focus on FALLS

connecting people working in falls prevention

open FOR BETTER CARE
Hāpai ake te toiora

Issue 4 December 2015

Welcome to *Focus on Falls* – a quarterly publication for everyone interested in understanding and preventing falls in older people. **Reducing Harm from Falls** is the name and the broad aim of the national programme led by the Health Quality & Safety Commission, working in partnership with key organisations such as the Accident Compensation Corporation (ACC).

Please pass it on!

Sandy Blake, clinical lead

INSIDE

LET'S HEAR FROM YOU

- Sign up to be on the mailing list **here**.
- We love to get your questions and feedback. Let us know what you think of *Focus on Falls*, what you'd like to hear about in future, or tell us about your improvement story. Please contact Bridgette Connor – Project Manager (**Bridgette.Connor@hqsc.govt.nz**).

Quick Question

As clinical lead for the Reducing Harm from Falls programme, what does Sandy Blake note when she visits DHBs?

ANSWER LAST PAGE

News from the programme team

The *Open for better care* campaign falls topic has now wrapped up. The programme team would like to say a big thank you to everyone who took part in this year's efforts. You can read an overview of the falls campaign activities **here**.

The Reducing Harm from Falls programme has now formally entered its evaluation phase, with the appointment of Synergia Consulting as evaluators. Led by Dr Sarah Appleton-Dyer, the Synergia team are designing the evaluation framework before gathering and analysing data from across the sector. The team plans to interview key stakeholders and take an in-depth look at falls prevention activities across three DHBs. The programme was designed to engage the sector in reducing harm from falls by promoting evidence-based practices to prevent falls and reduce fall-related injuries in older people at risk in care settings. The evaluation is needed to:

- determine if the programme has met its stated objectives and achieved the intended results
- help us determine what the sector needs from us to support a sustained focus on reducing harm from falls across care settings.

The evaluation period will run until mid-February 2016.

Looking through another lens at Whanganui District Health Board medical ward

By Wendy Stanbrook-Mason, nurse manager medical services and Colleen Hill, clinical nurse manager medical ward

Our mantra of care with dignity, Kia tū rangatira ae, kia mana ae te tangata, reminds us that for patients and their whānau, we should always uphold their dignity and ensure we focus on what is most important to them and their whānau first and foremost.

Care of the cognitively impaired

It is well recognised that, when older people are admitted to hospital, they may develop behavioural disturbances such as confusion, agitation, delirium, dementia or cognitive decline (Dewing 2012; Holden et al 2008; Laurila et al 2004; Stenwall et al 2007; Wilkes et al 2010). Compared to patients without dementia, those with dementia are twice as likely to experience adverse events while hospitalised, such as falls, sepsis or pressure injuries. They are also up to three times more likely to sustain fractures or delirium.

Ryan et al (2013) have shown delirium occurs in about one-fifth of general hospital inpatients and particularly in those with prior cognitive impairment. Assessing June year 2014 discharges from the Whanganui DHB medical ward, 74 patients were discharged with a diagnosis indicating identified confusion or delirium. Total discharges for the period were 1929 patients. If the figure identified by Ryan et al was applied to the total numbers discharged then 386 patients would be expected to show signs of confusion or delirium, rather than the 74 identified.

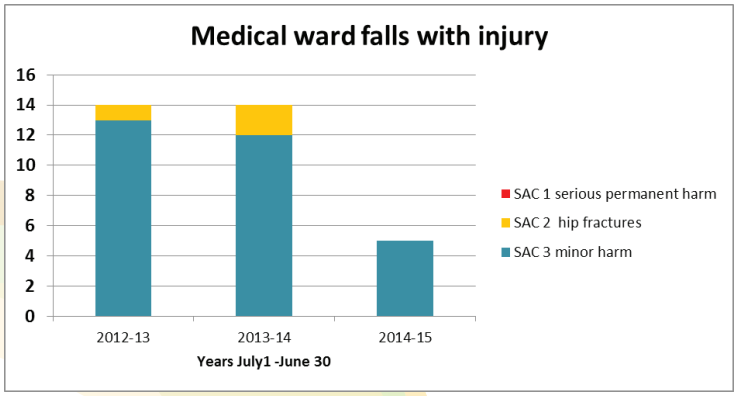
Recent data suggests that 20–25 percent of patients aged 70 years and older admitted to an acute hospital setting have dementia (Draper et al 2011; Travers et al 2013; Travers et al 2013).

