



Star Project

Working together to prevent falls in residential care

The Star Project: Working together to prevent falls in residential care

Ms Kirsten Moore (NARI)



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Project team

Chief Investigators

- Prof Keith Hill , LaTrobe University, Northern Health & NARI
- Ms Betty Haralambous, NARI
- Prof Andrew Robinson, School of Nursing and Midwifery and Wicking Dementia Research & Education Centre , UTas
- A/Prof Terry Haines, Monash University and Southern Health
- Dr Jenny Nitz , University of Queensland

Research team

- NARI: Ms Marcia Fearn, Dr Elizabeth Cyarto, Ms Emma Renehan, Ms Sue Hunt
- The University of Tasmania: Mr Brendan Churchill, Ms Emma Lea
- The University of Queensland: Ms Stephanie Fu





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Participating facilities

- **Victoria**
 - Fronditha Care Inc (Templestowe)
 - St Vincent's Health Service (Auburn House & Riverside House)
 - Ballarat Health Service (Bill Crawford & Jessie Gillett)
- **Tasmania**
 - Queen Victoria Home
 - Vaucluse Gardens
- **Queensland**
 - Mount Lofty Nursing Home
 - Wishart Village
- Mix of CALD, psychogeriatric, high & low level, dementia specific, metro & regional



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Falls in residential care

- Common adverse event with at least 50% of residents falling each year
- Higher rates in some groups, eg 70-80% of residents with dementia (Shaw 2007)
- Over half of falls result in an injury with a 1/3 resulting in fracture (Kallin 2002)
- European estimate from 2002 of 944Euro/fall in residential care or AD \$1560 (Nurmi & Luthje)





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Falls prevention evidence

- Less evidence available for residential aged care (RAC)
- Multifactorial interventions, either based on falls risk assessments or general interventions introduced for all residents can reduce falls in RACs (Becker 2003, Dyer 2004, Jensen 2002)



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Single interventions

- Single interventions shown to be effective in reducing falls in RAC include:
 - Medication review (Zermansky 2006)
 - Vitamin D supplementation (Bischoff 2003; Flicker 2005)
 - Continence management combined with functional training (Schnelle 2003)
 - Staff education (Bouwen 2008)
- Exercise has had mixed outcomes in RACs (Faber 2006, Nowalk 2001, Toulotte 2003)





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The Star Project

- Round 1 Encouraging Best Practice in Residential Aged Care – Australian Government Department of Health & Ageing
- Secondment of nurses to be Falls Resource Nurses (FRN)
- Action research method
- Aim: to effectively implement, in a sustainable manner, best practice guidelines in falls prevention in 9 RACFs



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Guidelines

- Guidelines to implement falls prevention in RAC:
 - National – Australian Safety and Quality Council's guidelines (2005) & Victorian Quality Council's guidelines (2004),
 - International - Registered Nurses' Association of Ontario (2005) & National Institute for Clinical Excellence (2004)





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Method

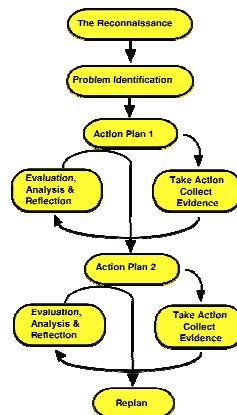
- External comprehensive baseline audit of current practice
- 0.2 EFT funding for 12 months:
 - Secondment of FRN and
 - 12 month Action Research process facilitated by research/project officer
- Facility wide staff training
- Environmental modifications (\$8000), hip protectors (\$5000) and high-low/low-low beds (\$4000)
- Falls risk assessment for consenting residents
- Evaluation, including economic and interviews with managers and FRNs



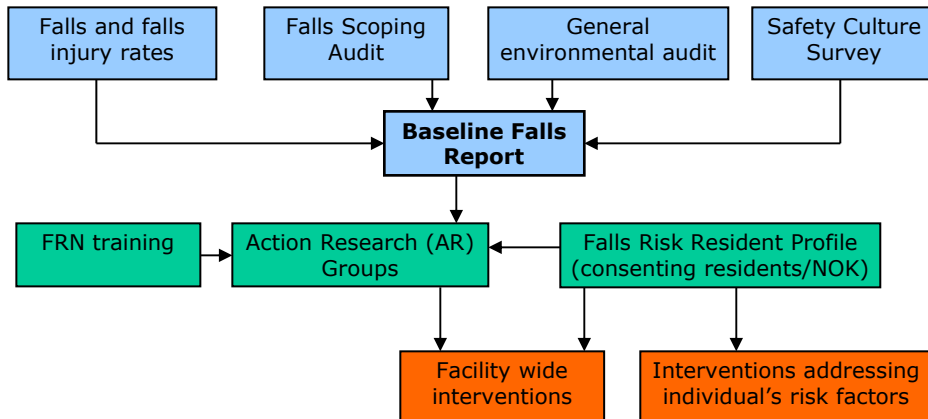
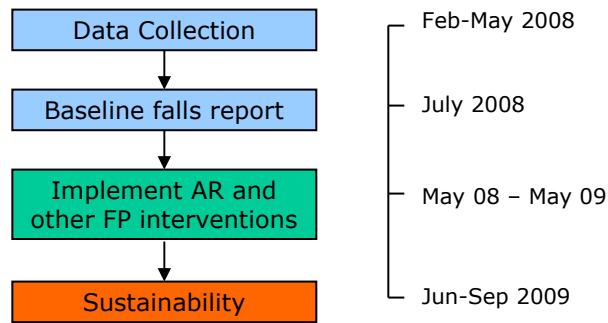
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Action research



