

Towards a value proposition... scoping the cost of falls

NZIER scoping report to Health Quality and Safety Commission NZ
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Keypoints

While the majority of falls result in no harm, some falls result in financial costs and loss in quality of life.

Inpatient falls add up to \$5m a year to treatment cost...

In 2010/11 patient falls accounted for 52% of the 377 reported 'serious and sentinel events' – 45% of these falls led to hip fractures. These cost more than \$2m.

ACC claims data indicate the cost to ACC of around 2,600 inpatient falls per year is \$3m. Not all injuries from falls are claimed for, nor are all costs to society captured by this data.

Unpublished studies by a number of public hospitals found that treatment and rehabilitation of inpatients who fell in hospital may cost the hospital \$500k-600k per annum. This suggests the direct costs of patient falls could be of the order of \$5m pa nationwide.

...while all fall-related admissions in a year are enough to fill a median-sized DHB

Inpatient falls that lead to harm soak up resources, but there are five times as many hospital discharges related to falls in aged residential care, and 18 times as many from falls in the community in general.

There are a total of 47,000 fall-related discharges per annum. These account for 5% of all discharges in a year, and cost public hospitals \$205m.

This is similar to the total annual hospital budgets, or annual day- and inpatient volumes, of DHBs like Hawke's Bay or Nelson Marlborough DHB.

Falls affect quality of life and result in wider social costs

Simply looking at hospital discharges understates the impact. With over half the fall-related discharges related to people over 65, the loss of independence, including discharge into aged residential care, and premature death impose further costs.

Taking an even broader view, the 2010 evaluation for the NZ Injury Prevention Strategy estimated the cost of falls to be \$536m for treatment and rehabilitation, plus \$271m from lost economic contribution and human costs of \$929m.

Consider incentives and cost-effectiveness of harm prevention

It is clear that a considerable amount of health and disability sector resources are tied up in the treatment of injuries from falls, and in subsequent rehabilitation and care.

It is also clear that there is considerable value in preventing harm from falls, as it avoids costs of treatment and admissions to hospital or aged residential care. This frees up beds and funds for other uses. But whether and where resources should be devoted to preventing harm from falls must be informed by the cost-effectiveness of interventions (i.e., the return on investment).

Individuals and providers generally have good incentives to prevent harm from falls. But attention needs to be paid providers have the information and incentives to address falls, as the costs of falls (and thus the benefits of prevention) are not always felt where the falls (or prevention activities) happen.

Contents

1. Introduction.....	1
2. Toward a value proposition.....	2
3. Volumes	3
3.1 Scope.....	3
3.2 Volume estimates	4
4. Costs and health impact	7
4.1 Society-wide costs of falls.....	7
4.2 Cost of inpatient falls	8
4.3 Quality of life impacts	10
5. Conclusions.....	11
5.1 What we have found	11
5.2 Next steps	11

Appendices

Appendix A Additional information	12
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Figures

Figure 1 Scope of falls that result in harm	3
Figure 2 ACC claims for in-hospital falls 2010-11.....	5
Figure 3 Fall-related ACC claims by age 2010-11	6
Figure 4 Claims for falls in the community 2010-11.....	6

Tables

Table 1 New accepted claims for falls by scene 2010-2011	4
Table 2 New fall-related claims 2010/11.....	7
Table 3 Health and health service costs of falling.....	8
Table 4 Impact of inpatient falls.....	9
Table 5 Health utility estimates after fractures.....	10
Table 6 Publicly funded discharges for falls 2009/10	12

1. Introduction

This short scoping report seeks to express the value of preventing falls that lead to harm.

The purpose is to inform where the Health Quality & Safety Commission New Zealand (the Commission) may best focus its efforts in reducing harm from falls, taking into account the roles and initiatives of stakeholders, and to point to areas for further analysis.

The Commission is naturally interested in inpatient falls because in 2010/11 these accounted for 195, or 52%, of the 377 reported serious and sentinel events in public hospitals. These events require significant additional treatment, are life threatening, or cause a major loss of function or death.¹ The Commission reports that 88 of the 195 resulted in a fractured hip, reportedly costing hospitals more than \$2m.

In addition, the number of serious and sentinel event falls had risen by about 50% each year between 2007/08 and 2010/11 (the latest data available when this report was prepared). It is not clear whether this trend is due to increased and improved reporting or changes in practice.

