Preventing falls in older Aboriginal people

Professor Rebecca Ivers for the Ironbark Investigator team
Summary

Falls in older Aboriginal people

Development and piloting of the Ironbark program

NHMRC trial
  Design
  Investigator team
Background

Highest rates of hospitalized falls for Aboriginal people 2003-2010 were among those aged 65+ in women and those aged 60-64 in men (Boufous et al 2010)

Population of Aboriginal people aged 45-64 years is growing, with increasing numbers of Aboriginal people surviving to older ages

Early onset of chronic diseases: fall risk at younger ages?

Limited published reports of falls programs for Aboriginal people

Important elements of success for Aboriginal programs include: locally owned community based programs, Aboriginal leadership and capacity – applied to fall prevention programs?
The Ironbark Pilot Project was funded by the NSW Health Aboriginal Injury Prevention and Safety Promotion Demonstration Grants Program

**Project team:** Caroline Lukaszyk (Project Manager), Julieann Coombes (Aboriginal Research Officer)

**Steering committee members:** David Ella, Robyn Moore, Matt Sonter, Mick Pittman, Barry Duncan, Lorraine Lovitt, Jean Turner, David Follent

**Investigators:** Prof Rebecca Ivers, Prof Cathie Sherrington, Prof Bob Cumming, Prof Tony Broe, Dr Lisa Keay, Dr Anne Tiedemann, Dr Holly Mack

**Resource Development:** Julieann Coombes, Caroline Lukasyzk, Anne Tiedemann, Cathie Sherrington, Megan Swann, Catherine Kirkham, Betty Ramsay
The Ironbark Project

1. Examine burden and risk factors for falls in older Aboriginal people

2. Understand what programs are currently being delivered in NSW

3. Qualitative work with community members and stakeholders to understand acceptability and feasibility of identified falls programs

4. Development and piloting of new program
Yarning circles

- 10 yarning circles held in Sydney, the Central Coast, Central West, and Illawarra Shoalhaven
- Total of 76 participants (16 males, 60 females)
Program development

- On-going program
- Delivered in Aboriginal community settings, overseen by local Aboriginal staff
- Free
- Delivered in a 1 x 1.5 hour class on a weekly basis
  - 45 minute ‘yarning both ways’ session – education component – based on Stepping On
  - 45 minute exercise session – based on Otago exercises
- Program materials developed with culturally specific images and photographs
- Program was trialed at 6 pilot sites for a 3 or 6 month period: Umina, Nowra, Mount Druitt, Windsor, Ulladulla, Redfern
Evaluation

- Baseline, 3 and 6 month measurements by Aboriginal Research Assistants
- Physical measurements:
  - Timed sit to stand
  - Timed 4m walk
  - Standing balance tests
- Questionnaires
- Weekly feedback slips
- Facilitator and site manager weekly feedback forms
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline (n=77) mean (SD)</th>
<th>3 months (n=77) mean (SD)</th>
<th>Change between baseline and 3 months mean (SD), p</th>
<th>6 months (n=69) mean (SD)</th>
<th>Change between baseline and 6 months mean (SD), p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing balance (out of 50sec)</td>
<td>43.3 (9.6)</td>
<td>44.8 (8.1)</td>
<td>1.44 (8.8), 0.16</td>
<td>46.8 (7.5)</td>
<td>2.28 (7.5), &lt;0.01</td>
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<tr>
<td>Sit to stand (sec)</td>
<td>15.4 (4.4)</td>
<td>13.3 (4.5)</td>
<td>-2.13 (2.8), &lt;0.01</td>
<td>11.2 (2.9)</td>
<td>-3.73 (3.6), &lt;0.01</td>
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<tr>
<td>4 meter walk (sec)</td>
<td>7.5 (4.1)</td>
<td>5.9 (3.0)</td>
<td>-1.61 (2.3), &lt;0.01</td>
<td>4.4 (2.9)</td>
<td>-3.29 (3.3), &lt;0.01</td>
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<tr>
<td>Gait speed (m/sec)</td>
<td>0.66 (0.3)</td>
<td>0.81 (0.3)</td>
<td>0.16 (0.3), &lt;0.01</td>
<td>1.07 (0.4)</td>
<td>0.42 (0.4), &lt;0.01</td>
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<tr>
<td>Short Physical Performance Battery Score (out of 12)</td>
<td>8.3 (2.0)</td>
<td>9.4 (2.1)</td>
<td>1.08 (1.5), &lt;0.01</td>
<td>10.7 (1.9)</td>
<td>2.25 (1.7), &lt;0.01</td>
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<tr>
<td>BMI</td>
<td>32.0 (7.7)</td>
<td>31.4 (7.5)</td>
<td>-0.56 (1.2), &lt;0.01</td>
<td>31.6 (6.9)</td>
<td>-0.61 (1.5), &lt;0.01</td>
</tr>
</tbody>
</table>
Outcomes

“I enjoyed it, you learn so much. You go out now and stand tall, you feel confident and you don’t feel like a little old lady. It’s not just good physically, it is good mentally. I go around to others that live in my retirement village and move hazards. I never sit down at home and I like doing my exercises.” (Female, Nowra)

