team worked through causes of and what could be done to reduce falls. Included notices and carer education about falls alarms - to make relatives responsible as well.

Falls reduction and wellbeing program

- Volunteers were trained to work with patients in the geriatric unit to assist them in activities and eating and run groups.
- Ongoing program with falls reduction as one of the primary aims.

Documentation audit

- Measured compliance with National Standards

Bedside audit

- Measured compliance with National Standards

Screening tools and assessments

In 2016, the Falls Risk assessment tool was in use at Health Service F. It used the Ontario Modified Stratify (Sydney Scoring) with minor local modification. Health Service F was in the process of ceasing use of the FRAT and developing an integrated screening tool.

In 2016, there was not a paediatric screening tool in use. A tool using the Little Schmidy Falls Risk Assessment had been developed and was in use in 2017.

Health Service F – Costs

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total	Cost per bed in 2016	Notes
Committees	$45,546		$9,430					**$54,976**	0.88%	**$77**	
Staff Education	$96,285		$8,160		$6,016		$0	**$110,461**	1.78%	**$155**	
Projects	$87,195		$6,062		$28,990			**$122,247**	1.97%	**$172**	$19,000 project funding
Procedures and Guidelines	$10,656							**$10,656**	0.17%		Cannot report on number of times accessed
Nursing falls risk assessment/management tool		$970	$398,670	$558	$128,898	$114	$7,866	**$535,434**	8.61%	**$753**	
Falls assessments by other professionals		$854	$350,994	$1,555	$359,205	$20	$1,380	**$711,579**	11.44%	**$1,001**	
Move patient to low low bed		$0	$0	$1,012	$233,772			**$233,772**	3.76%	**$329**	
Move patient to supervised position		$25	$10,275	$234	$54,054			**$64,329**	1.03%	**$90**	
Supply non slip socks		$23	$9,453	$87	$20,097			**$29,550**	0.48%	**$42**	
Source falls prevention alarm			$0	$506	$116,886			**$116,886**	1.88%	**$164**	
Respond to falls prevention alarms		$647	$265,917	$506	$116,886			**$382,803**	6.16%	**$538**	
Organise continuous patient observer (CPO)		$2	$822		$0			**$822**	0.01%	**$1**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total	Cost per bed in 2016	Notes
Education of patient and family (informal)		$346	$142,206	$173	$39,963	$34	$2,346	**$184,515**	2.97%	**$260**	
Remove clutter		$728	$299,208	$87	$20,097			**$319,305**	5.14%	**$449**	
Supervise patients in the bathroom				$787	$181,797			**$181,797**	2.92%	**$256**	
Physiotherapy treatment aimed at falls prevention		$8	$3,288	$4,680	$1,081,080			**$1,084,368**	17.44%	**$1,525**	
Occupational Therapy treatment aimed at falls prevention				$281	$64,911			**$64,911**	1.04%	**$91**	
Provide inpatient falls and balance program (untested)				$112	$25,872			**$25,872**	**0.42%**	**$36**	
Medication review		$9	$3,699	$74	$17,094	$31	$2,139	**$22,932**	**0.37%**	**$32**	
Falls champion (nursing)		$69	$28,359	$56	$12,936			**$41,295**	**0.66%**	**$58**	
Source falls prevention equipment				$506	$116,886	$4	$276	**$117,162**	**1.88%**	**$165**	
Refer to AH (inpatient)				$76	$17,556	$8	$552	**$18,108**	**0.30%**	**$25**	
Handover of falls risk		$42	$17,262					**$17,262**	**0.29%**	**$24**	
Wedges under mattress to prevent rollout				$58	$13,398			**$13,398**	**0.22%**	**$19**	
Fall out mat placed next to bed				$253	$58,443			**$58,443**	**0.94%**	**$82**	
Provide exercise or walking group				$219	$50,589			**$50,589**	**0.81%**	**$71**	