Apart from these hospital-based serious and sentinel event falls, falls also occur in other places, such as the home and aged residential care facilities. Other stakeholders have approaches to address harm from those falls, but the Commission also has an interest as these falls may relate to treatment and care practices and decisions.

The value proposition for reducing harm from falls is that it reduces the costs of treatment and rehabilitation, including premature admission to aged residential care. It also prevents premature loss of life or decrease in the quality of life.

Prevention programme costs would need to be compared to the costs they are likely to reduce or avoid in order to assess whether a programme is the best use of resources. However that task was outside scope.

This is an initial scoping report only. The aim is to provide an initial, broad order of magnitude estimate of the financial and human costs from falls.

The methods used in this report reflect this limited brief. The approach was to: briefly explore ACC claims data and National Minimum Dataset hospital discharge data; review a number of readily available local and international research reports on the topic; and interview a number of subject matter experts on their knowledge of the volume, cost and broader consequences of falls. These experts were identified by the Commission, and those mentioned in interviews undertaken.

This initial scoping report is not intended to provide in-depth data analysis and modelling or a full systematic review of the literature on the topic. This report also does not consider the costs or effectiveness of programmes aimed at reducing the harm from falls.

¹ Health Quality & Safety Commission New Zealand. 2012. Making our hospitals safer. Serious and Sentinel Events reported by District Health Boards 2010/11. Wellington: Health Quality & Safety Commission

2. Toward a value proposition

The value of falls prevention comes from avoiding costs currently faced by funders/providers and individuals following a harm-causing fall. There are a range of definitions of harm. For scoping purposes we use a broad definition, equating harm with the need of some form of treatment and/or loss of quality of life.

Falls that lead to harm impose extra diagnostic, treatment, rehabilitation and care costs on hospitals, aged residential care, and other community-based providers.

Providers may also face extra administrative costs, such as when they need to file reports or undertake an investigation. One of the subject experts interviewed estimated that each investigation involves 60 hours of staff time. This time is thus lost to other value-adding activities, such as treatment and care. Just the 195 fall-related sentinel events may divert over 6 FTEs to administration in a year.

These additional treatment and administration costs are generally absorbed by providers. A reduction in falls would thus improve productivity, by reducing costs or enabling more care for the same overall costs.

Costs may be passed on to other parties, in particular to ACC. Some providers are compensated for extra costs resulting from a fall, for example when they are paid on a per visit or bed day basis. In those cases the full costs of a fall may not be apparent to a provider. But there is still a resource cost to society.

Individuals also face costs. Financial costs include any private contributions they may need to make to their treatment and care, and any loss of earnings not covered by ACC or insurance.

Personal costs from falls include pain, anxiety, short or long term disability, including a loss of confidence, and in some cases death.

The 2010 evaluation for the NZ Injury Prevention Strategy estimated the cost of all falls to be \$536m for treatment and rehabilitation, plus \$271m for lost economic contribution and \$929m in terms of human costs.²

The authors of that report have not been able to confirm if the cost of treatment and rehabilitation included an allowance for the bulk-funded 'public health acute services' which may add a further \$110m to the treatment costs.³

The following sections seek to provide estimates of volumes, financial costs, and personal costs.

² O'Dea D, and Wren J. 2010. NZ Estimates of the total social and economic costs of "all injuries" and the six priority areas respectively, at June 2008 prices: technical report prepared for NZIPS Evaluation. ACC: Wellington.

³ This is based on falls accounting for 26% of the injury related discharges (47,000 fall related discharges/180,000 injury related discharges) and a public health acute services budget of \$421m.

3. Volumes

3.1 Scope

The focus of this report is on falls that result in harm. This is a subset of all falls. The distinction is important, because the literature on falls prevention may report on the effectiveness of preventing falls, or of preventing harm in case of a fall. The distinction affects how we consider effectiveness and cost-effectiveness. For example, Vitamin D may not prevent falls, but it may reduce the harm in case of a fall.⁴

The next scoping issue is what harm-causing falls should be excluded. The Health Quality & Safety Commission is concerned with quality and safety in health and disability support services.