“This is a very good program because it is about respecting us as Elders, what our needs are. It’s good - really good - I like it. I have learnt to talk about things. You always think about things but talking is great.” (Male, Redfern)

“The program meant a lot and I have learnt a lot. It was not rushed and you felt confident doing it. Gyms are full-on and here, you’re relaxing and knowing that you’re getting something out of it. It’s important to have an Aboriginal specific program as we feel welcomed here and we see our Auntie’s and sisters.” (Female, Mt Druitt)
NHMRC grant investigator and project team

**Chief Investigators:** Ivers R, Sherrington, Clapham K, Mackean T, Keay L, Clemson L, Tiedemann A, Hill AM, Simpson J, Ryder C

**Associate Investigators:** Eades A, Hunter K, Hill K, Howard K, Rogers K, Gwynne K, Kickett M, Cumming R, Jan S, Gwynn J.

**Project staff to date:** Julieann Coombes, Caroline Lukaszyk, Sallie Cairnduff, Jean Turner
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**Project staff:** Julieann Coombes, Caroline Lukaszyk, Sallie Cairnduff,
Project officers NSW, SA, WA
Administration assistant
Research assistants

**Steering committee:** Julieann Coombes, Jean Turner, Anne-Marie Eades, Marian Kickett, peak ACCHO bodies from NSW, WA, SA
Aims

**Primary:** to establish the effectiveness of a community-based fall prevention program (the *Ironbark Program*) on the rate of falls in community-dwelling Aboriginal people 45 years and older, compared to controls who receive a healthy ageing program.

**Secondary:** to establish the impact of the fall prevention program on the proportion of fallers, and the impact on health-related quality of life, functional mobility, physical activity and waist circumference 12 months after randomisation.

**Economic analysis:** to establish the cost-effectiveness and cost-utility of the fall prevention program, from the perspective of the health and community care funder.

**Process evaluation:** to quantify participation, inclusion and enjoyment; explore participants’ experiences of the intervention; and establish factors associated with participation.
Methods

Cluster randomised control trial with randomisation of 60 community-based groups in NSW, South Australia and Western Australia

Recruitment of existing Elder or community groups catering to older people, or formation of new groups, with delivery of a weekly healthy ageing group program

Recruitment by dissemination of information to Aboriginal Medical Services by Aboriginal community controlled peak bodies, local advertising in community newspapers, and engagement with local Aboriginal community or health services or Local Aboriginal Land Councils.

Sites will be randomised to receive either the **Ironbark Program** or attend a weekly healthy ageing group, with facilitated discussion and speakers focusing on social and emotional health and well-being.

Both intervention and control sites will deliver the program weekly for 12 months. Control group will receive intervention for 6 months following.
Figure 1: Flow chart of study enrolment, randomisation and procedures

1. Staggered recruitment or creation of community groups

2. **BASELINE**: consent, baseline questionnaire and functional measures

3. **Online group randomisation**

   3.1. **INTERVENTION**: Ironbark Program

   3.2. **CONTROL**: Healthy ageing program

4. Process evaluation

5. **12 MONTHS**: blinded assessment and weekly falls reporting
Participants

• Aboriginal or Torres Strait Islander people 45 years and older
• Live in a private dwelling or retirement village and be willing to attend weekly meetings at the participating site

• Exclusion criteria: inability to leave the house without physical assistance from another person; a progressive neurological disease; or a medical condition precluding exercise

• All participants will require medical clearance from a general practitioner

• Family members, including non-Aboriginal people, will be permitted to attend classes for both intervention or control groups but will not be included in the trial if not eligible to participate
Program delivery and staffing

- Intervention and control programs will be offered to participants free of charge; services may offer subsidised transport as per usual practices.
- **Staffing:** For both control and intervention sites there will be two staff members: a **program facilitator** who will deliver the program, and a **site manager**, who will arrange transport for participants, monitor attendance and collect program data.
- All staff will attend state-based face to face training at commencement of program and will also be connected with other staff (matched by intervention group status) by phone, skype or social media for peer to peer support and formal training.
Baseline and outcome measures

**Baseline Assessment:** Prior to randomisation, physical status, social and demographic characteristics, and fall-related factors such as history of falls, vision, and medication, will be assessed via an interviewer-administered questionnaire by trained Aboriginal research assistants blinded to intervention allocation.

**Outcome measures:** Primary outcomes will be the *rate of falls* after 12 months of program delivery. Fall data will be collected weekly by site managers who will ask participants about self-reported health, falls, frequency of home exercise, and sleep. Site managers will telephone non-attendees each week and ask about falls in the previous week.

Secondary outcomes will be collected using validated instruments during assessments at baseline, and 12 months after randomisation by trained Aboriginal research assistants blinded to intervention allocation. Secondary outcomes will be the proportion of people who fall in the 12 months after randomisation, health-related quality of life, physical activity, functional mobility and waist circumference.
Why successful?

- Team (long standing collaborations, experience, breadth and depth)
- Aboriginal consumer/community partnership
- Rigour (trial design, including process/economic evaluation)
- Extensive pilot work/feasibility
- Endorsement!
Working with community, for community

- Project oversight by steering committee
- Partnerships and support from Aboriginal community controlled services and peak bodies
- Aboriginal involvement at all levels
- On-going feedback to communities
Publications