	Org wide	Acute per bed	Acute total	Subacute per bed	Subacute total	Mental Health per bed	Mental Health total	TOTAL	% of total	Cost per bed in 2016	Notes
Post Falls Management		$395	$162,345	$979	$226,149	$17	$1,173	**$389,667**	6.27%	**$548**	
RiskMan		$55	$22,605	$230	$53,130	$37	$2,553	**$78,288**	1.26%	**$110**	
Risk Management	$108,304							**$108,304**	1.74%	**$152**	
		Per ward		Per ward							
Falls prevention alarm		$400	$6,800	$18,000	$144,000			**$150,800**	**2.43%**	**$212**	
Low low/ Floorline beds		$0	$0						**0.00%**		None purchased in 2016
Non- slip socks		$200	$3,400					**$3,400**	**0.05%**	**$5**	
Equipment used											
Continuous Patient Observers								**$913,935**	**14.70%**	**$1,285**	Used 50% of cost of CPO for high patient acuity
							TOTAL	**$6,217,866**	**100.00%**	**$8,745**	

Beds

Acute 411, Subacute 231, Mental Health 69 Total 711

Wards

Acute 17, Subacute 8, Mental Health 4

Discussion

The key findings from this work are that majority of resources allocated for the prevention of falls were consumed in the areas of physiotherapy treatment aimed at falls prevention, continuous patient observers, falls prevention assessment/screen by professions other than nursing and falls prevention alarms.

Several of these activities could be considered to be "multi-purpose" activities that address multiple aims simultaneously, of which falls prevention was one. Extracting the falls prevention specific amount from these activities was difficult for respondents to specify, thus some caution is required in the interpretation of these results.

The largest resource allocation category that could be classified as being entirely specific to falls prevention was the use of falls prevention alarms, where on average 11% of falls prevention resources were directed. This category exceeded the resources consumed even by falls risk assessment tool completion by nursing staff. This is of particular interest given research findings from two large randomised trials internationally indicating that this intervention has no effect on the rate of falls[1,2].

The employment of constant patient observers was part of the falls prevention strategy at all six health services and accounted for 14% of overall spend on falls prevention. Most requests for constant patient observers for falls prevention were also for other reasons, such as high patient acuity and /or cognitive impairment. Falls have been found to increase "marginally" when the impact of having constant patient observers was evaluated across seven acute inpatient wards[3].

Informal falls prevention patient education accounted for 8% of total spend on falls prevention, the number of falls per thousand beddays has been found to be not significantly different between groups provided with falls prevention material and usual care[4].

Limitations

During the process of data analysis, several limitations to the data collection method became apparent. Mapping the time spend throughout the health services on risk management around falls incidents was challenging. Estimations by clinical staff of the time spent were possible, as well as that spent by the quality and risk staff, and have been included in the estimates where possible. However, we were not able to estimate the time spent by line managers of these staff and this cost may be significant.

Some data was unavailable. For example, one organisation was unable to estimate the cost of constant patient observers. Due to the potentially large costs involved, we used an average of the costs per bed spent by the other health services to extrapolate a figure, in order to include an estimation in the overall cost and the percentages of the total cost of each activity.

We randomly selected one medical, one subacute and one mental health ward at each health service. The amount of time spent by staff in falls prevention varies between ward types. At one health service, an acute assessment unit was selected and was then compared to an acute surgical ward. These differences were then magnified by the process of calculating whole service costs by multiplying per bed cost by bed numbers.

There may be activities being undertaken on the wards selected that were not identified by the staff interviewed. We provided prompts about the kind of equipment that may be used but not about specific activities, such as patient education, to avoid the perception that we were suggesting activities that should be undertaken. Staff found estimating how much time and how frequently they performed tasks very challengeing.

Next steps

A meeting of the advisory and consumer was held on Thursday, August 24th. This data was presented, followed by a presentation of the existing evidence about the effectiveness of each of the strategies used by the health services to prevent falls and harm from falls.

The stakeholder and consumer reference group identified key areas where there is a large amount of resources being directed towards activities where there is a high level reference base available indicating there is no effect of this strategy. There were also areas identified where resources are being directed towards strategies where there is an absence of evidence indicating whether the strategies are effective or not. The reference group concluded that step should now be taken to disinvest from areas where there is known evidence of the ineffectiveness of the intervention and yet there are large resources being spent in the area. The group will now work on developing proposals to attract partnership funding to facilitate disinvestment in these activities.

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