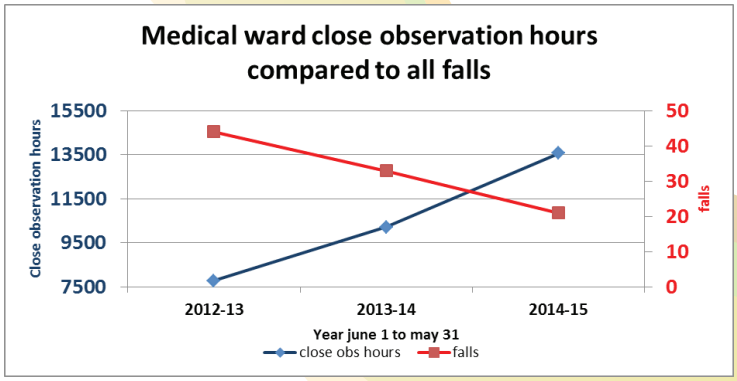
Gladman et al (2012) contend that hospitalisation and being in unfamiliar surroundings disrupts the patient's routine, which often heightens their confusion and distress. The noise level, bright lighting and lack of clear signage can be frightening and disorientating. Hospitalised patients with cognitive impairment may wander, putting themselves and others at risk. They may also display disruptive behaviours including aggression, calling out, yelling or screaming, creating difficulty for nursing staff to manage and deliver care, as well as causing distress to other patients. Compounding this, staff in general do not have the necessary training to manage these behaviours appropriately and the physical hospital environment is not conducive to caring with patients with cognitive impairment. The provision of special observations in acute care settings is associated with significant financial costs to the service (Dick et al 2009).

Over the last three years there has been a significant increase in the number of close observation (CO) hours required (this is the term given at Whanganui DHB; it can also be known as specialling and watches). Since mid-2012 to 2015 our DHB has seen a 77 percent increase in the hours of CO, equating to a 34 percent increase of patients requiring CO and impacting with a 7 FTE unbudgeted staffing cost.

A key part of the project has been recognising that the most vulnerable patient was often with the least formally trained staff. We have also identified that if we increase staff knowledge by way of conversation and education, we can improve how we provide care.

Providing focused education and increasing the health care assistant's knowledge and awareness, while not reducing close observation time, has seen a 60 percent decrease in falls with associated harm between the years 2012–13 and 2014–15.





WHAT'S BEEN HAPPENING ...

HOW DOES THIS LOOK IN PRACTICE?

Healthcare assistants

Our health care assistants have been a driving force in establishing a change in the culture of care for people with cognitive impairment. Their training and education has enhanced awareness and understanding of the needs of people with cognitive impairment.

Our cat

This little pet has proven to be a powerful tool for our patients and has demonstrated the ability to stimulate positive emotional feelings in people with cognitive impairment.

Distraction trolley

The tools on the trolley provide opportunities to make a connection with the person and promote meaningful activities and communication. This enhances quality of life and can reduce agitation and distress.

Chrysanthemum

The chrysanthemum is a symbol of dignity and is the philosophy that underpins our practice 'Care with Dignity - Kia tū rangatira ae, kia mana ae te tangata.' Being able to identify people with cognitive impairment through this symbol cultivates an environment which encourages sensitive and purposeful care.

HCA workbook

This includes an education module that has been developed to help educate our health care assistants in the right skills, knowledge and attitudes to deliver high quality care to people with cognitive impairment.

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SOME STAFF EXPERIENCES ...

WHAT WE'VE LEARNT

"ALWAYS smile – make them laugh. It's okay to be silly and have fun. I find it relaxes them."

"Make your questions and answers brief – people respond better if you do not ask direct questions e.g. Instead of "what would you like for lunch?" I try; "the lunch looks nice today." People tend to 'get lost' if your statements are too lengthy. "

"Don't give too many choices. If someone is very confused they can find mealtimes overwhelming. I break it up into small manageable portions. I had a patient who was refusing her meals but when I took it all away then just offered her the soup, she ate half of that. Then I offered her one more thing and she ate half of that. Just one thing at a time."

"Every patient is unique therefore every patient must be approached in a particular way – there is no 'one size fits all'."

"What works one day might not work the next day for the same person. Approach every encounter as a new person."

"Give lots of encouragement and praise but only if it is genuine."

"Treat every person as an adult – do not patronise or speak to someone as if they are a child. They will recognise it if you do and take it as an insult to their intelligence. Always assume they can understand you."

"Sometimes the person may not be interested in any sort of activity. Remember they have come into hospital with an acute illness. It may only be when they are in the recovery phase that they may have the energy to participate. Offer but do not push it. You can always try again later."