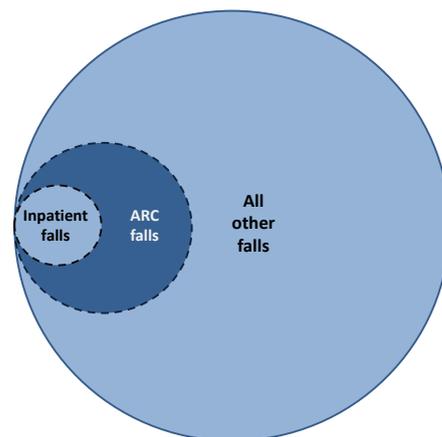
At first glance, this suggests a focus on falls in hospitals, residential care facilities, and other health care and disability support services. But care and support services are also provided in the community (e.g. home care), and inadequate community-based care, admission and discharge decisions could also lead to preventable falls that impact on quality of life and demand for services. The health system boundaries are thus porous (Figure 1).

Further, if resources are to be devoted to preventing falls, it is in the interest of society to look at where such resources can make the biggest impact. This suggests we also ought to consider falls in the community.

ACC has a clear interest and role in falls in the community, such as falls in sport (a third of falls resulting in a claim for 15-64 year olds), at work or in school.

Figure 1 Scope of falls that result in harm

Not to scale



Source: NZIER

⁴ Church J, Goodall S, Norman R, Haas M. 2011. *An economic evaluation of community and residential aged care falls prevention strategies in NSW*. Sydney: NSW Ministry of Health

3.2 Volume estimates

A recent All District Health Boards report that mapped injury prevention activity for falls found there was not one comprehensive data set for falls, their causes, and their impacts.⁵

ACC claims data is probably the most comprehensive source of falls that result in harm. ACC claims data shows about 565,000 falls resulted in an accepted claim for an injury. Claims data also provides insights on where these falls occurred (Table 1).

However, not all falls that result in harm may lead to treatment and/or a claim. And some carers or health practitioners may not report a fall or set in train an ACC claim, for example when they deal with minor injuries like cuts then and there, or seek to avoid paperwork. Other practitioners are fastidious about reporting and claiming, perhaps as part of a continuous improvement culture or because they wish to ensure the patient or resident has access to future ACC support. These issues may explain some of the observed differences in the incidence of falls reported by DHB, for example.

Table 1 New accepted claims for falls by scene 2010-2011

(Data rounded to nearest hundred)

Year	Public hospital	Residential facility	Home	Other
Volumes	2,600	10,500	280,000	271,500
Share of total	0.5%	18.5%	50%	31%

Source: ACC, Blake 2012

All fall related hospital discharges

The national minimum data set (NMDS) for 2009/10 shows there were a total of 47,000 fall-related publicly funded hospital discharges.⁶ Slipping, tripping, or stumbling caused 29% of falls.

The 2,600 falls that occurred in public hospitals shown in ACC data is the same as the volume of patient falls recently identified by the Ministry of Health from the NMDS for the second half of 2011, scaled up to a full year.

Open wounds (21%), contusion (13%), and fractures (6%) were the most cited injury types (apart from injury cannot be determined, 24%) from in-hospital falls.

Inpatient falls

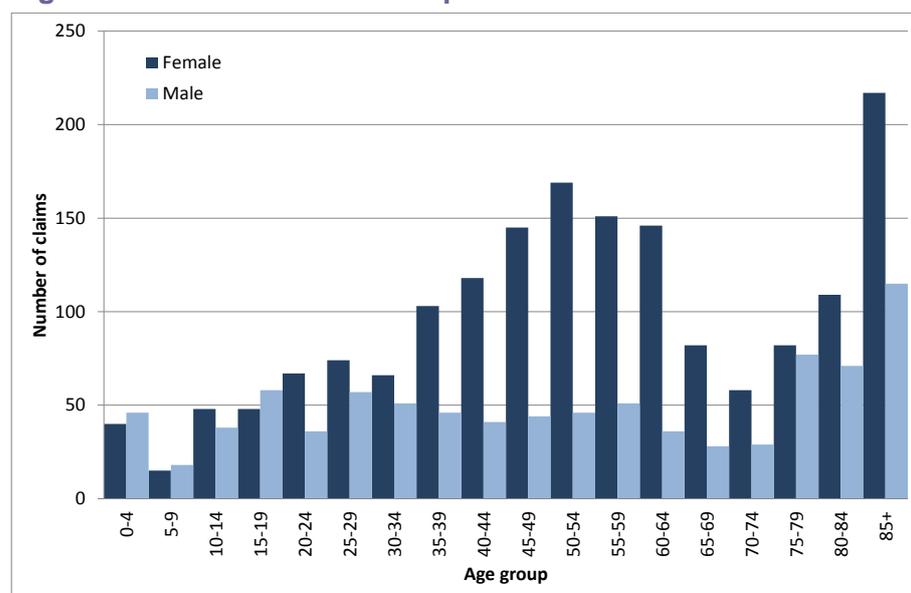
The incidence of claims for in-hospital falls is 0.6 per 1,000 population, but the frequency and incidence rises with age (Figure 2). It is 1.5 for people aged 75-79, 2.2 for those 80-84, and 4.5 for those 85+. Given the ageing population, in-hospital falls would be 20% higher in 10 years, and 40% in 20 years, and costs disproportionately higher.