Timelines





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Falls Risk Assessments

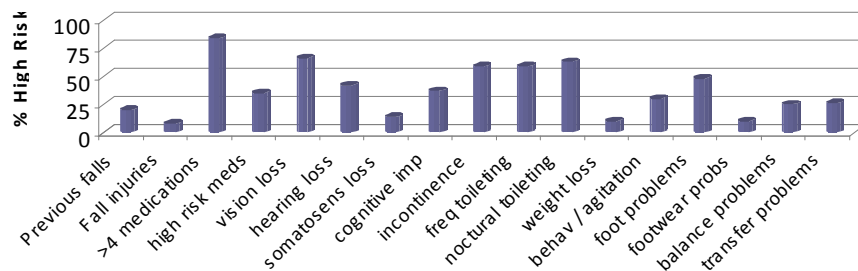
- Facilities all had their own falls risk assessments
- Lack of capacity for pooling data, therefore project instituted common tool (FROP-Resi) across all 9 facilities
- Requirement of Ethics / consent
- 329 residents (52%) assessed
- Average age 85 (sd=8) years
- 72% female



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Percentage at high risk on most common falls risk factors

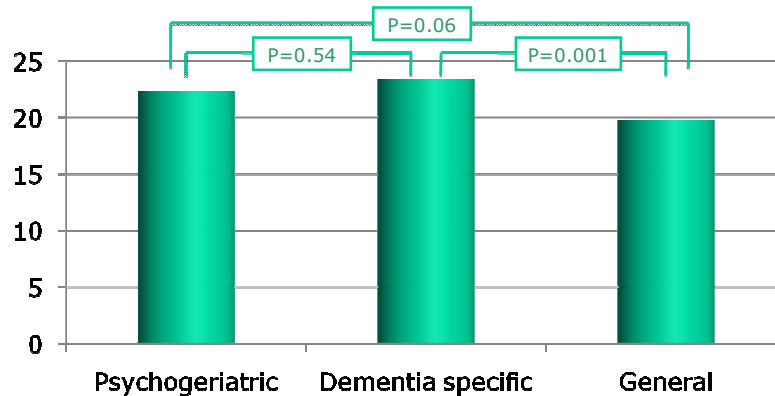




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Comparison by facility type



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Environmental audit

- All 9 facilities audited by 1 assessor (April/May '08)
- Tool adapted from the Improving the environment for older people in Health Services: An audit tool (NARI/DHS) 147 Recommendations (communal, nighttime, bedroom audits)
- Across all sites 450 recommendations (34%) required action.
- Average 50 per site (range 31-64 or 21%-44%) requiring action

