Personal Alert Victoria clients:
Who is falling and what are their thoughts on falls prevention?

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The project team

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Personal Alert Victoria (PAV)

- Personal monitoring and emergency response service
- Funded by the Victorian Government
- Supports frail older people and people with disabilities to live an independent life
- Fosters greater confidence and safety
The problem of falls in PAV clients

- Recent falls, or perceived risk of falls, is a key reason for people to be referred to the PAV service
- Falls are the most common reason clients activate their alert pendant
- Western Australian study
  - 56% of alerts occur in response to a fall

De San Miguel et al., Australas J Ageing 2008; 27: 103-05
Value of understanding the local problem

- Interventions that are tailored to local problems, barriers and enablers are more effective.
- Tailoring requires:
  - Mapping of interventions to underlying demand
  - Understanding the moderators of intervention uptake
  - Creating a solution
Project objectives

1. Identify the patterns, risk factors and outcomes of PAV clients who experience a fall.

2. Explore perceptions and experiences of PAV clients who experience a fall.

3. Explore perceptions and experiences of assessors about their role in falls prevention.
Project design

Sequential explanatory mixed methods study

Quantitative Data linkage study

Qualitative Interviews with PAV clients

Quantitative Assessor survey
DATA LINKAGE STUDY
Data processing and linkage

- PAV service provider dataset
  - Demographics
  - Number and nature of alarm events raised

- Linked with Victorian DHHS datasets
  - Linking variables: patient identifier, age, gender
Participant cohort

- A total of **48,023** PAV clients between 2012 to 2014

**Mean age:** 84.1 years

**Female:** 80%

**Lives alone:** 82%

**>3 medical conditions:** 12%

**Top 3 health conditions:**
1. Arthritis
2. Diabetes
3. Asthma

**Reason for alarm event:**
1. Falls (45%)
2. Unwell (20%)
PAV clients by region

- Northern Metropolitan: 27%
- Eastern Metropolitan: 23%
- Western Metropolitan: 15%
- Southern Metropolitan: 8%
- Loddon Mallee: 7%
- Grampians: 5%
- Barwon South West: 8%
- Gippsland: 8%
- Hume: 8%
ED utilisation by PAV clients

- 96,574 ED presentations
- 62% via road ambulance
- 29,381 PAV clients presented
- Median LOS: 5.0 hours
- Transfer to ward: 64%
- Usual residence: 31%
Hospital utilisation by PAV clients

82,280 unplanned admissions

12,574 (15%) for falls

28,682 PAV clients admitted

Median LOS: 4.0 days

Multiday stay: 69%
Acute care: 99%

Most common diagnoses:
1. Acute myocardial infarction
2. Heart failure
3. Fracture femur
4. Fracture pelvis/spine
## Reason for callouts

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of callouts (N = 38,084)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart-related</td>
<td>2,478 (7%)</td>
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<tr>
<td>Anxiety</td>
<td>713 (2%)</td>
</tr>
<tr>
<td>Bleeding</td>
<td>876 (2%)</td>
</tr>
<tr>
<td>Confusion</td>
<td>527 (1%)</td>
</tr>
<tr>
<td>Falls</td>
<td>16,882 (44%)</td>
</tr>
<tr>
<td>Pain</td>
<td>2,904 (8%)</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td>2,980 (8%)</td>
</tr>
<tr>
<td>Unwell</td>
<td>7,637 (20%)</td>
</tr>
<tr>
<td>Other (e.g. locked in)</td>
<td>3,807 (8%)</td>
</tr>
</tbody>
</table>
Callouts between 2012 to 2014

Rate per 1000 person years

- Activated alarm
- Activated alarm for falls
ED presentations between 2012 to 2014

Rate per 1000 person years

p = 0.000
Unplanned admissions between 2012 to 2014

- Unplanned hospital admission
- Unplanned admission for falls

Rate per 1000 person years

- $p = 0.000$ for the blue line (hospital admission)
- $p = 0.000$ for the orange line (admission for falls)
INTERVIEWS WITH PAV CLIENTS
Objectives

