How people with dementia make technology work for them.

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www.dementia.stir.ac.uk
Assistive Technology and Dementia: current status

• Growing use of assistive Technology (AT) with people with dementia within UK and internationally based on assumptions that AT can:
  
  ▪ reduce caregiver burden,
  ▪ help sustain cognitive and functional abilities,
  ▪ encourage ‘ageing in place’
  ▪ delay entry into residential or nursing care
  ▪ Lead to significant efficiencies and cost-effectiveness savings

AT currently being ‘mainstreamed’ within the UK

How do people with dementia and their carers actually use AT in the context of their everyday lives?
Assistive Technology and Dementia: the evidence

• Until recently most studies of AT in dementia restricted to:
  - Technology development studies
  - Small scale trials of AT devices
  - Local evaluations of AT services

• Lack of evidence for AT from large scale studies
  - Major issue for continued roll out
  - Particularly important issue within the context of healthcare & need for evidence to demonstrate efficacy
Methods

• Part 1. Identification of range and types of AT currently provided by AT services

• Part 2. Survey of AT products provided by AT services

• Part 3. Qualitative study of everyday use of AT devices by people with dementia and their carers
### Part 1. AT’s available for people with dementia

<table>
<thead>
<tr>
<th>Used ‘by’ people with dementia</th>
<th>Used ‘with’ people with dementia</th>
<th>Used ‘on’ people with dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Time/place orientation</td>
<td>• Communication aids</td>
<td>• Telecare systems</td>
</tr>
<tr>
<td>• Prompts and reminders</td>
<td>• Play and enjoyment</td>
<td>• GPS and location alarms</td>
</tr>
<tr>
<td>• Communication aids</td>
<td>• Reminiscence</td>
<td>• Safety and security</td>
</tr>
<tr>
<td>• Tools and aids</td>
<td></td>
<td></td>
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<tr>
<td>• Alerts and alarms</td>
<td></td>
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</tr>
</tbody>
</table>

Gibson, G., Newton, L., Pritchard, G., Finch, T., Brittain, K., Robinson, L (2014) The provision of assistive technology products and services for people with dementia in the United Kingdom *Dementia.* Available online at [http://dem.sagepub.com/content/early/2014/05/05/1471301214532643](http://dem.sagepub.com/content/early/2014/05/05/1471301214532643)
Tech used ‘by’ people with dementia
Tech used ‘with’ people with dementia
Tech used ‘on’ people with dementia
Part 2. Survey of AT providing organisations

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Local Authority</th>
<th>Housing Provider</th>
<th>Charity</th>
<th>NHS Trust</th>
<th>Private Company</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of services</strong></td>
<td>245</td>
<td>48</td>
<td>1</td>
<td>2</td>
<td>35</td>
<td>331</td>
</tr>
<tr>
<td><strong>Community alarms</strong></td>
<td>244</td>
<td>47</td>
<td>1</td>
<td>2</td>
<td>33</td>
<td>327</td>
</tr>
<tr>
<td><strong>Community alarms and telecare</strong></td>
<td>196</td>
<td>25</td>
<td>0</td>
<td>2</td>
<td>29</td>
<td>252</td>
</tr>
<tr>
<td><strong>Telehealth</strong></td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td><strong>Stand alone AT products</strong></td>
<td>15</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td><strong>GPS location services</strong></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
Part 3. Qualitative study of experiences of technology

- 39 qualitative interviews exploring everyday use of AT
  - 26 carers (age range: 49-82 years)
  - 13 People with dementia (age range 49-91 years)

- Emerging themes
  - AT types & experiences of using AT
  - AT use: a form of bricolage
  - Challenges to everyday use of AT

Types of AT

‘Formal’ AT
- Accessed via health and social care professionals
- Community alarms, telecare, GPS location monitoring equipment

‘Off the shelf’ AT
- Purchased directly from private sector
- Dementia friendly signage, telephones, remote controls

‘Do it yourself’ AT
- Everyday devices developed or adapted by families
- Reminder systems, simplified technology
I still had my freedom that I could always know that she was in the house and I could view her at any time (Carer 106).

As I say I couldn’t have continued working as long as I did, and I’m still, we’re still benefiting from it. I think it’s a wonderful device, wonderful. (Carer 109)
Experiences of AT; People with Dementia

- Relatively rare for devices to have direct benefits for people with dementia

- People with dementia rarely aware of AT or convinced of need

She said it [pendant alarm] made her feel like a crock. She says, “I don’t need this, I’m perfectly alright”. (Carer 113)
Some people with dementia accepted AT for the sake of their carer.

Oh he’s terrified. He’s lost me in the town once…he was terrified (PwD 107)

Negative experiences

I’ll tell you the truth, I’m terrified of it [pendant alarm]. (PwD 104)
AT Use & Bricolage

• “The non conventional use of tools or methods designed and intended for a different use to address local and immediate needs” (Greenhalgh et al 2013)
  Or “making do with what is at hand”

Examples of Bricolage

• Using devices for different purposes than their original designs

• Combining AT with everyday technologies

• Using everyday technologies to complement or replicate AT

• Adapting devices ‘on the fly’; to meet a person’s needs, or as a person’s needs change
Challenges to bricolage based use of AT

- Formal AT’s rarely enabled ‘bricolage’
  - Closed systems – could not be adapted ‘on the fly’
  - Lack of support to carers to act as ‘bricoleurs’
  - Lack of wider information about AT to support its use

IV  The (telecare); have they been helpful at all?
P108  Oh what, since they put it in? Haven’t seen them since. They haven’t really, I’ve had a letter from them to say they’re reviewed every year, or something. Haven’t seem ‘em since. (PwD109)
Conclusion

• Bricolage provides a useful tool to explore the everyday use of AT in practice
  ▪ Combining AT with other technologies in the home
  ▪ Showing up the everyday arrangements required to put AT into practice

• Currently AT and AT services for dementia do not enable ‘bricolage’
  ▪ AT not easily adapted to individual circumstance
  ▪ Little ongoing support as a person’s needs change
  ▪ Carers not supported in the bricoleur role

• Need to reconfigure AT services for people with dementia’
  ▪ Supporting bricolage based use of technology
  ▪ Supporting carers to act as ‘bricoleurs’
  ▪ Being sensitive to technology related needs as they change over time
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  ▪ Professor Louise Robinson

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