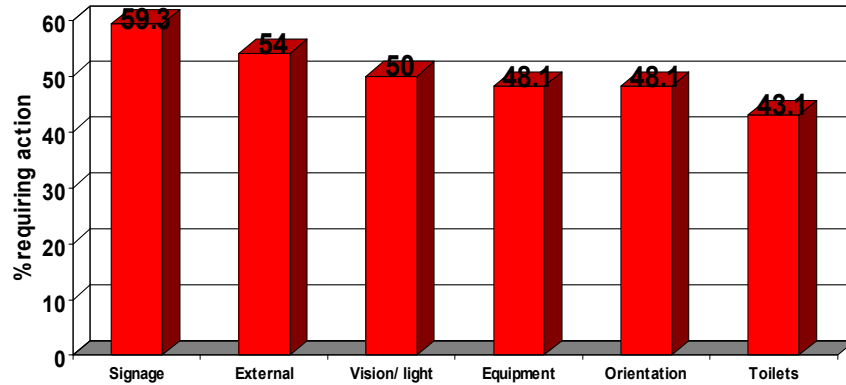




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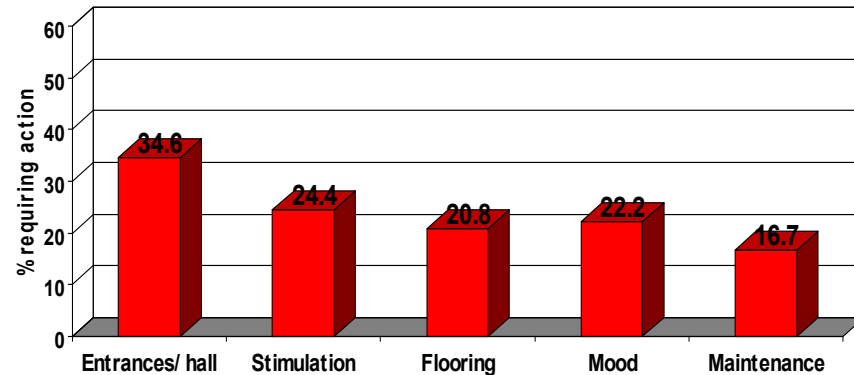
Communal: % requiring action



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Communal: % requiring action

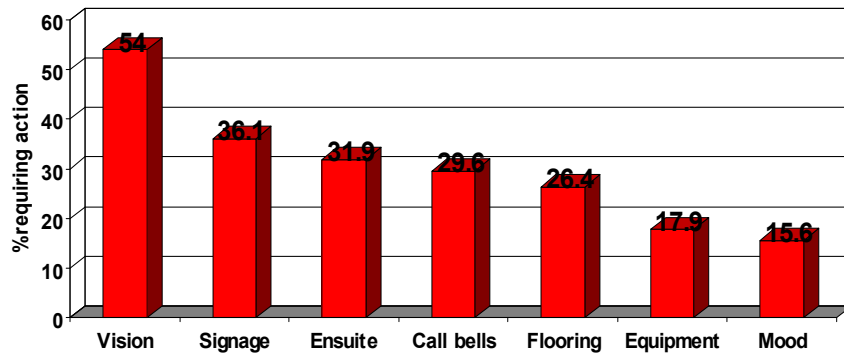




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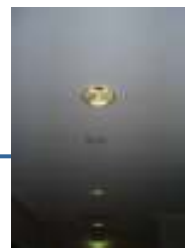
Bedroom: % requiring action



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Lighting: common issues; glare/reflection, inconsistent, dim, bright, downlights





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Contrasting colour for visibility



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Modifications

- Gym equipment
- Height adjustable chairs
- New outdoor shed
- Tree stump removal
- Automatic communal toilet doors
- Improved signage
- Repaving outdoor area
- Ramps
- Replace internal mat wells
- Luminous stair nosing
- Handrails/grabrails
- Bed/chair alarms
- DECT phones
- Outdoor seating
- Pendant bells
- Convex mirrors





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Training

- Based on "SPLATT" model; interactive, falls prevention expo
- Work in groups through workstations run by different disciplines
- Motto 'Falls are everyone's responsibility'
- All staff encouraged to attend
- Over 400 staff across the 9 sites attended
- Positive feedback – see things from the resident's perspective





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Engaging residents and family

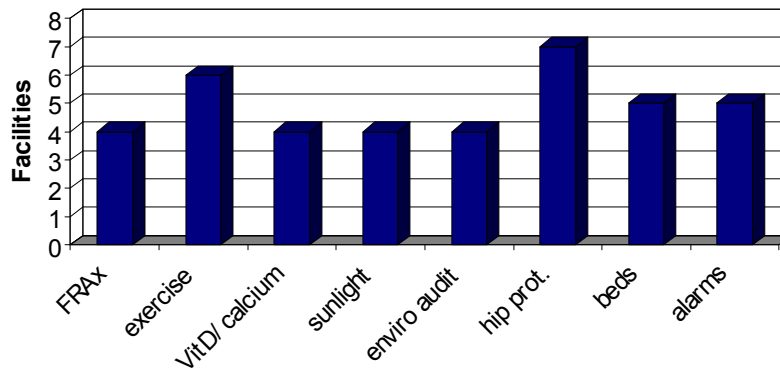
- Challenging!
- Evening sessions for family and residents were popular (wine and cheese) - 200+ family and residents attended information sessions on falls prevention across facilities
- Many facilities developed brochures for residents and family members (falls prevention, appropriate footwear, falls friendly Christmas gift ideas)



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Improvements in practice (n=8)