⁵ Blake S. 2012. *A collaborative National Approach to Reducing Preventable Harm. Quality of care indicator mapping: Falls injury prevention and pressure injury prevention.* All District Health Boards

⁶ The Injury Prevention Research Unit reports that using NMDS data for the same period there were 20,700 discharges from public hospitals related to falls; the difference may be due to not counting day-patients and re-admissions or other definitional issues.

There is a strong gender based pattern in the number of claims for in-hospital falls. This is not explained by differences in admission rates, and is also at odds with the National Patient Safety Agency 2007 report which found that male inpatients were more likely to fall.

Figure 2 ACC claims for in-hospital falls 2010-11



Source: ACC

Falls in aged residential care

The 10,500 falls in aged residential care is in the context of the 32,000 residents. Detailed, resource-intensive claim-level analysis would be needed to identify which of these ACC claims for falls in a residential care facility resulted in a hospital admission. Evidence from elsewhere gives an insight into probabilities of use of different medical services after a fall for an 80-84 year old in residential care: 13% go to an ED, 45% are admitted to hospital, 35% use other medical services, and 3% die.⁷

The incidence of falls rises with age. This is reflected in fall-related ACC claims (Figure 3), and the NMDS for 2009/10 shows 51% of falls-related discharges related to people aged over 65 (see Table 6 in the appendix for detail). Campbell and Robertson (2010) report "In NZ half of those aged 80 or over fall in any one year."⁸ This is similar to other research – Church et al suggest a 50% probability of falling (rising with age).⁹

Robertson and Campbell (2008) cite a study of 14 residential care facilities in New Zealand finding that 271 of the 680 residents experienced at least one fall over 18 months (and fallers averaged 3.5 falls over that period), 68% resulting in an injury.¹⁰

⁷ Table 17 in Church et al. *op cit*

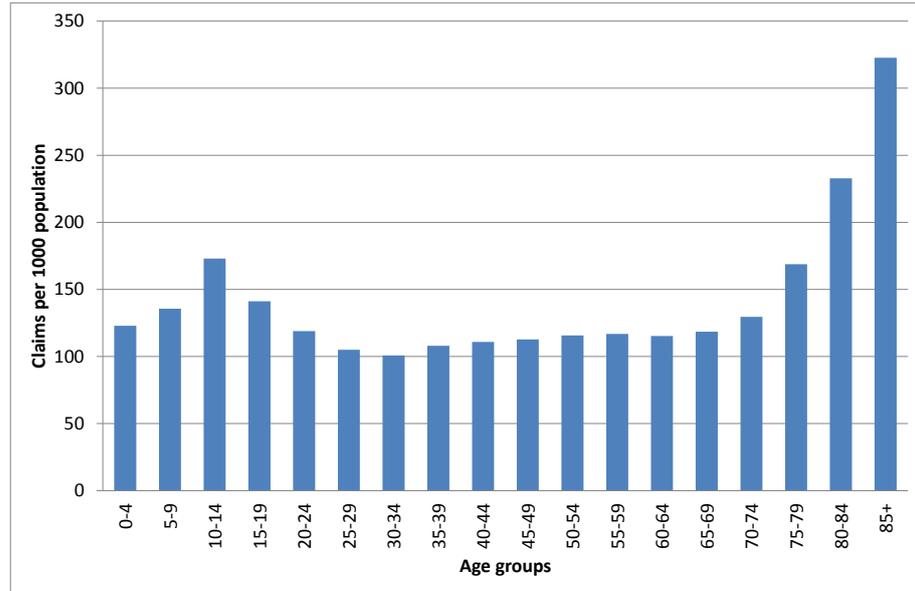
⁸ Campbell J & Robertson C. 2010. "Comprehensive approach to fall prevention on a national level: New Zealand" in *Clinics in Geriatric Medicine* 26 (2010) 719-731

⁹ Table 15 in Church et al *op cit*.

