NEW APPROACHES TO MANAGING WANDERING

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Overview

- Review evidence related to outcomes of dementia related wandering.
- Look at results of two behavioural interventions trialled to reduce risky aspects of wandering in Residential Aged Care (RAC).
- Discuss approaches that future research should consider.

What are we talking about?

An objective, empirically-founded definition to aid universal understanding of the behaviour:

"syndrome of dementia-related locomotion behavior having a frequent, repetitive, temporally-disordered and/or spatially-disoriented nature that is manifested in lapping, random, and/or pacing patterns, some of which are associated with eloping, eloping attempts, or getting lost unless accompanied".

Algase DL, Moore D Helen, Vandeweerd C, Gavin-Dreschnack D and the IWC (2007) Mapping the maze of terms and definitions in dementia-related wandering. (2007) *Aging and Mental Health.* 11 (6):686-98.

An explanatory model of risky locomotion

(derived from the Need-Driven Behaviour Model, Algase et al 1996)

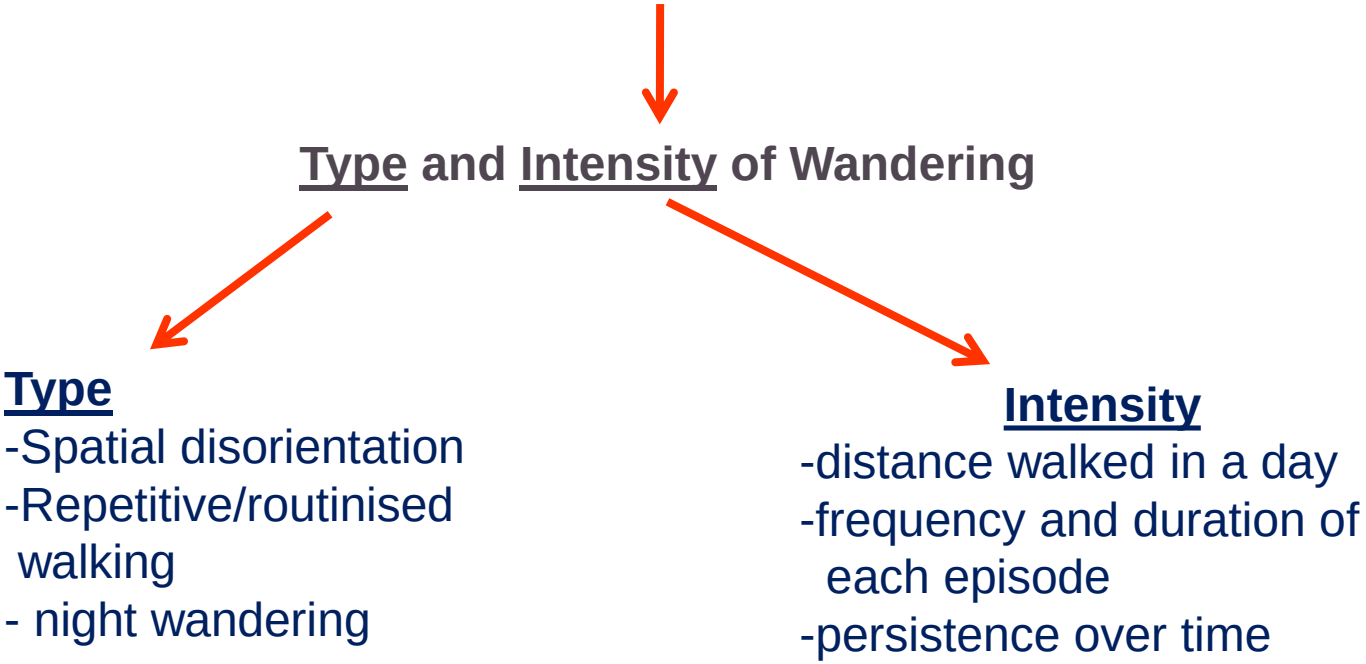
Contributing Factors

Stable

- *Demographics*
(age*, race, gender*, education)
-*Predisposing factors*
(personality*, response to stress*)
ApoE status

Dynamic

- *Enabling*
Mobility*, function*, health status*, medications*
- *Neurocognitive* *
(attention, cognition, memory, language skills, executive functioning, wayfinding capacity



Algase, D.L., Beattie, E.R., & Therrien B (2001) Impact of cognitive impairment on wandering behavior. Western Journal of Nursing Research 23(3), 283-295.