"Do not just put an activity in front of a person and expect them to 'get on with it'. The activities on the trolley are there to help us to connect with the person. Sometimes this is hard work but when you do find that one thing that brings a spark to their eyes, it is really rewarding."

"Enter their world because this is their current reality. For example I had a patient who was attempting to climb out of bed. He told me that he was on a boat and he was going to jump off. I said to him; 'Oh no, please don't do that – these waters are shark-infested!" He was then happy to stay where he was."

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Health care assistants in the Whanganui DHB medical ward

Staff voice

Prior to this project

'It was long, boring and stressful before, extremely stressful. We had no resources, nothing. Magazines were about it (if we could find them) and they were out of date.'

After the project commenced

'Now it's just wonderful, you just feel so happy because you can see that they're more comfortable, happier and they're thinking about something else. I tried for three days to get one patient to interact (he was not very sociable), but today I found what triggered his connection which was really cool. He was painting with water, making a steam train and said to me, "Look at that," and I said, "You've made a masterpiece". So he's been a little bit more chatty.'

'For me, the quality of my life is defined and determined by how strong I sense my own dignity, privacy and honour, and, how much I feel others honour me as a total person.'

Richard Taylor (Alzheimer's from the Inside Out. Health Professionals Press: Texas, 2007)

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Stay Independent Falls Prevention Toolkit for Clinicians

This toolkit helps primary health care professionals screen, assess and support older patients in preventing falls and maintaining their independence. Download the toolkit **here**.

Addressing the challenges of an ageing population

By Dr Paul Cooper, clinical lead, primary care

September saw the release of the Stay Independent: Falls Prevention Toolkit for Clinicians developed by the Health Quality & Safety Commission in association with bpac[nz].

The toolkit and its message recognise the Commission's desire to expand the scope of the Reducing Harm from Falls programme to include primary- and community-based care.

It also recognises a need to ensure the future of the programme so generations of ageing New Zealanders will continue to receive its benefits.

As a primary care practitioner, I am delighted to see the expansion of the falls programme into the community. The toolkit provides excellent resources to address falls risks in positive and proactive ways. The emphasis on prevention and the focus on integration of health services provide the best opportunity to address the challenges presented by New Zealand's rapidly ageing population.

All three arms of the New Zealand Triple Aim for health care improvement are included in this long-term view, with individuals receiving improved quality, safety and experience of care, ensuring population health and equity are addressed and thus making the best use of health system resources.

The challenge for primary care teams is to take the resources available and incorporate them into the health care services we already offer ageing New Zealanders. We need to make the assessment of falls risks a fundamental part of health care.

Many DHBs are developing pathways and guidelines for different conditions affecting the ageing population, such as cognitive impairment/dementia, falls, frailty, bone health/osteoporosis, palliative care and directories of elder health services. The primary care sector is in danger of being overwhelmed by multiple guidelines and pathways. There is an urgent need for a rationalisation of these pathways or patient maps to produce a limited number of guides to assist clinicians. The pathways will have agreed assessment tools and outcomes which can be usefully applied in a setting which best meet an individual's needs.

A lot of innovative work is occurring throughout New Zealand in the falls area but currently there is no easily identifiable national forum for sharing these ideas or learning from each other. We are a small country with limited resources and hence national cooperation and integration are critical to make best use of health funding.

What should the system look like in five years' time?

Falls risk assessment will be an important part of a comprehensive wellness assessment offered to our patients as they age. Falls assessment will be integrated with other health assessments, such as cardiovascular disease risk, and will be seen as routine practice by primary care teams. These assessments will start at 55–60 years of age and place an emphasis on primary providers becoming partners with individuals to maintain their independence in the community for as long as possible.

Common assessment tools will be validated and used by all agencies involved in the individual's care. The tool will be in electronic form with easy access and sharing between providers, the consumer and their family/whānau. Where problems are identified or a fall has occurred, there will be easy access to local rehabilitative services with electronic referral between community-based providers.

Preventative programmes promoting healthy strength and balance exercises will be easily accessible promoting mobility, social interaction and general wellbeing.

Funded DEXA (bone dexity) scanning will be available to individuals with risk factors or meeting agreed criteria as an important part of the prevention programme.

We talk a lot about the integration of health systems and this lifetime view of reducing harm from falls requires all individuals and agencies to work together. This is not about primary and secondary care or specialists vs generalists. It is about what is best for patients and designing a multidisciplinary system that truly responds to the needs of individuals and promotes healthy ageing and wellbeing. While patient pathways are useful tools, a really effective service is more about the relationships between different providers. Teamwork is crucial and really effective teamwork is all about relationships and good communication.

