iPREFER –

intervention to PREvent Falls after Emergency Response

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Background

- Ambulance Service of NSW responded to 50000+ “falls” in 2008/9
- “Falls” is second most common emergency response category
- Current non-conveyance rate is 25%
- “Falls” most common reason for non-transport

Simpson et al. AJA 2012
Background

- No routine or standard care for non-conveyed older fallers
- Limited referral pathways available to
  - GPs,
  - Falls Prevention Teams,
  - Health Care providers
- 47% of non-conveyed elderly were re-attended within two weeks

Snooks et al. Qual Saf Health Care, 2006
Systematic review

- Commonly non-transported due to:
  - No injury sustained/only minor injury sustained
  - Patient ‘refusing to travel’ (RTT)
  - Treatment on scene is sufficient

- Most common management was ‘lift assist’
Systematic review

- Majority of non-transported falls occur at home

- Recent studies show potential to improve patient health outcomes of non-transported older fallers through appropriate interventions
Non-transported fallers are a vulnerable population
- 39% CNS disorders
- 79% required assistance to carry out ADLs
- 74% experienced 3+ falls in previous year
- 52% unable to walk 10 min without a rest

58% fell during 6mth follow-up
22% fell within 30 days
Independent predictors of falls

- 3+ falls in past year
- Assistance required for personal ADLs (dressing, bathing, toileting)
- Unable to walk for 10 min without a rest

Previous study results-ASNSW
Previous study results - ASNSW

- Independent predictors of repeat ambulance use
  - 3+ falls in past year
  - assistance required for personal ADLs (dressing, bathing, toileting)
  - pain that interfered with activities in the past month
Hypothesis

Rapid, timely and tailored intervention in older people who are not conveyed to hospital following a fall will lead to a significant reduction in future falls, fall related injury and use of emergency services.
Population

- n=234 (117 Intervention/117 Control)
- Non-conveyed older fallers (65+ years)
- Attended to by Ambulance crew from participating stations (Bondi, Maroubra, Mascot, Randwick, Paddington, SAC, Marrickville)
- Community dwelling

Exclusion criteria:
- Persons living in Residential care facilities
- Cognitive impairment and no carer
- Limited English speaking/reading skills
RCT Study outline

000 call following a fall

Clinical algorithm (T19) applied by paramedics

Conveyed to ED

- Inform patient about intended contact
- Contact research staff

Not conveyed

Home assessment (Baseline) within 24-48 hours

List of identified risk factors generated

Randomisation

Control group

Intervention group

Reassessment
000 call following a fall

Clinical algorithm (T19) applied by paramedics

Conveyed to ED

Not conveyed

Paramedics:
- Inform patient about intended contact
- Contact research staff

Home assessment (Baseline) within 24-48 hours

List of identified risk factors generated

Randomisation

Control group

Intervention group

Reassessment
RCT Study outline

Baseline Assessment within 48 hours

- Medical and Medication Hx
- Falls and Fracture Hx
- Quality of Life (EQ-5D),
- Falls Efficacy (ICON FES),
- GDS
- Physical activity (IPEQ) and Physical function
- Cognition: GPCOG, Trail A/ B
- Home safety (Homefast)

000 call
Clinical algorithm (T19)
Conveyed
Not conveyed
Paramedics: - Inform patient - Contact research staff
Home assessment
List of risk factors
Randomisation
Control group
Intervention
Reassessment
Study outline

List of identified risk factors

Example:
- Sleeping tablets
- Low vision and last review 2 yrs
- Poor balance
- No handrails in bathroom
Referral Indicators (1)

Home medication review (HMR)
- Centrally acting medication
  - (Anti-depressants, Anti-psychotics, Sedatives/Sleeping tablets)
  - Multi- medication (4+ or 12 doses/day)

Optometrist review
- Bifocal glasses used for outside mobility
- Low vision (MET <16)
- Last optometry review 2yrs +
Referral Indicators (2)

Post acute care services (PACS)

- Physiotherapy
  (below average physical performance)

- Occupational therapy
  (Home hazards e.g. Bathroom safety, lighting, mobility)
Referral Indicators (3)

Falls, Balance and Bone Health Clinic
- ‘Complex’ participants
  (orthostatic hypertension, dizziness, frequent unexplained falls,)

Aged Care Clinic
- ‘Complex’ participants
  (esp. below average cognitive performance)
<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Referral to service provider</th>
<th>Patient contacted by…</th>
<th>Intervention location</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td>Post Acute Care Service</td>
<td>Physio/OT</td>
<td>Home visit</td>
<td>6 months</td>
</tr>
<tr>
<td>Home modification</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Optometry</td>
<td>Optometrist</td>
<td></td>
<td>Home visit</td>
<td></td>
</tr>
<tr>
<td>Home Mediation Review</td>
<td>General practitioner</td>
<td>Pharmacy</td>
<td>Home visit</td>
<td>Immediately by GP</td>
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<tr>
<td>Falls, Balance and Bone Health Clinic</td>
<td>General practitioner</td>
<td>Outpatient Clinic</td>
<td>POWH Outpatients</td>
<td>As appropriate</td>
</tr>
<tr>
<td>Aged care Clinic</td>
<td>General practitioner</td>
<td>Outpatient Clinic</td>
<td>POWH Outpatients</td>
<td>As appropriate</td>
</tr>
</tbody>
</table>
Recruitment to date: 133

Completed 6 month ReAx: 97
‘Problems with a great idea’

- Difficult to comprehensively educate all paramedics
- Profile of non-transported patients indicate they may have benefited
- Patients who declined transport may be more likely to decline participation
- Fall follow-up may be completed by primary care provider
‘Problems with a great idea’

- Limited attention on disease and injury prevention, health promotion, public health
- Emergency calls for life-saving treatments increased
- Training and tools not sufficient to recognise high risk patients and need for referral
Conclusion

- 25% of fallers are not-conveyed

- Non-conveyed older fallers have a high falls risk

- The study will help determine whether these interventions, using existing services, will be able to reduce future falls and ambulance call out
Acknowledgement

- **NEURA**
  - A/Prof Jacqui Close
  - Prof Steven Lord
  - Dr Anne Tiedemann
  - Joanne Lo
  - Linda Roylance
  - Betty Ramsay
  - Daniel Schoene
  - Sandra O’Rourke

- **Ambulance Service NSW**
  - Paul Simpson
  - Station research coordinators and paramedics from: Bondi, Mascot, Maroubra, Randwick, Paddington, SAC, Marrickville

- **Post acute care service (POWH)**
  - Prof Gideon Caplan
  - Karin Erdmann
  - Amanda Trist
  - Debbie Keogh