¹⁰ Robertson M C, and Campbell AJ. 2008. *Optimisation of ACC's fall prevention programmes for older people. Final Report.* Dunedin School of Medicine, University of Otago.

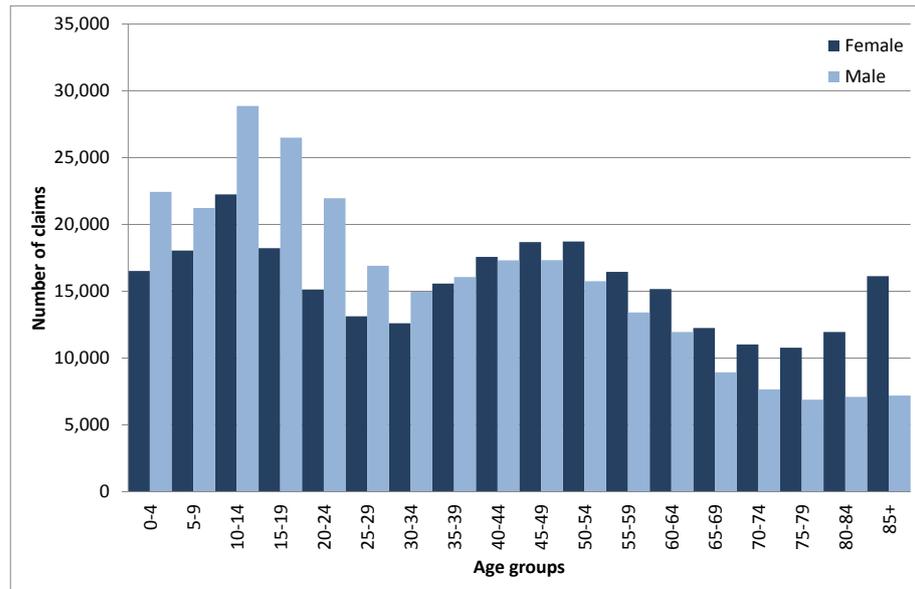
This age profile is important, as it suggests treatment for falls is going to rise over the next twenty years: currently the population over 75 is 267,000, but this will rise to 380,000 in ten years, and 550,000 in 2032. The 85+ group will rise from 76,000 to 170,000 over that period.

Figure 3 Fall-related ACC claims by age 2010-11



Source: ACC, Statistics NZ

Figure 4 Claims for falls in the community 2010-11



Source: ACC

4. Costs and health impact

4.1 Society-wide costs of falls

O'Dea and Wren recently estimated the society-wide costs of falls.¹¹ They estimated that treatment and rehabilitation (including private contributions) cost \$536m per annum, the lost economic contribution was worth \$271m, and the human costs \$929m.

The human cost was based on 383 fatalities (average 10 years of life lost, YLL) in 2006, and 4,806 serious non-fatal falls in 2008.¹² These falls were estimated to result in almost 8,000 disability life years (DALYs) lost, using the ratio of DALYs to YLL from the Australian burden of disease and injury study (a ratio of 2).¹³

Most falls that result in a claim occur in the community (at home, aged residential care, playground, etc.), and the average cost is \$561, ranging from \$200 per claim at young ages, to \$750 in middle ages, and exceeding \$1000 for falls claimed for by people 85+. This cost added up to \$316m in 2010/11.

In the time available we were unable to identify the cost of claims for falls in aged residential care; this will require additional claim-level analysis.

Robertson and Campbell 2008 report, based on claims data spanning 2004-2006, that average claims costs for residential care residents were 25% greater than for older people in the community.¹⁴ This suggests a cost of falls in aged residential care of \$7.5m, if we apply the average ACC claims cost of falls in the community and add 25%. If the average cost is closer to that for falls in the place of medical treatment, the cost may be \$12m.