We need to encourage innovation and support individuals to work at the top of their scope.

Paraphrasing one of the slogans of the falls programme – 'this is everyone's problem' – we need to work together to help patients. As Professor Ngaire Kerse, a general practitioner with training in geriatric medicine and extensive experiences with the Commission's falls programme puts it: 'Staying upright is everyone's responsibility'.

Reducing falls risks through medicine review: An improvement project in Hawke's Bay

By Brendan Duck, clinical pharmacist facilitator in primary care, Hawke's Bay DHB and Di Vicary, clinical facilitator: medicines and diagnostics, Health Hawke's Bay

Acknowledgement: Leigh White, clinical nurse specialist gerontology, and Peter McIntosh, Vanessa Brown and Jenni Jones, clinical pharmacist facilitators in primary care, Hawke's Bay DHB

The falls minimisation committee at Hawke's Bay DHB aims to reduce the rate of and harm associated with falls in Hawke's Bay as part of the national strategy to improve patient safety. The committee cuts across sectors and includes representatives from a wide range of primary and secondary care organisations.

The committee identified medicine-related risk factors as a potentially modifiable risk factor for falls, especially in patients taking multiple medicines.

Medicines are a major contributor to both falls and associated harms. One study showed medicine as a contributor to falls in 25 percent of patients(1). Centrally acting medicines, in particular psychotropics (eg, antipsychotics, antidepressants and hypnosedatives) and anti-epileptics, along with antihypertensives (including diuretics) are highly associated with increased risk of falls(2–4). Further information on falls risk-increasing medicines can be found in **Topic 8: Medicines: balancing benefits and falls risks** (**pdf**)(5).

Medicine reviews targeting and modifying the use of falls risk-increasing medicines reduce falls and associated harm. Analysis of outcomes following medicine review for patients who had doses of falls risk-increasing medicines reduced or medicines withdrawn found a 31–53 percent reduction in falls(1,6). A review on cost effectiveness of falls prevention strategies has found reducing centrally acting medicines in community dwelling older people has the greatest impact on reducing falls risk(7). It also found medicine reviews, as part of a multi-factorial approach and supplementation with vitamin D, are effective at reducing falls risks for patients in age-related residential care (ARC)(7).

Development of the medicines-related falls risk assessment tool (MrFRAT)

We developed MrFRAT based on evidence relating to medicines' contribution to falls. The scoring is based on a meta-analysis of nine medicine classes (4) and polypharmacy(8). A score of four or more on MrFRAT indicates a heightened risk of medicine-related falls and that medicine review by the general practitioner (GP) or practice-based clinical pharmacist would be beneficial. The **MrFRAT package** is being socialised throughout Hawke's Bay's GPs and ARC facilities by the local primary health organisation Health Hawke's Bay (HHB).

A retrospective review in 60 patients in a Hawke's Bay ARC facility concluded that 50–70 percent of residents who had fallen recently would have been identified as being at risk of a medicine-related falls using the MrFRAT tool.

The tool was approved by the DHB's clinical council falls committee and endorsed by the pharmacy and therapeutics committee and HHB's clinical and quality advisory committee. It was then piloted in two ARC facilities in 2013–14. After the pilot, the tool was modified to include digoxin and support documentation developed for ARC staff and prescribers. It is designed to be part of an interdisciplinary falls prevention strategy.

The implementation process

Minimum standards of care are currently in place for ARC facilities around falls including post-falls assessment and individual falls minimisation plans. We're aiming to increase the awareness of medicines contributing to falls and to review medicines proactively to minimise falls. MrFRAT identifies residents at risk of a medicine-related fall, and also highlights to the prescriber if the resident is not on a vitamin D supplement for consideration as part of the medicine review process.

MrFRAT has been introduced to all but two Hawke's Bay ARC facilities. Implementation was voluntary and supported by HHB's clinical facilitator medicines and diagnostics and the clinical nurse specialist gerontology and clinical pharmacist facilitator at Te Mata Peak Practice. The package provided to ARC facility staff to support MrFRAT included:

- MrFRAT
- ISBAR fax template
- implementation guide for ARC staff
- GP information guide, including deprescribing techniques for the medicine classes which make up the MrFRAT screen.

ARC nursing staff received the MrFRAT package well. They will use it to support:

- the long-term care plan developed within the first three weeks following admission
- the multidisciplinary team discussion, either six monthly or annually
- any post-fall assessment
- communication to prescriber when the registered nurse has concerns around particular medicine use, for example hypnotics.