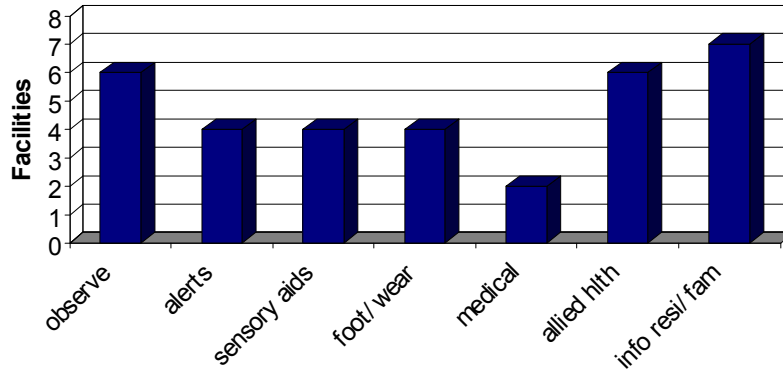




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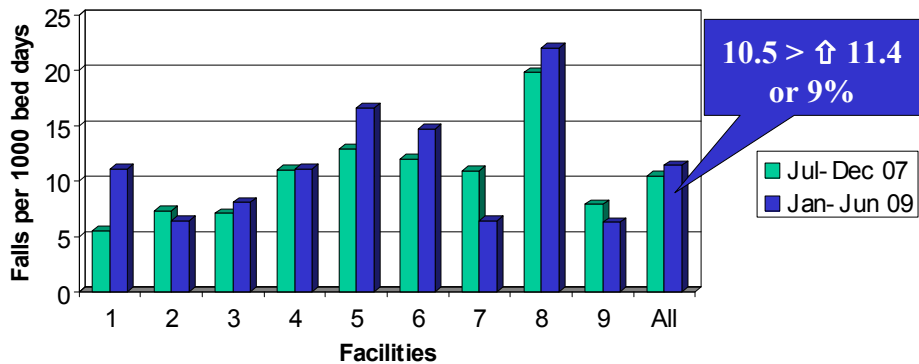
Improvements in practice (n=8)



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Falls Incidents

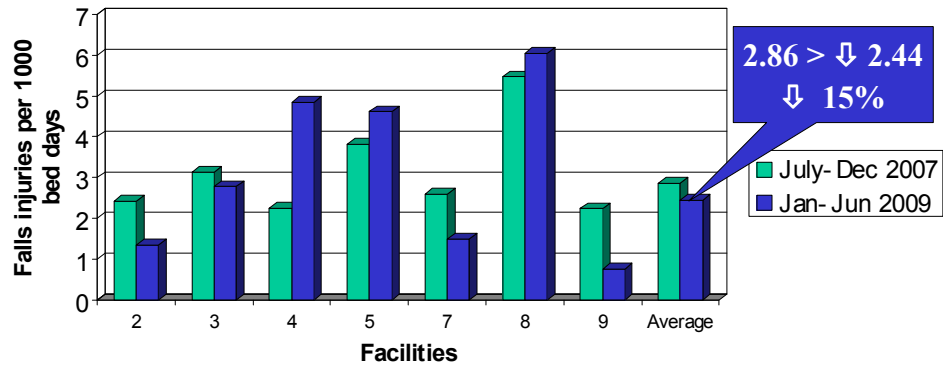




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Falls Injuries



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Why no reduction in falls?

- Time lag –implementing most interventions during the final 6 month data collection period
- Awareness raising impact > increased reporting of falls (some managers reported this)
- Evidence not transferable to all types of RACs?
- Wrong interventions or not enough?
- Resident population becoming frailer/no control group





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Barriers

- Staff turnover – 2 facilities change in project officer, FRN and facility manager > loose momentum
- Lack of management support at some facilities
- Limited time for non direct care provision
- Environmental modifications > getting trades people and prioritising/agreement
- Practice change slow and project activities took more time than anticipated
- Regular attendance at action research meetings was difficult to achieve
- Difficulties with backfilling (lack of staff, unsuitable skills)



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Enablers

- Funding for backfilling provided FRNs some extra capacity
- Funding for purchasing equipment/ modifications
- Dedicated and motivated FRNs – usually doing some project work in their own time
- Involving staff at varying levels
- Management support of project
- External support from research team
- Organisation based steering committees





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Resource developed

- Website guide to implementing falls prevention interventions incorporating:
 - Information on how to use falls incident data and how to define a fall
 - Evidence based guidelines
 - The falls risk assessment tool used in this project
 - The scoping audit tool modified for use during the project for facilities to monitor their practice against evidence based guidelines
 - A guide to action research
 - A guide to implementing an interactive falls prevention expo
 - Links to relevant websites



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Conclusion

- Action research:
 - Useful for practice improvement in falls prevention
 - Effective in engaging and empowering facility staff
 - Applicable for other clinical areas
- Links between researchers and RACs useful for improving practice
- Increased access to allied health staff important for supporting falls prevention
- No reduction in falls (possibly due to time lag, awareness raising or lack of effect of interventions) but reduction in injuries
- Sustainability will be influenced by staff turnover and lack of time available for QI activities