The average cost of claims for injury from inpatient falls cost was twice that of falls in the community, summing up to \$3m. The cost of the 47,000 fall-related discharges (5% of all discharges in a year) is \$205m (35,000 inpatients at \$175m + 12,000 day patients at \$30m).

Table 2 New fall-related claims 2010/11

ACC new claims

Location		Claims	Total cost	Average cost
Community	Female	280,192	\$145m	\$518
	Male	282,423	\$171m	\$604
Place of medical treatment	Female	1,739	\$2m	\$1,143
	Male	888	\$1m	\$1,147
Total		565,242	\$319m	\$564

Source: ACC

¹¹ O'Dea D, and Wren J. 2010. *NZ Estimates of the total social and economic costs of "all injuries" and the six priority areas respectively, at June 2008 prices: technical report prepared for NZIPS Evaluation*. ACC: Wellington.

¹² More recent data reported by the NZ Injury Prevention Unit noted 489 falls resulted in death. <http://blogs.otago.ac.nz/ipru/>

¹³ 10 YLL per fatality suggests $2 \times 10 \times 383 = 7,660$ DALYs lost, which at a 3.5% discount rate and \$150,000 per DALY (based on the value of statistical life used in the transport sector) gives \$929m.

¹⁴ Robertson M C, and Campbell AJ. 2008. *Optimisation of ACC's fall prevention programmes for older people. Final Report*. Dunedin School of Medicine, University of Otago.

The ACC data provides an order-of-magnitude indicator, but it is not the full financial cost of falls. For example, it excludes an allowance for the bulk-funded cost of public health acute services, which could add an estimated \$110m (equivalent to \$196 per claim, or \$2,300 for each of the 47,000 fall-related discharges per year). It also excludes privately incurred costs.

It is also very likely to exclude the costs of premature admission to aged residential care following a hospital admission for a fall (but this has not been confirmed). This is relevant as, for example, Church et al find that 1% of those aged 70 admitted for a fall were discharged to aged residential care, rising to 8+% for those 85+.¹⁵

Table 3 shows estimates of the distribution of the level of harm associated with falls, and the average cost (in Norway) of associated treatment.¹⁶ Service costs include costs for general practitioners, physiotherapy, ambulances, hospital stays and outpatients, community nursing and rehabilitation, and residential care. These estimates, in the context of evaluating the cost-effectiveness of fall prevention for older women, provide a sense of relative costs; the estimates of itemised costs appear comparable to those in New Zealand.

Table 3 Health and health service costs of falling

Harm level	Impact	Proportion	Cost (NZ\$ equivalent)
No harm	No treatment	50%	0
Mild and moderate	Bruising, sprains, cuts, simple fractures	37%	\$600
Serious	Complex fractures of arm, femur or leg requiring hospitalisation	11%	\$8,000
Severe injury	Hip fracture including 3 weeks institutional rehabilitation	1.0%	\$47,000
Very severe injury	Hip fracture with complications and discharge to nursing home	0.5%	\$135,000

Source: Hektoen et al. 2009, assume 1NZD=5NOK

4.2 Cost of inpatient falls

An assessment of the impact of inpatient falls by the National Patient Safety Agency suggests that the distribution of harm is similar to that found in the community: the majority of falls lead to no or only minor harm (Table 4).¹⁷

¹⁵ Church J, Goodall S, Norman R, Haas M. 2011. *An economic evaluation of community and residential aged care falls prevention strategies in NSW*. Sydney: NSW Ministry of Health

¹⁶ Hektoen L, Aas E, Luras H. 2009. "Cost-effectiveness in fall prevention for older women". *Scandinavian Journal of Public Health* 37: 584-589

¹⁷ National Patient Safety Agency. 2007. *Slips, trips and falls in hospital. The third report from the Patient Safety Observatory*. National Patient Safety Agency: London

The proportion of falls that cause death may be understated because some patients pass away sometime shortly after a serious break; the National Patient Safety Agency cites an estimate of an 18% mortality rate following a serious break of the neck of femur.