Analysis of falls risk-increasing medicines

Data collected during the implementation of the MrFRAT screening included:

- initial screening of all residents
- MrFRAT score and medicines which contribute to this score
- facility data – number of falls 12 months prior and post implementation.

Data was collected for 19 Hawke's Bay ARC facilities, comprising 61 percent of the total residents in ARC facilities (see Table 1). We found 55 percent of residents in ARC were at heightened risk of medicine-related falls (score ≥4). Nationally the use of potentially inappropriate medicines in ARC facilities is greater than in community dwelling patients(9,10). We found similar patterns of potentially inappropriate medicine use in Hawke's Bay ARC facilities.

Measuring outcomes

ARC facilities have been asked to provide monthly falls data for the 12 months prior to implementation of MrFRAT and the 12 months following. The purpose is to determine if there is a change in falls rates.

We expect to see these improvements:

- A reduction in the number of falls within Hawke's Bay ARC facilities.
- Maintenance of current high vitamin D supplement prescribing.
- Reduced use of inappropriate medicines.

To support the quality improvement process, an audit of medical practice (CQI) activity on the MrFRAT tool has been developed and endorsed by the Royal New Zealand College of General Practitioners. The activity targets patients with an MrFRAT score of 4 or more.

The aim is for 70 percent of these patients to have a medicine review within 3–6 months and have a risk reduction plan in place. This plan includes indication for all medicines, identifying and managing medicines where risks outweigh benefits, and a monitoring plan for all medicines.

Progress, learning and next steps

Feedback during the implementation of the MrFRAT tool into Hawke's Bay ARC facilities was positive. Most facilities have taken up the training, and none have indicated they would not use the tool. At this stage, six facilities have fully implemented MrFRAT as part of their falls minimisation plans.

We have reflected on progress to date and the success factors learnt from other quality improvement initiatives. The focus to increase implementation throughout the region is now on:

- continued MrFRAT support and education for ARC staff
- developing a communication process to give ARC facilities regular updates about implementation progress
- integrating MrFRAT into business-as-usual processes, documents and IT
- continued communication between the DHB, HHB, ARC facilities, GPs and clinical pharmacists working in general practice.

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Table 1: Summary of medicine and MrFRAT data for 19 Hawke's Bay ARC facilities collected during MrFRAT implementation, February to July 2015

Antipsychotics	Antidepressants	Hypnosedatives	Antihypertensives*	Anti-epileptics	≥6 medicines
28%	39%	22%	43%	13%	52%

*Alpha blockers and diuretics only

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Archie and Joyce – flying the flag for being bold, not old

Each year around one in three New Zealanders aged 65 and over will have a fall causing injury. While a small number of falls happen in hospitals, the majority occur in the community – many in or around the home.

Last year, 18,000 older people had a fall that caused a stay in hospital. We know these stays are time-consuming and costly but, more than that, they can have a huge impact on the person involved.

Falls can cause older people to lose confidence, stopping them doing certain activities. This can actually increase the risk of a fall as inactivity can affect someone's fitness level – and having good strength and balance can prevent falls. An older person who has fallen can withdraw and stop doing outdoor activities.

Nelson couple Archie (92) and Joyce (86) are great examples of how strength and balance exercises can help prevent falls and keep older people independent.

The pair, who featured in our March 2015 issue of *Focus on Falls*, have been going to exercise classes for five years following a recommendation by their doctor. They haven't had a single fall in that time, something they attribute to keeping fit and active.

'In life you can't just sit and do nothing – if you do, you won't get far. That's the same with keeping strength as you age,' says Archie.

'The most important part of life is to enjoy what you're doing, and being able to be independent and not worried about falling helps a lot.'

Joyce says she enjoys the social aspects of the exercise groups as well.

'The people are all very friendly and they always talk to you. You aren't isolated. We have a lovely time,' she says.

Joyce says the extra confidence she has gained from exercise is wonderful.

'It's kept us going all those years. It's easy to give in and say "I won't do it today" but it gives you a purpose, and when you feel like that you will enjoy it more if you do go.'

To find out more about Nelson Bays Primary Health falls prevention click **here**.

Just in: Evidence-based publications and resources

Addressing risk factors for falls in older people by reviewing medicine use and enhancing balance and strength

In collating this summary of published research and other resources, we've looked at the complex interplay between risk factors for falls that may not be modifiable (for example, age or a previous fall) and modifiable factors (for example, use of falls risk-increasing medicines or exercise to increase balance and strength).