Wandering

Type and Intensity

ADVERSE OUTCOMES

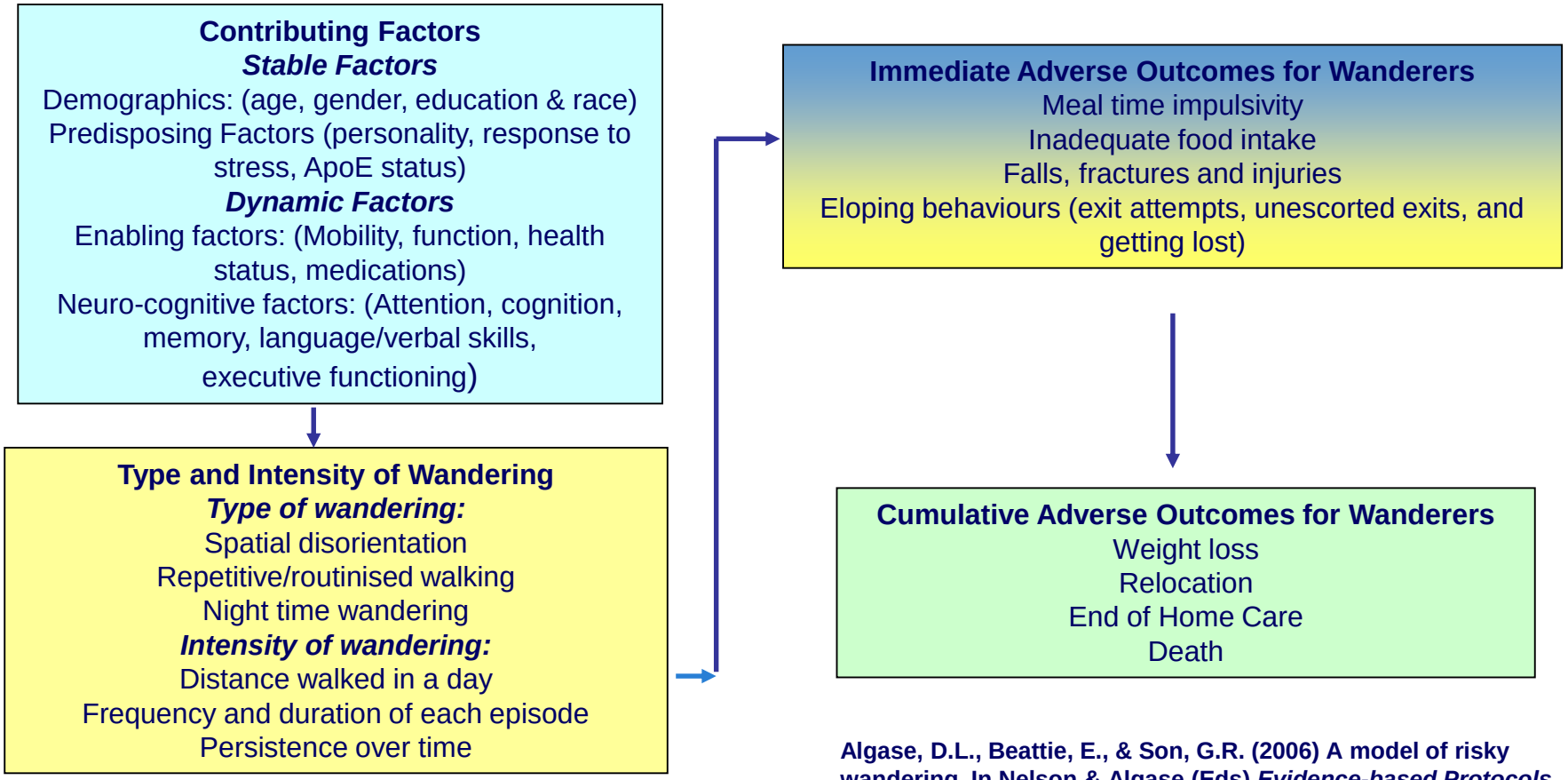
Immediate

- Fatigue *
- Food intake*
- Falling and injuries*
- Unescorted exits*
- Exiting alone*

Cumulative

- Weight loss (in excess of the disease alone) *
- Relocation*
- Ending home care*
- Becoming lost*
- Death*

Risk Model



Algase, D.L., Beattie, E., & Son, G.R. (2006) A model of risky wandering. In Nelson & Algase (Eds) *Evidence-based Protocols for Wandering Behaviour (*2006), Springer:NY.

