

TOPIC 4



HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND
Kupu Taurangi Hauora o Aotearoa

Addressing risk factors in an individualised care plan

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How you can use **Topic 4**

Use **Topic 4** as:

- an information resource that explains the evidence and reasons for assessing an older person's risk factors for falling
- a 60-minute professional development exercise (see [60 minutes of professional development](#) in this resource).

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Key messages in Topic 4

- Screening for falls, assessing risk factors and making a care plan can be done in the community, residential care or in hospital.
- An individualised care plan for each older person considers their personal circumstances, then tailors the interventions needed to respond to the identified risk factors they face.
- Taking actions that are right for each individual can reduce the rate of falls in hospitals and long-term care facilities by 20–30 percent, and in the community by 10–35 percent. This is supported by several systematic reviews.
- Remember, the overall falls prevention message is **ask, assess** and **act**.
- Risk assessment is meaningless without action.



What Topic 4 covers

‘Do something about risk factors, don’t just count them’ is a call to action for falls prevention that’s both obvious and based on evidence. The statement applies to older people in any care setting. Topic 4 covers the importance of using an individualised care plan for each older person when considering and responding to the risk factors for them falling. **Topic 3** explains how to assess risk factors. Topic 3 and 4 should be read together.

Systematic reviews point to the effectiveness of multifactorial risk assessment and interventions in reducing falls (Ambrose et al 2015; Stubbs et al 2015a; Stubbs et al 2015b; University of York: Centre for Reviews and Dissemination 2014a; b). We have clear evidence that using an individualised approach when focusing on an older person’s risk factors – **in hospital** and **community** settings – can help to prevent them falling.

Because older people fall for a variety of reasons, we need to adopt a truly interdisciplinary and individualised approach. Topic 4 explains why we should do so, and how we can achieve such an approach.

The **first required reading**, to complete the professional development activity for Topic 4, sums up the focus on falls in hospital settings from an international perspective in a concise discussion of best practice.

In New Zealand, risk assessment and care planning are now embedded **as processes of care** measured by quality and safety markers.



Evidence for using an individualised approach to care planning

Older inpatients usually have several risk factors. This means they may need a number of interventions (ie, multifactorial interventions) to reduce their risk of falling or injury. Several systematic reviews have found that multifactorial interventions reduce the rate of falls in hospitals and long-term care facilities, sometimes by more than 30 percent (Cameron et al 2010; Stubbs et al 2015b).

The reviews found the rate in the community reduced by 10–35 percent (Stubbs et al 2015a).

It’s important to understand the difference between multifactorial interventions and multiple programme components before using this evidence to inform practice:

- *Multifactorial interventions* are a set of combined actions based on a systematic individualised assessment of the patient, to ensure their particular risks are considered and addressed.
- *Multiple programme components* are a set of actions standardised for all patients, and so cannot ensure older people identified as ‘high risk’ will have their particular risks addressed (Blake and Weststrate 2013; Cameron et al 2010; Ganz et al 2013; Hempel et al 2013; Lamb et al 2011). Multiple components may be put into practice as a ‘bundle’. However, evidence has not demonstrated any reduction in falls with a bundle approach (Barker et al 2016). ◆



What an individualised care plan means

An individualised care plan is a plan that assesses the risk factors for each older person, then takes appropriate actions. Achieving this requires a streamlined, multidisciplinary approach.

Use risk factors to assess what actions are appropriate for each older person

‘Do something about risk factors, don’t just count them’ is a call to action for falls prevention that’s both obvious and based on evidence. The statement applies to older people in any care setting.

Evidence for the effectiveness of multifactorial interventions directs us to systematically check for falls-related risk factors that we can do something about (such as treatment, modification or better management), and to make meaningful plans for each risk factor (Ganz et al 2013; Healey and Darowski 2012; Oliver and Healey 2009; Schwendimann et al 2006).

When planning care, no ‘one size fits all’ (Rose 2008). Intervention and support strategies must be tailored to each older person’s pre-existing risk profile, preferences and capabilities, and integrated with care for any known medical problems (Ganz et al 2013).