A recent **meta-analysis** of randomised controlled trials of falls prevention interventions supports earlier **Cochrane review recommendations** for an individualised multifactorial approach, assessing and addressing risk factors to reduce falls in older people in hospital and long-term care settings. The importance of addressing an older person's risk factors is also underlined in a qualitative study of falls in community dwelling octogenarians – poor falls risk identification and follow-up, and health care system disconnects were among the key themes contributing to the finding that '**people are getting lost a little bit**'.

Medicine use in older people

In **Topic 8: Medicines: balancing benefits and falls risks** (**pdf**) we referenced studies showing that systematic patient-centred review of older people's current medicines reduces falls. A summary of **medicines increasing the risk and consequences of falls** (**pdf**) identifies which to target for review and may be a useful refresher prior to reading this section. It can be printed as a learning resource for display.

Beers Criteria updated

Introduced in 1991, Beers Criteria offer guidance on use of potentially inappropriate medicines (PIMs) in older people, and have been a reference point for prescribers and improvement activities. The **2015 update of Beers Criteria** (**pdf**) by an expert panel of the American Geriatrics Society was published recently with two new components:

- drug–drug interactions highly associated with harmful outcomes in older people
- drugs that should be avoided or have their dose adjusted based on the individual's kidney function.

Additional resources as part of the Beers Criteria update package are:

- recommended **alternative medicines** (**pdf**) where medicines have a potentially harmful interaction with certain diseases or conditions (specifically, falls, dementia and chronic kidney disease).
- **'how to use' guide** (**pdf**), which outlines key principles for using the criteria and includes advice to patients and caregivers on talking with clinicians about the medicines listed.

The need for careful prescribing and deprescribing: antidepressants, antihypertensives and anticholinergics

Referencing the 2012 Beers Criteria, a **study** (**pdf**) to benchmark the prevalence of PIM use in older people found evidence that most prescribing is not problematic in relation to the criteria, but concluded interventions to decrease PIM use are still needed.

Another recent **review** of studies investigating medicines associated with increased risk of falling presents a finding that psychotropics appear to increase the risk of falls. In particular, the use of antidepressants is under discussion with an editorial asking **'should antidepressant medication be used in the elderly?'** (**pdf**). In a **study** confirming symptoms of depression and antidepressant use are associated with falls in middle-aged and older adults, the authors recommend further studies to simultaneously examine the influence of these two risk factors.

In a special issue on **late-life depression and antidepressants**, several research articles are particularly relevant to falls prevention:

- A **systematic review of studies** on the relationship between selective serotonin reuptake inhibitors and falls in older adults sparked a **dialogue** about whether causation or association is the better explanation.
- A **study** of older people participating in a falls prevention programme (FPP) found that, among the 30 percent who were depressed at baseline, improvement in falls efficacy was significantly correlated with improvement in depressive symptoms. The authors ask whether FPPs could usefully include a component targeting both depression and falls efficacy.
- Another **study** found a high rate of initiation of antidepressant therapy after hip fracture, potentially increasing falls risks for this already vulnerable group.

Hypertension may be over-treated, and the use of antihypertensives post-hip fracture surgery requires an individualised approach, according to the authors

of a **study** (**pdf**) which found that one-third of older patients who'd had hip fracture surgery were re-admitted at least once within six months. The most frequent comorbidity in the study population was hypertension (which was an independent predictor of readmission after hip fracture surgery). The most common reason for readmission was another fall.

In a **systematic review** (**pdf**) of anticholinergic burden and adverse outcomes in older people, the authors concluded that, although higher anticholinergic burden is associated with negative brain effects, poorer cognitive and functional outcomes, there is not one standardised tool for measuring anticholinergic burden. Using nine available anticholinergic rating scales, the authors undertook a pharmacoepidemiological **study** (**pdf**) of the New Zealand population. They established that higher anticholinergic burden is associated with adverse outcomes, specifically, hospital admissions, hospitalisations for falls, length of stay and GP visits.

Prescribed vitamin D supplementation

An **evaluation** (**pdf**) of the health outcomes and economics associated with universal prescribed vitamin D supplementation is a useful addition to **Topic 7: Vitamin D and falls: what you need to know** (**pdf**). Modelling in the evaluation showed cost savings and reduced mortality through falls prevention. The article discusses the mechanisms through which vitamin D supplementation is thought to be effective, and acknowledges the role of vitamin D in falls prevention remains controversial.

Low-dose aspirin

A randomised controlled trial looking at whether low-dose aspirin may prevent fractures and fall-related hospital presentations in healthy older people is described in this **study protocol**.