Wandering	Risk estimate	Interpersonal	Technological	Policy
Excessive wandering; Wandering disrupts necessary	Low	Engagement; diversion; collusion, behaviour modification	Sensory enhancement	Risk screening assessment; behaviour logs; scheduled location checks
Losing one's way indoors	Low-medium	Verbal re-direction; train to use same route every time.	Environmental design and cueing	Risk screening assessment; behaviour logs; scheduled location checks
Trespassing into off-limits or hazardous areas or beyond mastery level; night wandering; stating intent to leave; preparing to leave	Medium	Verbal redirection; behavioural modification; structured activity programs; wandering registry; intensified supervision.	Alert/alarm systems; barricades, locks/subjective exit barriers, e.g. mirror, mural, door and floor camouflage, environmental design & cueing; surveillance	As above with increased frquency of location checks

Wandering	Risk estimate	Interpersonal	Technological	Policy
Exit door lingering and testing	Medium to high	Redirect using verbal and non-verbal cueing & diversion; conceal cues for leaving, e.g. keys; intensified supervision; alert responsible parties to heightened risk	Subjective exit barriers	Lost residents plans; door alarms, drills/checks; incident reports; medication review
Seeking means or opportunity to exit	Medium to high	Verbal redirection; behavioural modification; structured activity programs; wandering registry; intensified supervision.	As above	As above
Un-approved exiting	High	Promptly respond to alert/alarms Contain, monitor	As above	As above
Eloping; losing one's way beyond care; getting lost	High, critical	Track, return. Promptly recognise absence, rapidly locate and return to supervised care, assess health status	Wandering registry, local or state police; search and recovery mission	GPS

What can we do better now?

- Wandering history on admission/ at home
- Take reports of increased locomotor behaviour seriously
- Get a good snapshot of the behaviour of concern – Excessive walking? Agitation? Fatigue? Intrusion?

  Peak period assessment

  Behavioural log

  RAWS (NH &C versions)
- Monitor capacity to walk safely- physical and cognitive (mastery of environment and wayfinding).

- Provide appropriate physical supports for environmental protection

A Tool to Measure Wandering Behaviour

• The Revised Algase Wandering Scale (RAWS) (Nursing Home & Community versions)

• A 28-item questionnaire, based on three dimensions of wandering
  Persistent walking
  Spatial disorientation
  Eloping

• Differentiates between those who do not wander, those with occasional behaviour, those who wander but without issues and those whose behavior involves moderate to high risk (scale 1-4)

• Validated in an Australian community sample

Algase, DL, Beattie, ER, Bogue, E, & Yao, L. (2001). Algase Wandering Scale: Initial psychometrics of a new caregiver reporting tool. *American Journal of Alzheimer's Disease and Other Dementias*, 16(3), 141-152.
Algase, D. L., Beattie, E. R. A., Song, J., Milke, D., Duffield, C. & Cowan, B. (2004). Validation of the Algase Wandering Scale (Version 2) in a cross cultural sample. *Aging & Mental Health*, 8(2), 133-142.
Marcus, J., Cellar, J., Ansari, F. & Bliwise, D. (2007) Utility of the AWS in an outpatient AD sample. *International Journal of Geriatric Psychiatry,* 22(8):801-5.

