



Methodological issues in tracking research

Louise McCabe

Senior Lecturer in Dementia Studies

University of Stirling

15th June 2017



Today

- Research with people with dementia – broad challenges
- Findings from a safe walking project
- Methodological challenges for tracking and assistive technology research



Including people with dementia in research

- Many people with dementia want to be included in research and experience positive outcomes from participation
- The NIHR report that in the UK in 2014/15 nearly 22,000 people with dementia took part in research, a 58% increase on the previous year and a total of 202 studies were open for recruitment
- The Alzheimer's Society Research Network is a team of over 250 carers, former carers and people with dementia who take an active role in assessing funding applications and monitoring ongoing projects
- Scotland, England, Australia and the USA all have networks that actively recruit people with dementia and their carers into research.

Capacity and consent

- Capacity should be assumed until demonstrated otherwise
- Capacity is situation specific
- Using 'process consent' methods enables more people with dementia to be included in research (Dewing 2008)
- For people with dementia deemed unable to give consent consultee advice can be sought to enable participation.



Safe walking and dementia – funded by NIHR i4i

- User engagement to understand the wishes and needs for a safe walking device of people with dementia and their family carers
- 12 people with dementia, 3 caregivers and 5 older people in two focus groups, one in Scotland and one in England.
- Two researchers facilitated each group, audio recordings were fully transcribed, data were analysed using a qualitative, thematic approach.

McCabe and Innes (2013)

Methods to engage with people with dementia

- Focus groups held in familiar place with (mostly) familiar group of people
- Tea, cakes and fruit provided to give a sense of occasion
- Lots of time for warm-up and process consent
- Pictures and objects (GPS trackers) were used to prompt conversation and generate ideas.

Findings

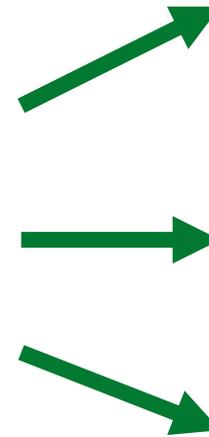
- People with dementia and family carers were very interested to learn more about trackers and share their views
- Focus on what trackers looked like and how they would be worn, wish for them to be discrete
- General acceptance and interest in trackers as a good option to enable independence and to keep people safe
- People with dementia and their carers reported positively on their engagement within the research and offered meaningful contributions to the project.



Some broader methodological issues:

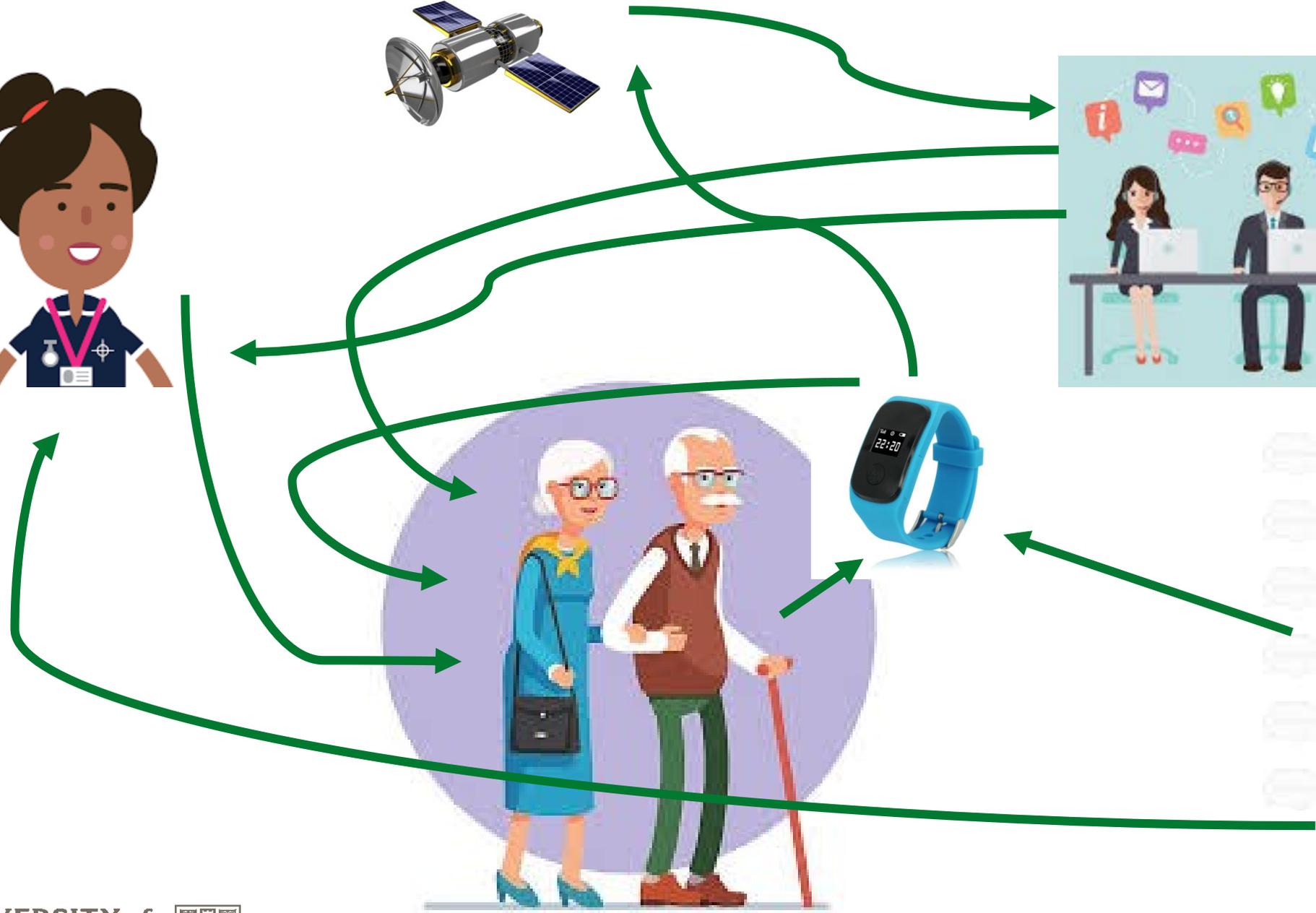
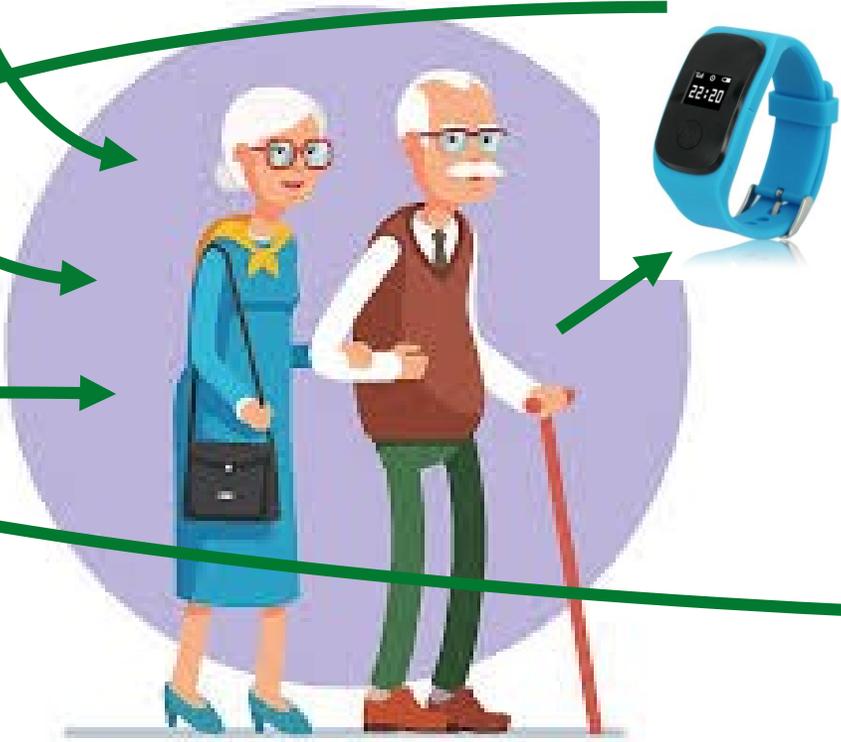
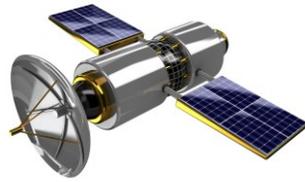
Black boxes and tangled networks

- Current methods, such as RCTs, often take a 'black box' approach to technology research which can limit understanding of the potential barriers and outcomes
- Technology does not act alone – it is dependent on human interaction within a network
- The complexity of these networks makes research challenging.



Outcomes

- Depression
- Anxiety
- Well-being
- Safety
- Falls
- Getting lost
- etc.



Realist evaluation – an option

- **What works for whom in what circumstances**
- **Contexts – what are the key features of individual contexts that influence technology use? (living arrangements, support needs, age, gender, care support provided, carers/relatives)**
- **Mechanisms – what resources can people draw on to make technology work for them? (confidence to interact with technology, technology that doesn't require interaction, appropriate support from care workers)**
- **Outcomes – what outcomes can be expected from given pairs of context and mechanism? (avoid move to residential care, go out walking, increased independence).**

For a telecare example see Berge 2016a and 2016b

Reflections and recommendations

- People with dementia are enthusiastic and often able to consent to take part in research
- Time and some imagination are needed to engage them effectively
- Technology research needs to open the black box and employ methodologies that allow us to do this
- Evidence about the use of tracking technology with people with dementia will improve with more complex, mixed methods studies.



References

- Berge, M. S. (2016). How do we understand partnership working: Experiences from a telecare project. *Social Policy & Administration*. doi:10.1111/spol.12273
- Berge, M. S. (2016). Telecare acceptance as sticky entrapment: A realist review. *Gerontechnology*, 15(2), 98-108. doi:10.4017/gt.2016.15.2.023.00
- Berge, M. S. (2017). Telecare - where, when, why and for whom does it work? A realist evaluation of a Norwegian project. *Journal of Rehabilitation and Assistive Technologies Engineering*, 4(0), 1-10. doi:DOI: 10.1177/2055668317693737
- Dewing, J. (2008). Process consent and research with older people with dementia. *Research Ethics*, 4(2), 59-64.
- McCabe, L. and Innes, A. (2013). Supporting safe walking for people with dementia: User participation in the development of new technology. *Gerontechnology*, 12(1), 4-15.

Thank-you

louise.mccabe@stir.ac.uk