Listen in: Why calcium supplements are not recommended

Listen to Kim Hill's Radio New Zealand National **interview** with Ian Reid, Distinguished Professor in Medicine at the University of Auckland, about his team's research on bone health and osteoporosis. More news about their award-winning research is **here**. Further reading from this team includes:

- a systematic review and meta-analysis on **calcium intake and bone mineral density** (**pdf**)
- a systematic review on **calcium intake and risk of fracture** (**pdf**)
- a review of **benefits and risks associated with calcium supplements** (**pdf**), which includes a re-investigation of data from the Auckland calcium study.

Enhancing balance and strength

We reviewed available evidence on the effectiveness of exercise programmes designed to prevent falls in **Topic 9: Improving balance and strength to prevent falls** (**pdf**), and presented strong evidence that certain exercise programmes reduce falls and injuries including fractures in older people. Published since then is an updated **Cochrane review** (**pdf**) on the impact of exercise on people with dementia. The authors concluded there was some evidence that ability to perform activities of daily living was improved, but more research is needed.

Evidence to inform provision of exercise programmes for older people

Several recent reports relate to cost effectiveness and uptake of evidence-based exercise programmes by older people. Particularly relevant for those with planning responsibilities, this cost effectiveness **study** reports significant estimated savings in acute care costs if all older community-dwelling adults treated in emergency departments (ED) for fall-related injuries were referred to an evidence-based falls prevention programme. The programme, **Matter of Balance**, is designed to reduce fear of falling and associated activity restriction and is currently being delivered in most states of the USA. Cost savings through reducing subsequent falls and associated treatment costs were calculated on two levels of participation, and the return on investment calculated at 144 percent. The authors note that referral to community-based programmes is likely to increase as falls prevention efforts, such as the **Stay Independent Falls Prevention Toolkit for Clinicians**, are taken up in primary care. The estimates were based on the assumption that all older adult fall-injured patients would be referred to the programme, as it is not possible to reliably predict which ones will fall again. In all, the case for referral from ED to community-based programmes is also a case for **an integrated approach to falls in older people**.

Other recent relevant publications have covered effectiveness and participant experience in home-based exercise programmes:

- A systematic review and **meta-analysis** (**pdf**) of studies on the effectiveness of individualised home-based exercise programmes.

- A cross-sectional **study** looking at the relationship between older people's adherence to home-based exercise programmes and their personal preferences, and the perceived benefits and barriers.
- A **systematic review and narrative synthesis** (**pdf**) identified the influence of cultural values and perceptions on programme participation.

In a study to discover older people's preferences in the delivery of exercise programmes for falls prevention, the researchers concluded that a key question is: '**Are your clients having fun?**' Respondents focused more on their experience of the programme (enjoyment, social interaction and leader qualities) than longer term advantages such as reducing the risk of falling. Having fun was important in another study, which designed games for older adults' movement capabilities for use with commercially available gaming technology. The intervention aimed to test a balance training tool that would be enjoyable, competitive and '**A Wii Bit of Fun**'. The authors found an increase in functional balance and balance confidence in older adults with both high and low risk for falls.

The sense of '**We are all one together**' was important in a qualitative study of peer educators' views on leading community-based programmes. Educators were motivated by their own experience of falls to identify and connect with their peers on falls prevention, but were also cognisant of barriers to engagement, such as beliefs that 'It won't happen to me'.

More about exercise and mobilising

Other studies of interest include:

- an **investigation** of the effects of 8-week controlled whole-body vibration training on reducing the risk of falls among community-dwelling adults
- a **study** following up a 12-month exercise intervention combining resistance and balance-jumping for community-dwelling older women. The intervention had improved physical functioning and bone strength, and the follow-up assessed whether there were long-lasting effects in reducing injurious falls and fractures
- investigating the characteristics of sedentary older people who enrolled in an exercise promotion trial, researchers found that although enrolees were in poor health, they were interested in '**Keeping Moving**' (**pdf**) and increasing their physical activity
- a **study** reporting 21 percent mortality a year after surgery for hip fracture highlights two potentially modifiable risk factors, one being change of residence. The other, 2–4 weeks of non-weight-bearing status, is associated with increased mortality rates (unadjusted analyses). Find references on weight-bearing after hip fracture surgery in this discussion: **'If patients can do this, they can weight bear'**.

Straight into your inbox

We can cover only a fraction of the published research, so here are suggestions for mailing lists and databases you may like to access.