- To explore the experiences and perspectives of PAV clients regarding falls and falls prevention interventions and activities.
- To explore barriers and enablers to participation in falls prevention interventions.
Avoiding the F word (Falls)

- I had been going to the toilet ... and on the way back I thought, “I can’t walk.” I mean I felt that I was too weak to walk so I was crawling, I must’ve fainted just outside the bedroom. [F, 74]

- If I bend down too quick I get black outs... it’s only temporary. My doctor increased my blood pressure tablets and I seem to be going alright. I collapsed about half a dozen times. [M, 84]
Perceptions on falls risk

**Interviewer:** Do you think you are at risk of more falls?

**Participant:** Well I hope not. I haven’t had any for a while. I’ve got a walker and if I go on long walks, because I get a little bit wobbly, I take the walker. But otherwise, I seem to be walking okay. [F, 80]

**Participant:** I hear on television a few people falling down and I am careful how much I can [do] but if I fall I fall, I couldn’t say nothing. Couldn’t say, “That can’t be happen to me”. It happen to many others, it can happen to me too. [F, 78]
Perceptions on the causes of falls

- The truth is I can’t believe I am old and when these things happen I think I can do it quickly like before. Of course answer the telephone and you go quickly you fall. Now I pay attention a lot more than before but this is what happened. [F, 80]

- I tripped over one of those half doors across my bedroom to stop the dogs getting in and I leant over that thinking it was fixed to the wall but it wasn’t and I fell in the dark and I fell over on top of that. [M, 78]

- I have so many falling and sometime it’s the doctor’s fault too, they give me tablets which doesn’t suit me. [F, 78]
Engagement in falls prevention activities

- The [local] council – community health services – under that they referred me to the gymnasium. I started going to a physiotherapist and he said yup you qualify and so once a week I go to the gymnasium. Every Monday I go there for an hour and the physiotherapist there will keep an eye on me and I hop on some machine and it costs me $6... It helps enormously! [F, 74]

- I think I do a lot of exercises here without going to physio. I flex my leg muscles and arms every morning to loosen up. [M, 84]

- I do a fair bit of exercise myself. Bend down touch my toes, a few body presses, just moving my body from side to side, my neck and my arms and things, all the exercises I used to do when I was bike rider virtually, and touch my hands on the floor, I still do that. Just mainly to keep my muscles flexible. [M, 78]
Barriers to accessing falls prevention interventions

Appropriateness of venue
- I turn blooming 74 and that’s the first time I enter the gym. And when you get in there is an enormous steep staircase. There is no lift! [F, 74]

Competing priorities
- Look, I can’t go to all of this [physiotherapy, falls and balance clinic] because we are alone, my husband is sick and he’s always in hospital, I can’t go and I only go if it’s very necessary. [F, 80]

Cost
- Well I think my biggest problem would be the cost of a lot of things. Because I’m on a pension. [F, 80]

Knowledge
- **Interviewer:** So, have you accessed any services such as physiotherapy?
- **Participant:** Well nobody offered me that. [F, 78]
Role of general practitioner

- All participants reported talking to their GP about their falls.
- Seek advice from GP and oncologist. And also I would talk about it with my son. [F, 74]

- I see my GP at least once a month. Happy to talk to him about black outs. [M, 84]

Participants are happy for the PAV service to contact their GP about their falls.
ASSESSOR SURVEY
Objectives

- To understand PAV client needs from the perspective of an assessor.
- To gain insight from assessors regarding their experience and knowledge of PAV client falls and referrals to falls prevention interventions.
Assessor Information

Assessment Organisation
- HACC Assessment Services/Regional Assessment services 51%
- Community Health Services 23%

Region
- Northern Metropolitan 23%

Time working as an assessor for PAV
- 5+ years 44%

104 surveys were completed between 28th of July and 20th of August
Assessing falls risk