In any setting, practices that make the environment and care safer for all older people are essential to preventing falls, but we cannot think of them as being individualised care (unless it is in their own home).

As noted in Topic 3, the risk factors for falls are varied. Also, patients have unique risk profiles with different combinations of factors. This means we must ensure risk factors aren’t missed and are reviewed through a ‘falls prevention lens’ (Ganz et al 2013; Miake-Lye et al 2013; Oliver 2008). Frameworks or checklists that cover common risk factors are useful ways to support a consistent and standardised approach to assessing risk.

The outline of risk factors and related interventions given in the ask, assess, act pocketcard (updated April 2014, see below) offers a structured way to ensure key elements are covered. This outline was developed from a synthesis of current guidelines.

3

assess

Check with the older person and their family/whānau about what they see as problems and risks.

Assess falls risk factors related to:

4

act

Talk with the older person and their family/whānau about what they think will be most helpful.

Refer for specialist input as needed.
Put interventions and supports in place to:

Address identified risk factors with specific actions		
PHYSICAL ACTIVITY	Balance, strength and gait	Enhance balance and strength
	Mobility	Improve or assist mobility
	Muscle strength (especially lower limb)	Prescribe vitamin D supplements if at risk of deficiency
	Feet and/or shoes	Address foot problems and ensure safe footwear
UNDERLYING CONDITIONS	Medicines (especially psychotropics)	Review and optimise medicine use
	Dizziness or postural hypotension	Manage and monitor hypotension
	Cognition	Put in place measures for orienting the person and reducing delirium risk
	Vision	Optimise vision
	Continence problems	Manage continence problems
	Any other health problems that may increase the risk of falling	Address other health problems
Home safety	Optimise home safety	

Use a multidisciplinary approach to care planning and action

Because older people fall for a variety of reasons, we need to adopt a truly interdisciplinary and individualised approach. People who can provide input into an individualised care plan include physiotherapists, podiatrists, pharmacists, nurses, occupational therapists, health care assistants and nutritionists.

WHAT AN INDIVIDUALISED CARE PLAN MEANS *continued*

When an older person has a fall, we know that in practice staff don't always assess that older person in the way recommended by guidelines (Tirrell et al 2015). To reduce the risk of further falls a multidisciplinary approach with referrals to health care providers with special expertise is often needed.

For example, a fall may be an opportunity to refer the older person for a comprehensive orthogeriatric assessment. We know that involving an orthogeriatrician after an older person has fractured their hip can help to decrease their risk of death (Neuburger et al 2016).

Consider referring the older person to an occupational therapist who can assess how safe their home is, and identify any safety modifications needed.

A referral to a fracture liaison service after a fall-related fracture will, among other things, provide osteoporosis assessment and management, and help to prevent the older person suffering a secondary fracture (Osteoporosis New Zealand 2014).

A multidisciplinary approach creates opportunities to 'red flag' any risk to others in the team that the team needs to manage proactively. Robust cross-referral mechanisms are also needed, such as between the care pathways for falls and fractures, and the care pathways for dementia. ♦



What really matters is critical thinking and acting on risk factors

A multifactorial approach includes various components, such as using critical thinking and clinical judgement, acting on the patient's risk factors, documenting and communicating patient information, and partnering with the patient's family/whānau. This section also lists some risk factors for falls and suggests possible intervention strategies for mitigating those risks.

Use critical thinking and clinical judgement

The value of basing your actions on skilled clinical reasoning is confirmed by findings that clinical observation and judgement alone often matches or outperforms the prediction tools used for risks of falls (Aranda-Gallardo et al 2013; da Costa et al 2012).

One patient admitted for assessment for dementia and weight loss, and another patient rehabilitating after a hip replacement following a fall at home may both be considered to have a 'risk' of falling, but they have very different risk profiles. This is one reason why we cannot create an individualised care plan for a patient without using our critical thinking and clinical judgement, and discussion with the patient and their family/whānau.

