Focusing on the falling frail

Dr Niki Fairhall
Physiotherapist
Frail older people

Increased risk of:

• Falls $^{1-3}$
• Fall-related fracture $^1$
• Reduced mobility $^2$

$^3$ Samper-Ternent et al, *J Aging Health* 2012; 24: 641–53
Frail older people

What is frailty?

Can falls be prevented?

What can we do at work on Monday?
What is frailty?
What is frailty?
# Diagnosis

## FRAIL screening tool

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue:</td>
<td>are you fatigued?</td>
</tr>
<tr>
<td>Resistance:</td>
<td>can’t ascend 1 flight stairs</td>
</tr>
<tr>
<td>Aerobic:</td>
<td>can’t walk 1 block</td>
</tr>
<tr>
<td>Illness:</td>
<td>&gt;5 comorbidities</td>
</tr>
<tr>
<td>Loss of weight:</td>
<td>&gt;5% body weight in 6 mth</td>
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</table>

## Frailty phenotype

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<tr>
<td>Weight loss:</td>
<td>&gt;4.5kg in past year</td>
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<tr>
<td>Exhaustion:</td>
<td>fatigued, tired, weak</td>
</tr>
<tr>
<td>Low activity:</td>
<td>sits &gt;4 hrs/day, walks little</td>
</tr>
<tr>
<td>Slowness:</td>
<td>walks 4m in &gt;6 seconds</td>
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<tr>
<td>Weakness:</td>
<td>weak grip</td>
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1 Subra et al, *J Nutr Health Aging* 2012;16:714e720

Can we reduce falls in frail people?
Can we reduce falls in frail people?

Frailty Intervention Trial

Ian Cameron, Susan Kurrle, Cathie Sherrington, Stephen Lord

Evaluate effect of a multi-factorial intervention on:

- frailty
- mobility
- risk factors for falls
- fall rate
Randomised (n=241)

Multifactorial interdisciplinary intervention (n=120)

3 month follow-up (n=109)

12 month follow-up (n=107)

Usual care (n=121)

3 month follow-up (n=117)

12 month follow-up (n=109)
Randomised (n=241)

Multifactorial interdisciplinary intervention (n=120)
- 3 month follow-up (n=109)
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• Target frailty

• Target falls
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<th>Outcome</th>
<th>Between group difference, (95% CI) p-value</th>
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<tr>
<td>Frailty</td>
<td>14.7% (2.4% to 27.0%), p = 0.02</td>
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<td>Falls risk factors:</td>
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<tr>
<td>- Mobility (gait speed)</td>
<td>0.06 m/s (0.01–0.10), p=0.02</td>
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<td>- Strength</td>
<td>1.84 kg (0.17 to 3.51), p=0.03</td>
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<td>- Balance (sway)</td>
<td>-90.63 mm (-168.6 to -12.6), p=0.02</td>
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<tr>
<td>- Proprioception</td>
<td>0.07 (0.60 to 0.75), p=0.83</td>
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<tr>
<td>- Visual contrast sensitivity</td>
<td>0.25 (-0.81 to 1.31), p=0.64</td>
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<tr>
<td>- Reaction time</td>
<td>-27.9 (-40.28 to 26.23) p=0.68</td>
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<td>PPA falls risk score</td>
<td>-0.40 (-0.83 to 0.04), p=0.07</td>
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Fairhall et al, *Age Ageing*, 2013; Dec30
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Treating frail people

- Exercise, single intervention?
- Challenge balance
Treating frail people

- Exercise, single intervention?
- Challenge balance
- Supervision
Treating frail people

- Exercise, single intervention?
- Challenge balance
- Supervision
- Maximise adherence
Treating frail people

• Address factors associated with frailty
  – Vit D deficiency, low mood, cognitive impairment, incontinence

• Case management

• Long treatment period

• Screen for frailty
  ➔ intervene to reduce frailty
• Frail people are at increased risk of falls

• Balance challenging exercise. Consider more supervision for safety and adherence

• Address factors associated with frailty
Acknowledgements

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