Delivering a rapid, in-home falls prevention service for older people

Approximately 40 per cent of older adults fall in the community each year. To help meet the needs of this growing cohort, Alfred Health and Ambulance Victoria partnered to develop a collaborative falls response model called STRIDE, providing a specialised, in-home service to patients to reduce their risk of falling and prevent future hospitalisation.

## Background

One third of those aged over 65 years and living in the community will fall each year, potentially leading to a cascade of negative consequences including decreased confidence, reduced activity levels, functional decline, reduced quality of life, and social isolation. This, in turn, increases risk of dependency and institutionalisation.

Falls account for 16 per cent of all Ambulance Victoria (AV) dispatches within the area serviced by the Alfred Hospital (AH) and are the leading cause of emergency department (ED) admissions for people aged over 65 years. With an ageing population, demand on health services to care for older people who have experienced a fall is only expected to grow.

People who have fallen are more likely to fall again, so services exist that focus on preventing falls. These services, however, typically require interactions with many different providers in multiple health disciplines, have extensive wait times, and/or require the patient to present to hospital.

There is growing evidence for the effectiveness of multifactorial assessments in reducing the rate of falls. These assessments examine the different individual factors in a person’s life that might increase their risk of falling so that targeted interventions can be implemented to prevent future falls.

To reduce AV paramedic call outs and ED admissions, AH and AV implemented a falls response model that offered patients aged over 65 years an in-home multifactorial assessment and tailored interventions within 24 hours of referral.

This service was named STRIDE, an acronym derived from the longer name: ‘Service to reduce risk, improve independence and decrease emergency admissions’.

Collaborative model for a falls response service

**Lead** Alfred Health

**Partner** Ambulance Victoria

**Duration** December 2016 – August 2018

**Key outcomes**

* Delivered comprehensive, in-home multifactorial assessments to 120 patients through the STRIDE service
* Reduced patients’ fear of falling
* Improved patients’ quality of life
* Reduced problems experienced by patients in areas such as pain and discomfort, self-care, and anxiety and depression
* Achieved high patient adherence with interventions and recommendations
* Received positive feedback from patients, clinicians and referrers

‘[STRIDE] helps to keep the patient safe when they are extremely vulnerable and … minimise the possibility of them being readmitted to hospital. The sense of safety and care has been so very important to me in my recovery.’

**– Patient**

## Key activity

* STRIDE targeted people aged 65 years and older residing in the AH catchment area who called Triple Zero (000) or presented to the AH ED after experiencing a fall. The fall had to be from standing height or lower and could not be one that required ambulance transport to hospital.
* Within 24 hours of referral to STRIDE, patients were offered a comprehensive, multifactorial assessment in their home. This would be provided by an advanced practice allied health clinician.
* The assessment would guide the recommendation of tailored falls prevention interventions and referrals. This included education for all patients and further prescription of treatments such as exercise or adaptive equipment as appropriate. The main areas targeted included:
  + home exercise
  + medication review
  + adaptive equipment prescription
  + continence management
  + gait aid prescription
  + bone health
  + home modifications
  + nutrition
  + feet and footwear
  + referrals to community rehabilitation or health services.
* Correspondence was always sent to the patient’s general practitioner (GP) and follow-up visits or phone contact occurred as needed.
* STRIDE initially operated seven days a week from 7am to 7pm, however, due to low demand, these hours were later reduced and combined with an on-call service.
* For the same reason, the model was expanded to accept referrals from the AH ED and the Chevra Hatzolah Melbourne emergency medical responder service in addition to from AV as per the original model design.

## Outcomes

* 120 patients received the STRIDE service, with 101 consenting to participate in project evaluation.
* At one month, follow-up data showed patients were less fearful of falling. The proportion of patients reporting a low concern of falling increased from 20 per cent to 32 per cent, while the proportion with a high concern of falling decreased from 38 per cent to 26 per cent.
* Patients also showed improved quality of life. Median quality of life scores increased from 70 to 80 and patients reported a reduction in problems with pain and discomfort (from 70 per cent to 46 per cent), self-care (63 per cent to 43 per cent), and anxiety and depression (50 per cent to 34 per cent).
* After one month, eight (8 per cent) patients had experienced a subsequent fall. Three (3 per cent) of these patients sustained a serious injury and required hospital admission. This low proportion shows potential for the STRIDE service to reduce ED re-presentations caused by subsequent falls.
* Patient adherence with education recommendations was in excess of 70 per cent. General advice – such as the rest, ice, compression and elevation (RICE) approach to injuries – was the most common form of education provided, along with advice on home environment, mobility or gait aid.
* Patient adherence to treatment interventions was also generally high, ranging from 63 per cent for exercise (the most commonly prescribed treatment) to 86 per cent for adaptive equipment prescription. Research suggests adherence could have been positively influenced by the delivery of the recommendations in the patient’s home.
* Patient satisfaction was very high, with 82 per cent of the 95 survey respondents agreeing the STRIDE service had minimised their risk of falling.
* Clinicians and referrers also showed overwhelming support for the service, saying it had clinical relevance and addressed an unmet need in the community. They particularly valued the advanced practice allied health clinician role, noting that this potentially negated the need for joint visits and/or duplication of physiotherapy and occupational therapist resources for these patients.

‘I believe the STRIDE team is very important and helpful to the patients who have experienced a fall. Without the STRIDE team’s help, I don't think patients can do so well, as after discharge from hospital, patients only go back the original routine. No knowledge, no methods to prevent future fall.’

**– Family member**

## Key learnings

* Low demand meant STRIDE could not be sustained as a standalone service. However, the service model could be integrated with a suitable, existing home-visiting service and referral sources could be expanded to local GPs, other EDs, and residential aged care facilities.
* Service model changes made during the pilot in response to this low demand demonstrated that STRIDE could be delivered within a standard eight-hour service day and provided six days a week without significantly affecting the rapid response rate or patient outcomes.
* Even when a falls response service was offered within 24 hours, a significant portion of patients (48 per cent) chose to delay clinician contact. The most common reasons given for declining an assessment within the timeframe were that they were unavailable, already had prior commitments, or were awaiting medical review or a GP appointment.
* While the STRIDE service’s initial aim was to prevent hospital admissions following falls in the community through referrals from AV, the majority of referrals ended up coming from the AH ED. A key learning was that a large proportion of falls in the community required imaging in the ED, and by running a collaborative service model with referrals coming from both ED and AV, the STRIDE service was beneficial in preventing unnecessary hospital admissions following falls.

### Stakeholder feedback

Focus groups and one-on-one interviews with clinicians and referrers yielded the following suggestions:

* **Medical oversight of the STRIDE service –** This could support clinicians in making decisions on medical observations such as calling Triple Zero (000) for a medical admission and enabling review of patient medications and their impact on falls risk.
* **More time to develop a relationship with AV –C**linicians felt this could have positively impacted the number of referrals to the service. The ED was suggested as a logical access point for ongoing education of AV about the STRIDE service due to the ED’s existing relationship with AV paramedics.
* **Debriefing and more professional development –** Clinicians said a debrief mechanism would have been beneficial, especially on weekends when they were acting as sole clinicians. They also requested case reviews, competency reviews, and upskilling in new areas such as fracture management.

‘What you folks did really turned me around. It was what I needed at the time. You don’t want to burden family, so you don’t say anything. [You] made me think … and put me on the right track. I am so much better now, and you guys were what made the difference.’

**– Patient**