Act on the patient's risk factors, document that information and communicate with other team members

An individualised care plan doesn't help the patient unless it's implemented. Once risk factors for falls are identified, action must follow. As for auditing whether the patient had appropriate, individualised interventions to respond to their risk factors, the general rule is, 'if it wasn't documented, it probably wasn't done'.

Handing over between shifts and as the patient moves around the hospital between departments is also critical. If the patient and their family/whānau participate in related discussions, they can take appropriate responsibility and **request any help needed for mobilising the patient** safely.

WHAT REALLY MATTERS IS CRITICAL THINKING AND ACTING ON RISK FACTORS *continued***Partner with patients and families/whānāu to prevent falls**

About 50 percent of older patients who fall have already fallen once (Oliver et al 2008). If the loved one of a family/whānau has a fall in hospital, and staff haven't asked about falls or listened to their experience, they must feel that injury has been added to the 'insult' of not having their insights and wisdom sought and acknowledged.

Many patients and families/whānau are capable and open to using **general information that helps them be proactive about their own safety**. Educating patients about particular risks associated with their admission (such as what to expect after their operation) empowers them to manage risks they might otherwise not have anticipated (Jones 2012).

When offering an individualised care plan to prevent falls, we need to:

- consider the patient's preferences and feelings
- mitigate the patient's loss of identity they feel in having to rely on others
- mitigate fears related to the patient's fall
- consider the daily routines of the older person.

Some patients may feel over-confident or wish to be independent. So it's important to start a positive conversation about mitigating risk-taking behaviour. Such activities may include simple activities of daily life (for instance, needing to use the toilet) (Hill et al 2016). Also remember that access to interventions is influenced by factors such as cost, distance, availability of transport and parking, and weather conditions. Finally, social and cultural beliefs will influence attitudes to various interventions (University of York: Centre for Reviews and Dissemination 2014b).

It's also important to partner with the patient and their family/whānau when creating their plan for care after a fall. Reducing the risk of falling is something we do *with* the older person, not *to* them.

What really matters in preventing falls is to identify the older patient's risk factors and take appropriate action. To repeat the **words of Frances Healey**, 'The scale of the challenge can perhaps best be faced by setting aside the question, "How do we prevent patients from falling?" and instead repeatedly asking ourselves, "How can I prevent this patient from falling?"' (Healey 2011).

Reducing patients' risks of falling is something we do with them, not to them.

Examples of interventions tailored to specific risk factors

Risk identified	Possible mitigation
Balance and gait problems	<p>Recommend the patient does balance and strength exercises either in a community group or at home (see Topic 9)</p> <p>Refer the patient to a physiotherapist for them to:</p> <ul style="list-style-type: none"> • assess gait and balance • introduce one-on-one progressive gait and balance retraining • introduce strengthening exercises • advise and teach how to use assistive devices correctly.
Mobility	<p>Consider specific moving and handling measures for the patient, for example, signals that indicate the level of support the patient needs to mobilise.</p>