Two approaches to reducing risky wandering

- **Aim**: To trial the feasibility of two behavioural interventions implemented with people with severe dementia who wander in RAC.
- **Target of the intervention**: frequent/repetitive walking & boundary transgression
- **Protocol development**
  - Consulted with potential end user
    - → Exercise based activity & Music
  - Considered theoretical frameworks
    - Wandering is an expression of unmet needs.
      - Eliminate / modify underlying cause
      - Make the behaviour safer
  - Considered the evidence
    - No previous RCTs specific to wandering
    - **BUT** Walking programs had the strongest evidence
    - **AND** Listening to preferred music effective for agitation

Intervention protocols

Supervised walking program

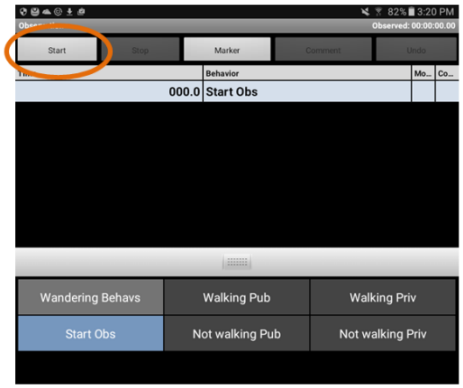
- Daily 30 minute walk with a trained RA or care staff
- 30 minutes before peak activity periods
- Outside care facility
- 3 week trial

Listening to preferred music

- Daily 20 minute session with trained RA
- Listened to selection of preferred music 30 minutes before peak activity (condition 1) OR at random times (condition 2).
- 3 week trial

Outcome measures

- Pre, during and post measures
- **Protocol fidelity –** length of session, reason for deviations from protocol/no intervention.
  - IRR 10% - check protocol fidelity and types of communication used
- **Characteristics of wandering**:
  - Direct observation – 2 x 2 hours per week per participant
    - Locomoting / non locomoting – frequency & duration
    - Pattern – pacing, lapping, random, direct
    - Boundary transgression – entry into out of bounds/hazardous areas
  - 24/7 step count – Actigraph™ Activity monitors
  - Trialled Noldus Pocket Observer™
- **Immediate pleasure** (music intervention)
- **Staff/family members perception** (interviews)
- Others: wandering status agitation, sleep, falls, weight



Participants

Supervised Walking

- 2 participating facilities
  - 60 bed dementia specific locked unit
  - 120 bed mixed frail aged ad people with dementia (not locked)
- 7 residents with severe dementia who were known to wander and tolerate Actigraph™

Preferred Music

- 2 participating facilities
  - 60 bed dementia specific locked unit – condition 1
  - 94 beds – 16 beds in locked dementia specific unit – condition 2
- 10 residents with severe dementia who were known to wander and enjoyed listening to music

What did we find?

- Protocol fidelity

  Supervised Walking Program – 80% of planned walks were completed

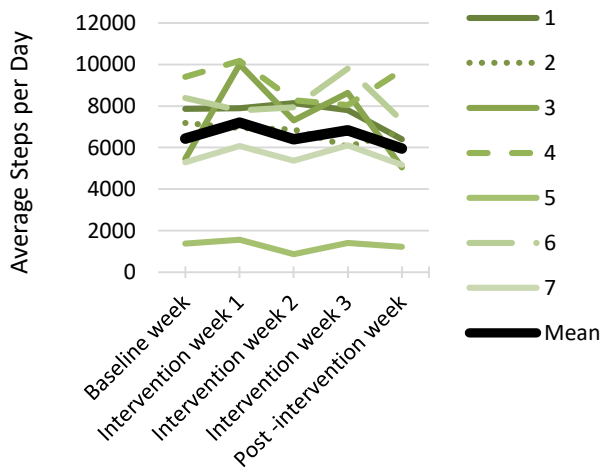
  - Reasons for not starting/completing walk: participant refused (n=5), participant fatigue (n=4), self-reported Illness (n=3), staff reported participant illness (n=3), participant asleep (n=3), staff unavailable to conduct walk (n=1).
  - Reasons for not taking planned route: road work, participant choice, weather

  Listening to Preferred Music– 61% of scheduled sessions were initiated; only 60% of sessions initiated went for full 20 minutes