Readily-available New Zealand data indicates a similar distribution of harm: Canterbury DHB, in the *Quality and Safety Challenge 2012*, reported 2287 inpatient falls in a year, 59% of which resulted in no harm, and the 41% (947) that resulted in injury including 38 (1.7%) serious harm incidents.

Canterbury DHB estimated that the direct costs of falls resulting in serious harm added to \$580,000 from treatment and longer stay; these falls also resulted in quality of life losses, a loss of confidence and fear of falling, and an increased risk of institutional care on discharge. 80% of the serious incidents were hip/pelvis fractures (each with a direct cost of around \$20,000).

Table 4 Impact of inpatient falls

Reported incidents in UK hospitals and mental health units

Harm level	Impact	Proportion
No harm	No treatment	65%
Low harm	First aid, minor treatment, observation	31%
Moderate harm	Outpatient treatment, hospital admission, or longer inpatient stay	3.6%
Severe harm	Permanent disability or major fracture	0.6%
Death	Death	<0.1%

Source: National Patient Safety Agency 2007 p16

We understand that research at Auckland DHB found a similar proportion of inpatient falls resulted in serious harm (2.6%), 40% of which were neck of femur. Brown *et al*/estimated had earlier estimated that the cost of treating hip fractures was \$24,000, taking into account follow-up rehabilitation care, while other fractures cost considerably less.¹⁸ We understand that more recent estimates from work done at DHBs indicated the average cost of treatment and rehabilitation of *any* serious fracture following an inpatient fall is around \$26,000.

Scaling up these specific DHB estimates to the national level, based on their share of total national discharges, and taking into account the ACC claims for falls in public hospitals, suggests a \$3-\$5 million total cost of treatment and follow-up rehabilitation for inpatients harmed by falls.

Those patients that are discharged to aged residential care may add further fiscal cost; assuming a 2.5 year average length of stay in aged residential care, and a net additional cost of \$25,000 per year¹⁹, suggests an additional cost of \$62,500 if these patients would

¹⁸ Brown P., McNeill R, Radwan E, Willingale J, 2007. *The Burden of osteoporosis in New Zealand 2007-2020. Report for Osteoporosis NZ.* School of Population Health. University of Auckland.

¹⁹ We take the contract price for aged residential care, and subtract from it superannuation that is paid anyway less the personal allowance. A further adjustment could be made for premium charges. The impact on taxpayers may be somewhat less once considering the proportion of private payers. We have not adjusted future costs for inflation, nor discounted the amount.

otherwise not have entered aged residential care. With a 5%-10% probability of being discharged into aged residential care (depending on age)²⁰, it would add \$3,000-6,000 to the cost of an average inpatient fall.

4.3 Quality of life impacts

The quality of life impacts of harm-causing falls (and avoided by prevention activities) are another type of cost that need to be taken into account.

The Quality Adjusted Life Year (QALY) is a common measure used in healthcare evaluations. It is a measure of people's quality of life given their health status (often assessed through questionnaires), with 1 = perfect health and 0 = death. The change in status due to a fall can be multiplied by the number of expected life years remaining to get a sense of the QALY cost. Table 5 provides an indication of impacts for two key fracture types, drawn from the literature. A hip fracture would detract around 0.2 of 'utility', compared to a well state.

Table 5 Health utility estimates after fractures

	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Well	0.94	0.9	0.86	0.83	0.79	0.71	0.63	0.55
Hip fracture	0.74	0.7	0.66	0.63	0.59	0.51	0.43	0.35
Vertebral fracture	0.84	0.81	0.77	0.74	0.71	0.64	0.57	0.50

Source: Table 5, Brown *et al* 2007

Church *et al* (2011) also report QALY impacts for hospitalised fallers. The impacts in the first year are similar to those reported in Table 5, but the QALY loss is lower for subsequent years (0.1 for hip fracture and 0.7 for a vertebral fracture). Smaller fractures, requiring ED attendance only, have a small QALY loss in year 1 (0.02) and none subsequent years. Church *et al* also report an estimate of a QALY loss from a loss of confidence that (particularly elderly) people who fall are found to experience.

These QALY losses can be used to estimate both the health impacts of falls, as well as help identify the health gain benefits from prevention activities. For example, assuming a person aged 74 has a hip fracture and life expectancy at age 74 is 10 years, then the QALY loss would be $10 \times (0.79 - 0.59) = 2$ quality adjusted life years. These measures can form part of an assessment of a benefit/cost ratio that ought to be considered when making decisions about investing in fall prevention programmes.