WHAT REALLY MATTERS IS CRITICAL THINKING AND ACTING ON RISK FACTORS *continued*

Risk identified	Possible mitigation
Muscle weakness	<p>Screen and treat the patient for sarcopenia (recommended), with resistance exercise as a core component (Morley et al 2014).</p> <p>Consider the patient's diet and protein intake as well, and consider any opportunity for a nutrition or dietetics referral. Diet and protein are particularly important for frail patients, even though the impact on falls is unclear (Bauer et al 2013; Hubbard et al 2015; Rizzoli et al 2014).</p> <p>Consider the need for vitamin D supplementation (see information box on page 5).</p> <p>Refer the patient for a Green Prescription or to a falls prevention programme. Consider referring patients aged over 75 to a home-based programme.</p> <p>Contact Green Prescription coordinators (for a list see the Ministry of Health website) or ACC community injury prevention consultants for a list of local falls prevention programmes (enquire at information@acc.co.nz).</p>
Feet and/or shoes	<p>Refer the patient to a podiatrist for them to:</p> <ul style="list-style-type: none"> • assess and treat the patient's foot problems • prescribe corrective footwear or orthotics if needed.
Medicines (especially psychotropics)	<p>Taper off and stop psychotropic medicines for a patient if you assess the patient is not clearly benefiting from their use. Or reduce doses if possible and increase non-pharmacological treatments.</p> <p>Monitor the patient as they make recommended changes to their medication. See Topic 8.</p>
Postural hypotension (that may cause dizziness)	<p>Discuss postural hypotension with the patient and give them information about what it is and what it means for them.</p> <p>Recommend a patient changes their medicine to reduce hypotension.</p> <p>Monitor the patient as they make recommended changes to help them avoid or reduce instances of postural hypotension.</p>
Delirium	<p>Use various intervention strategies to prevent delirium. Exercises to make the patient more mobile are key components of such strategies.</p> <p>Delirium is the leading contributor to falls in hospital. The use of delirium interventions are effective in reducing new onset delirium among older inpatients and can reduce the risk of having a fall by 62 percent.</p> <p>These multicomponent and non-pharmacological inventions include, for example, reorientation, early mobilisation, promotion of sleep, maintenance of adequate hydration and nutrition, and provision of vision and hearing adaptations (Hshieh et al 2015; Martinez et al 2012).</p>
Dementia	<p>Refer the patient to a specialist if appropriate.</p> <p>Cognitive impairment needs to be diagnosed, and close care provided. Ask the patient's family/whānau what works for them.</p> <p>Although patients with dementia are hospitalised and injured more often than other people, and have longer recovery times, many of them respond to standard interventions such as physiotherapy and strength and balance exercise programmes. This is particularly so where a caregiver is able to support and help them with exercises and where information is presented in appropriate ways (Meyer et al 2015).</p>

WHAT REALLY MATTERS IS CRITICAL THINKING AND ACTING ON RISK FACTORS *continued*

Risk identified	Possible mitigation
Vision	Refer the patient to an optometrist or ophthalmologist for them to: <ul style="list-style-type: none"> • identify and treat any medical conditions contributing to the patient’s vision problems • identify and treat any patient problems with visual acuity and contrast sensitivity.
Incontinence	Refer the patient to a specialist if appropriate.
Pain	Consider if the patient’s pain is well managed or whether an adjustment in medication is needed. Or refer the patient to a chronic pain clinic if this may be beneficial. Taking an action is important, as ongoing pain is a risk factor for falling.
Hypoglycaemia	Consider adjusting the insulin regime of a patient with diabetes. Taking an action is important as hypoglycaemia is associated with falls.
Oral anticoagulants	Balance the benefits and risks of oral anticoagulants. If a patient does fall, oral anticoagulants can double the risk of death. Importantly, the risk of eventual death from a head injury due to a fall exceeds the annualised stroke risk for patients assessed as at lower risk of stroke (CHA2DS2-VASc scores of 0 to 2 (Inui et al 2014)).
Safety at home	Refer patients at higher risk of falling to an occupational therapist for them to: <ul style="list-style-type: none"> • assess the safety of the home and the patient’s ability to function safely there • arrange rails and other aids to be installed if needed. See Topic 5 . ♦



Vitamin D is essential for good health

It is important to maintain adequate vitamin D levels all year round for bone health (Ministry of Health and Cancer Society of New Zealand 2012). Low levels have been associated with reduced bone mineral density, high bone turnover and increased risk of hip fracture (Nowson et al 2012). There is an association between lower-serum vitamin D levels and falling (Annweiler and Beauchet 2015).

For those who are deficient in vitamin D and unable to increase their exposure to direct sunlight, supplements can be prescribed. One rationale for vitamin D supplementation is that vitamin D supplements may help prevent falls.

Vitamin D deficiency can be assumed for the following groups and a blood test is not necessary: those who are housebound, completely cover their skin or have very dark skin. Many residents of aged residential care facilities may meet these criteria (Best Practice Advocacy Centre NZ 2011; 2016). Vitamin D testing is only justified to answer a specific diagnostic question.