- 42% report assessing falls risk through a holistic assessment tool
- National Screening and Assessment Form most common holistic assessment tool
  - “Have you had two or more falls in the past 12 months?”
- 10% used a specific falls risk tool.
- Most common tool was the FROP-COM
- Falls risk was typically assessed at the PAV service eligibility assessment
Referrals/Recommendations to falls prevention interventions

- **Strength and balance**: Some/All the time (85), None of the time (5), Missing (10)
- **Education intervention**: Some/All the time (80), None of the time (10), Missing (0)
- **Medication review**: Some/All the time (75), None of the time (15), Missing (10)
- **Bone health**: Some/All the time (70), None of the time (20), Missing (10)
- **Vision interventions**: Some/All the time (60), None of the time (30), Missing (10)
- **Cardiovascular review**: Some/All the time (55), None of the time (40), Missing (5)
- **OT referral**: Some/All the time (50), None of the time (40), Missing (10)
- **Continence review**: Some/All the time (45), None of the time (35), Missing (10)
- **Foot health interventions**: Some/All the time (40), None of the time (30), Missing (10)
- **Hearing loss interventions**: Some/All the time (35), None of the time (25), Missing (10)
<table>
<thead>
<tr>
<th>Intervention</th>
<th>Transport</th>
<th>Motivation</th>
<th>Funding/Cost</th>
<th>Relevance</th>
<th>Not a priority</th>
<th>Location</th>
<th>Poor health literacy</th>
<th>Waiting times</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Strength &amp; balance</td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
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<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td>No local services Past negative experiences</td>
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<tr>
<td>Education</td>
<td><strong>X</strong></td>
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<td><strong>X</strong></td>
<td><strong>X</strong></td>
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<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td>Access to online information Lack of CALD info</td>
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<td>Medication</td>
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<td><strong>X</strong></td>
<td>Trust GP</td>
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<td>Bone health</td>
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<td><strong>X</strong></td>
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<td>Trust GP</td>
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<td>Vision</td>
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<td>Occupational Therapy</td>
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<td>Foot health</td>
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<td>Hearing loss</td>
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## Assessor level & system level barriers

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Client consent</th>
<th>Referral pathways</th>
<th>Ability to refer</th>
<th>GP com</th>
<th>Long waiting list</th>
<th>Funding</th>
<th>Time to complete referral</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength &amp; balance</td>
<td>X</td>
<td>X</td>
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<td></td>
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<td>Strict eligibility criteria No local services</td>
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<td>Education</td>
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<td>Access to online Information overload Lack of CALD info</td>
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<tr>
<td>Medication</td>
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<td>Bone health</td>
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<td>Occupational Therapy</td>
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<td>X</td>
<td>Client doesn’t want to change things in house Client does not understand OT role</td>
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<td>Contiuence</td>
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<td>Foot health</td>
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<td>X</td>
<td>Lack of providers</td>
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<tr>
<td>Hearing loss</td>
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Assessor perceived client barriers

- **Motivation**

  - Clients are focused on obtaining an alarm as they feel this will solve all their problems. Most clients are not interested in prevention by this time as they feel they are entitled to it and feel a worker...had promised an alarm, hence they do not always grasp the concept of eligibility assessment or addressing risk factors to prevent falls which will negate the need for an alarm.

  - Clients often feel that the programs aren't worthwhile and feel that they are too old to participate.

- **Transport**
Assessor barriers

- **Client level**
  - Getting the clients consent and getting the client to believe the referral is needed

- **Assessor level**
  - Assessors are not all medical professionals so clients do not always follow our advice
Strategies to improve intervention uptake

- Improve transport
- Home-based therapy
- Social activities
- Shorten time commitment

Falls prevention amongst PAV clients could be enhanced!
Take home messages

1. PAV clients avoided the F word [FALLS!].
2. Callout for falls are frequent and recurring.
3. Rate of fall callouts and falls-related hospitalisations are increasing over time.
4. Assessors felt clients were at risk of falls.
The Falls and Bone Health Team

We aim to improve the quality of clinical practice by generating new knowledge through clinical research projects.

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Falls and bone health team

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