²⁰ Table 16 of Church *et al*, *op cit*

5. Conclusions

5.1 What we have found

With an ageing population, the absolute number of falls, and thus costs, will rise (20% over the next 10 years, and 40% over 20 years based on current patterns, while costs will rise disproportionately).

These falls use valuable resources that could be applied elsewhere in the hospital or health system. In addition, the individual costs, in terms of pain, disability and premature death are considerable. As such, preventing harm from falls should be investigated.

The absolute volume and associated costs of inpatient falls are small when compared to all fall-related admissions (let alone all admissions). It would thus be easy to focus fire on bigger targets, such as falls that occur in residential care or the community.

However, a decision if, where, and how much should be invested in harm prevention programmes should be based on an assessment of the cost of such programmes and their marginal impacts. There is a reasonable amount of literature that can help inform such analysis, although much of it is focused on the older age groups.

5.2 Next steps

A first step should be for the Commission to decide what harm-causing falls it believes its initiative(s) in this area should focus on. This will help define the scope of any further analysis.

The orders of magnitude for volumes and costs in this report provide some of the relevant information to inform this decision; understanding the feasibility and cost-effectiveness of potential interventions would provide the other crucial piece. We understand some work is underway to bring together some of the existing research on cost-effectiveness.

Our initial look at international reports does not suggest that New Zealand is an outlier in any sense. But it may be worthwhile undertaking some benchmarking, particularly as part of the next stage of confirming priorities.

It will also be desirable to get more detailed information on hospital costs if modelling is to be undertaken on the cost-effectiveness of different programmes. The Ministry of Health (and/or DHBs) should be well placed to provide further information on cost weights to apply to NMDS volume measures. This should be supplemented with estimates from those DHBs that have recently undertaken (or are undertaking) research on the broader cost of falls, to supplement the high level summary statistics we have reported here.

One area that warrants further investigation relates to fall-related injuries that occur in aged residential care, including more detail on the distribution of harm and costs, ED visits and admissions. Beyond a survey of facilities, a less costly approach may be to take a sample of (anonymised) ACC client records with fall-related injuries to trace all recorded costs over a period of time, say 2 years.

Appendix A Additional information

Table 6 Publicly funded discharges for falls 2009/10

Reason	Mean stay	Total	Day cases	Share of total	Share aged 65+	Share aged 75+
W00 Fall on same level involving ice and snow	5.9	95	23	0%	32%	24%
W01 Fall on same level from slipping, tripping and stumbling	8.9	13505	3142	29%	64%	52%
W02 Fall involving ice-skates, skis, roller-skates, skateboards, scooters and other pedestrian conveyances	3.1	1698	546	4%	6%	5%
W03 Other fall on same level due to collision with, or pushing by, another person	3.3	1550	634	3%	2%	2%
W04 Fall while being carried or supported by other persons	2.9	212	86	0%	8%	7%
W05 Fall involving wheelchair	11.4	238	59	1%	61%	42%
W06 Fall involving bed	11	1981	431	4%	73%	65%
W07 Fall involving chair	10.3	1470	392	3%	55%	45%
W08 Fall involving other furniture	4.1	197	82	0%	18%	13%
W09 Fall involving playground equipment	1.5	2531	903	5%	0%	0%
W10 Fall on and from stairs and steps	6.8	3534	1044	8%	45%	31%
W11 Fall on and from ladder	5.2	1069	302	2%	34%	14%
W12 Fall on and from scaffolding	6.6	101	29	0%	11%	7%
W13 Fall from, out of or through building or structure	4.8	1496	437	3%	8%	4%
W14 Fall from tree	3.1	442	122	1%	2%	0%
W15 Fall from cliff	5.4	457	96	1%	18%	8%
W16 Diving or jumping into water causing injury other than drowning or submersion	4.3	142	52	0%	0%	0%
W17 Other fall from one level to another	4.1	1598	578	3%	15%	9%
W18 Other fall on same level	9.5	9159	2064	19%	68%	58%
W19 Unspecified fall	12.2	5584	1132	12%	73%	61%
		47,059	12,154	100%	51%	41%

Source: National Minimum Data Set