New Zealand guidance for vitamin D supplementation

- New Zealand-specific guidance for vitamin D supplementation can be found [here](#).
- Most people can achieve adequate levels of vitamin D through exposure to sunlight.
- Only prescribe vitamin D supplementation for frail older people or those at risk of deficiency. Older residents in long-term care are more likely to meet these criteria.
- ACC, district health boards (DHBs) and primary health organisations support the provision of vitamin D supplements for older people who live in residential care facilities.
- Monthly vitamin D supplements must be prescribed, but lower doses are available over the counter, eg, as cod liver oil tablets.
- The standard treatment in New Zealand for people with vitamin D deficiency, and who are unable to increase their exposure to the sun, is one x 50,000 IU cholecalciferol tablet a month, with the option of an initial loading dose of one tablet a day for up to 10 days if the vitamin D deficiency is severe.
- Routine supplementation for the general population is not recommended as it does not reduce falls or fractures (Bolland et al 2015; Reid et al 2014).
- Testing vitamin D levels is rarely required. It is expensive and often unreliable (Agency for Healthcare Research and Quality 2015; CADTH 2015). ♦



How to support care planning individualised to each older person

In relation to managing falls risk, the patient has an individualised care plan that focuses on their particular risk factors for falling. To clarify further, applying a standardised set of interventions is not individualised care – some interventions may be irrelevant, and some interventions the patient needs to respond to their particular risk factors may be missing.

The overall plan of care ensures consistency, coordination and continuity between team members. The plan is a critical form of communication that captures multidisciplinary perspectives and shared understandings of the patient's problem(s), the goals of care and the interventions designed to reach those goals. The plan also lets us evaluate the effectiveness of interventions (Blake and Weststrate 2013).

In addition to the individualised care plan, it is important to put in place essential elements of care that apply to all patients. **Topic 5 discusses how to ensure safe care and a safe environment**, for example, through appropriate adjustment of beds to the right height, and keeping patient bells, personal gear and mobility equipment within reach.

Use care plans in hospitals

Some DHBs have separate care plans to manage the risk of falls; other DHBs have this incorporated in the admission to discharge plan. **Signalling systems** and 'patient at a glance' boards can help. Either way, interventions focused on the risk of falls will be integrated with other goals, not least because many risk factors require management regardless, or are already being addressed in the process of managing underlying conditions.

Use care pathways to integrate primary and secondary care

Given the short length of stay in acute wards, it's possible that some interventions will not be completed within the admission. Planning individualised to each older person carries through in the referrals for specialist input and handover to the patient's primary or residential care team. For instance, a patient whose painful feet need more care may be referred to a podiatrist after discharge. Care pathways, supported discharge processes and fracture liaison services can help consumers and staff navigate an integrated system. Care pathways must be evidence-based.

Educate patients, families/whānau and carers

The importance of individualised education programmes for patients, their families/whānau and carers needs to be stressed. Education combined with training and feedback to staff reduced the rates of falls and injurious falls in a large randomised controlled trial (n = 3606). Older patients given individualised education in rehabilitation hospital units had approximately 40 percent fewer falls than control patients. The individualised education was based on principles of changes in health behaviour and was delivered by a trained health professional. The education was in addition to usual care (Hill et al 2015). ♦



What consistent approaches are available for falls risk assessment and care planning?

Falls prevention experts understand that, on a practical level, 'multifactorial assessment and intervention will be more consistently delivered if standard documentation formats prompt staff to consider key risk factors' (Healey and Darowski 2012). This advice applies in all care settings.

In hospitals, a review of risk assessment and care planning processes in New Zealand DHBs (Blake and Weststrate 2013) noted variation in the quality and versions of the tools in use. This resulted in the development of a combined risk assessment tool that includes falls and prompts care planning. It is hosted on TrendCare, an acuity tool used by the majority of public and some private hospitals in New Zealand (Blake 2013).

In residential care settings the interRAI assessment tool can support a consistent approach to multifactorial risk assessment and individualised care planning.

In the community primary care providers can make use of the Stay Independent Falls Prevention Toolkit for clinicians.