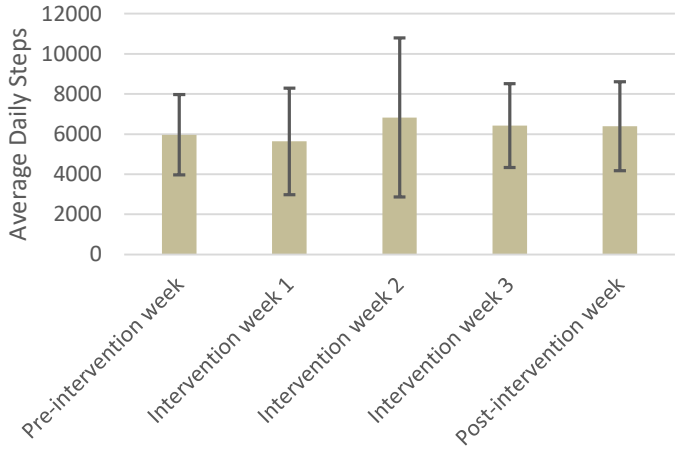
  - Reasons for not commencing – involved in other activity, planning another activity, absent from facility
  - Reasons sessions ending early – participant walked away from speaker or removed headphones
  - 1 participant refused all sessions

Effect of interventions on wandering

- No significant findings BUT characteristics of wandering were not exacerbated during intervention weeks



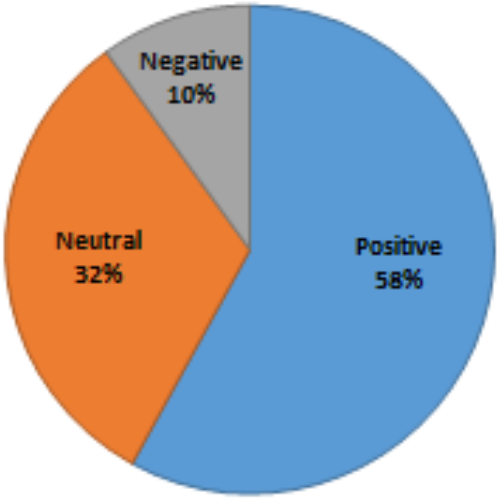
Supervised Walking



Listening to Preferred Music

Impact of music on mood

- Participants were asked ‘Did you enjoy listening to music’ at the end of each session:
  - **51% said YES**
  - **33% did not respond**
  - 13% said NO or were neutral
  - 3% response not recorded
- More positive mood observed during music sessions



Observed mood during interventions

Staff perceptions of walking program

- **Improved participants' mood and engagement** with others.
- Staff found it was an **enjoyable activity** that helped **build rapport with residents**.
- Walking outside the facility was an important part of the program.
- Participants seemed to enjoy going for a walk – after some initial anxiety, were **very enthusiastic**.
- Didn't notice change in amount of walking but seemed to **walk more in common spaces – more social.**
- BUT worried about **interfering with staff routine** and taking staff from care duties.
- Should **use volunteers or activity officers** and consider group walks for socialisation

General observations

- Participants initially had trouble adjusting to being outside
  - Some had not been outside facility for many years
    - Uneven ground, grass and breeze
- **No participant tried to run away**.
- The participants were very aware of the new surroundings and noises.
- Had trouble sticking to strict time schedule as participants keen to leave.
- **Some residents became very fatigued** – had low step counts but were elopement risk.
- **Suited participants but not all – low step count.**

Staff/family perceptions of music program

- Participants **enjoyed** listening to music.
- **Positive** changes in the person's mood and behaviour were observed.
- The program caused **minimal impact on the facility** and it should continue BUT no consensus on who should implement the program.
- Suggested using the music at set times e.g. after lunch or dinner.

General observations

- Very hard to get some residents to come to a designated area to listen to music – sometimes listened in areas with many distractions.
- Family may not know current likes and dislikes.
- Other residents entering bedrooms interrupted sessions.
- Expecting residents to sit for 20 minutes may not have been realistic.
- **Suited some participants but not all.**

Proposed modifications to the protocol

Supervised Walking Program

- Groups of residents walking in groups.
- Morning or afternoon sessions.
- Continue to walk outside the facility.
- Use staff / volunteers provided by facility to lead walks.
- Need to exclude residents with low step counts.

Listening to Music

- Check music selection with the person with dementia if possible.
- Need to be able to tolerate headphones.
- Involve facility staff more.
- Reduce the length of the intervention to 10 minutes.
- Consider adding a visual component e.g. video clips of artist or related /meaningful images.

Where to next?

- Revision of the RAWS
- Development of a tool to support effective and safe return
- Further refinement and testing of promising non-pharm. interventions focused on risk high risk characteristics