- At **SafetyLit** there are options for searching, email updates and a weekly collation of abstracts on injury prevention.
- Membership of **Injury Prevention Aotearoa** is free and open to anyone who works in, or has an interest in injury prevention. Join up **here** to receive the **monthly e-newsletter**.
- Find newsletters from the **Australian & New Zealand Hip Fracture Registry here** or email **clinical@anzhfr.org** to receive regular updates.
- At the **Fragility Fracture Network** website, newsletters and events are posted **here**.
- You may like to join the **NSW Falls Prevention Network here** to receive the ***Falls Links*** newsletter.

Learn more about falls prevention

The **10 Topics** cover core issues in falls prevention and updates on current evidence and best practice. Each counts as a learning activity for professional development hours.

Quick Question

As clinical lead for the Reducing Harm from Falls programme, what does Sandy Blake note when she visits DHBs?

ANSWER

It is interesting the different responses I get when locking down a date for a proposed visit. I am mindful how busy hospitals are but most DHBs are eager for the visit and discussions to occur. They openly welcome the opportunity to share learnings and are transparent about barriers to implement changes in practice.

I feel the time I am allocated with a senior manager is often reflective of not only the manager's personal interest in the problem of falls but of the organisation's beliefs regarding whether they can reduce harm from falls in the older person. The current literature reminds us how important leadership is in tackling this patient harm problem.

As I walk around the hospital I notice if posters or other patient and family/whānau information on falls are on display. Reminders keep the risk of potential harm from falls fresh in all our minds and send a message to the community that we care about this harm problem.

I note whether foyers and public areas have seating at a height that elderly visitors can rest safely on and do not have to struggle to get up from.

The first thing I notice in the ward areas is whether the passageway is cluttered or clear. It is not an unusual sight to see linen trollies on wheels, wheelchairs and other equipment blocking access to the handrails, obstructing the pathway of a patient mobilising and creating a danger if that particular patient grabs the mobile obstruction to steady themselves. Glancing down the corridor I can tell whether the ward has engaged in 'releasing time to care' or a similar programme, or may need to refresh their commitment. A ward upholding the philosophy of releasing time to care is uncluttered and well organised. It has a calm, 'in control' feel where there are no unanswered call bells. I know from my experience that increased time and vigilance with patients helps reduce falls, especially for patients with cognitive impairment.

The nurse leader of a quality improvement-focused ward takes the time to talk to you, regardless of the workload of the day. They always know when the last patient suffered harm in their care and what they learnt from analysing the incident. The discussions will invariably lead on to what they do well, tempered by seeking answers to what could they do better. The nurse leader truly believes that, despite the age and fragility of their patients, they can reduce harm. They believe falls are not inevitable for many older patients.

Quality data is displayed openly and is up to date. Staff members can talk to it and have pride in their achievements.

When approaching the patient space, I note whether there is a signalling system in place to remind staff of assistance required for safe mobilising of patients. There are many different patient care at-a-glance boards placed near beds and I note whether they are filled out and whether the patient, or family/whānau if present, understand the purpose of the board and if the information is correct. I will also note what the 'watchers/specialing nurses' are actually doing. Some sit out in the corridors away from the patients and would have little chance of intervening to prevent a fall.

I do sometimes see fall prevention strategies in place that in themselves do no harm but are not proven in the literature to make a difference. I discuss these with staff. Otherwise it is an extra task for nurses to complete among so many. An example is the various coloured wrist bands some DHBs give to patients to reminding staff of the falls risk level. There are also some strategies that

can increase the risk of harm if not individualised to the patient. An example is the belief that low beds are the answer to keeping the older person safe, without realising that, for some patients, the struggle to get up from a low position can actually cause a fall and if it stops a patient mobilising as they wish, is considered a restraint.

I often get invited to falls prevention committee meetings. The membership and attendance at these meetings also weave a story. Reducing harm from falls when patients are in our care requires an integrated effort across the sector. We need a partnership approach that: addresses the bone health of people >50 years; includes community exercise classes to improve strength and balance; is responsive to the ambulance officers that pick up the elderly after a fall; and involves programmes to keep safe those elderly that are frail and live in their own homes. A committee/group with cross-sector representation needs to develop a falls prevention and fracture liaison clinical pathway together. So, I note who is not at the table and talk about **Topic 10: An integrated approach to falls in older people: what is your part?**

The most important gain I get from a visit is that I always learn from the staff I speak to. I am able to both celebrate and take the good ideas back to the Commission to be shared more widely.

It is a great privilege to visit other DHBs and I recommend you all do the same.