The national programme Reducing Harm from Falls, supported by a national patient safety campaign, developed these risk assessment and care planning frameworks for DHBs and other providers to implement locally and regionally in ways that best suit them.

A degree of national consistency may result if providers reference these frameworks within their own tools, or develop tools based on them (Blake 2013). ♦



60 MINUTES OF PROFESSIONAL DEVELOPMENT

This learning activity equals 60 minutes of your professional development.

You can add it to the personal professional record you keep to check off your competence framework requirements.

To complete this learning activity, first read the whole topic and the three required readings, then assess your learning with the **10 self-test questions**.

Learning objectives

Reading and reflecting on Topic 4 and the materials in this teaching and learning package will enable you to:

- review the reasons for multifactorial assessment and individualised interventions to reduce harm from falls
- choose a standardised approach to developing an individualised care plan for falls risks
- discuss how a care plan for a patient relates to managing their risk of falling
- reflect on the capabilities of you and your team for selecting individualised interventions for falls when someone is identified as having risk factors for falling.

Teaching and learning package

Gather up the resources you'll need. Use the hyperlinks in this topic, or download or print the reference material.

Required reading

These three readings will help you form evidence-informed perspectives about how to respond to identified falls risks in an individualised care plan.

1. Healey F. 2011. Implementing a Fall Prevention Program via [webpage](#).
2. Cassie F. 2013. Push to reduce falls. *Nursing Review* 13(5): 28 via [pdf](#).
3. A [State of the Art Review](#) in *British Medical Journal* 2016 gives a good, short summary of falls risk assessment and care planning in the community (starts on page 2).

ADDITIONAL RESOURCES

Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care (2013) from the Agency for Healthcare Research and Quality is [here](#).

Pocketcard: [ask assess act resource for health professionals](#)

[Falls Risk Assessment Tools and Care Plans in New Zealand DHB Hospitals. A Review and Discussion Document](#)

[Falls Risk Assessment in TrendCare](#)

[Questions and answers about quality and safety markers \(QSMs\)](#)

Health Quality & Safety Commission [signalling system for safe mobilising](#) ♦

10 QUESTIONS

TOPIC 4 Professional development: questions to test your knowledge



PROFESSIONAL DEVELOPMENT ACTIVITY

ANSWER these questions to check you have retained the knowledge reviewed in this topic and readings

1	Working with the older person and their family/whānau on an individualised care plan to address their risk factors for falling is appropriate in which care settings? in hospital in the community in age related residential care in all of the above settings
2	The proportion of older inpatients who fall and have had a prior fall is about: 25 percent 50 percent 75 percent
3	Overall, the material presented in this article makes the case for: a consistent approach to care planning using standard interventions an ad hoc approach to care planning using individualised interventions a consistent approach to care planning using individualised interventions an ad hoc approach to care planning using standard interventions.

ANSWER

ASSESS the processes you used for risk assessment and planning care in your unit

4	Review the reading <u>Questions and answers about the QSMs</u> , and look at the baseline QSM audit results for the DHB in your area. What are the likely explanations for the baseline result?
5	Does your care setting use separate or integrated documents for falls risk assessment and care planning? separate integrated What do you think are the advantages and disadvantages of the approach used in your unit? The advantages are: The disadvantages are:
6	Describe two or three of the ways your care setting ensures a multidisciplinary approach is taken to falls risk assessment and care planning. 1. 2. 3.
7	Describe three specific things you typically do to involve patients and their families/whānau to reduce the risk of an older person falling: 1. 2. 3.

ASSESS

Outline three learnings or insights and how you will APPLY them in your practice

8	My first learning/insight is: I will apply it in practice by:
9	My second learning/insight is: I will apply it in practice by:
10	My third learning/insight is: I will apply it in practice by:

APPLY

LEARNER	NAME:	PROFESSION:	DESIGNATION:
DATE:	REGISTRATION ID:	WORKPLACE:	

Validation that learner has completed this professional development activity		Signature:	
NAME:	PROFESSION:	CONTACT:	
DATE:	REGISTRATION ID:	WORKPLACE:	

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