Local Digital Fund – Transforming Homecare Calls with Technology

User Research Report

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1. Research Method and Rationale

The method used a mixture of desktop research, quantitative surveys by paper and online questionnaires, a workshop with focus groups, and semi-structured interviews.

An academic review of recent studies into care technologies for older adults was first conducted to understand the issues impacting on successful implementation. This revealed what types of information must be known for all the various participants in the care network. It also provided useful lessons on how to approach care technology implementation and the complex dynamics involved in subsequent provision.

The academic research was supplemented by a review of documents (grey literature) surrounding, in particular, the experiences of local authorities with implementing homecare technologies. This generated additional pragmatic details related to the organisational contexts that apply to the local authority partners in this Local Digital Fund (LDF) project.

The outcome of the combined literature reviews was a clear understanding of what has to be known about carers and the care recipients before any technology is considered.

Three questionnaires were then created based on the reviews and discussions within the research team. Each questionnaire had a slightly different perspective but all were designed to understand the needs, attitudes, and profiles of individual respondents with respect to care technology. Most answers were quantitative with some supplementary qualitative text responses where appropriate. Frequency analyses were conducted in the main but interesting potential interactions and correlations were also explored.

Semi-structured interviews were carried out based on the themes covered by the questionnaires. The notes from the interviews were written up afterwards for informal analysis. The objective of the semi-structured interviews was to validate the findings from the questionnaires, with a view to seeing whether there were any additional issues the questionnaires had not identified.

In addition, a workshop was held during which small focus groups was conducted. Participants were a mixture of citizens, care recipients and carers.

The results from the questionnaires, semi-structured interviews, workshops, and group discussions were used to devise a principled method for selecting and implementing technologies for older adults.

The integrated desktop and field research provide a strong empirical basis for the method despite the limited time available for collecting, analysing, and interpreting the data.

2. Questionnaires

Three questionnaires were created and distributed for completion.

The questionnaires were for:

- Older adults, including recipients of homecare services;

- Their informal care network of friends and family; and

- Professional carers.

(See Appendix 1 for a copy of each questionnaire)

Each type of questionnaire was available either on paper or as a web survey and none of them collected any personal identification information. Distribution was through the three local authorities involved with this LDF project; their care providers and by advertising the web survey via networks known to the researchers at Aston University, in particular, the Aston Research Centre for Healthy Ageing (ARCHA).

Ethics approval for all questionnaires was obtained from Aston University.

Questions were voluntary to encourage participants to review all questions without having to answer every one, which does mean the frequency of answers can vary.

2.1 Questionnaire for Older Adults

This questionnaire covered four main areas:

1. Personal information about demographics, health, education, and with whom the respondents live.

2. Care and support currently being received.

3. Experiences with and attitudes to technology in general and to care technology.

4. Data sharing and security.

In total, 65 responses were received:

- 57% of respondents were female.

- 90% were aged over 64 years; 68% were over 74 and 28% were over 84.

- Most older adults reported living on their own (67%) or with their partner (24%).

- 86% of respondents lived in a city or town.

- 40% had no qualifications and 40% had a higher education certificate.

- Half were in good or very good health with less than 20% in poor health.

- Older adults reported feeling 'mostly' or 'always safe' at home (96%), which is encouraging.

- More than half had had falls and other accidents, which may indicate that they require some further support.

- Older adults continue to have a positive attitude to living at home.

- Loneliness is more of an issue, with 48% reporting feeling it sometimes, and for this reason any technology solution must address this important aspect of wellbeing.

Regarding attitudes to and use of technology:

- Three quarters of the respondents are always interested in learning, even if 25% never want to find out about new things.

- The technology currently being used is a mixture of devices.

- A fifth has access to a smart television, which opens up some newer forms of telecare.

- Over half have internet access through smart phones, laptops and tablets. This accords with the finding that nearly 50% have a general level of interest in smart technologies.

- Older adults were willing to consider using these technologies in their homecare. 40% of those answering this question said they would want to use it to access health services and advice, and nearly a quarter said they would use it to stay in touch with friends and family.

- Over half of the respondents had at least a reasonable level of technology competence.

- One third said they knew nothing about technology.

Correlating with these proportions is that:

- Half of the older adults were interested in using smart technology for tracking activities, health, and wellbeing with most of the remainder willing to consider it but would need persuading about its efficacy.

- Less than one fifth would not even consider technology, which means that technology is seen as a positive way forward by over 80% of respondents.

One of the areas where technology could save costs is in reducing the number of visits by care workers and we asked what older adults thought about this. Less than 40% were definitely against it but, as expected, most of these were the ones with little or no knowledge of technology. Their views, therefore, may be more a reflection of their own confidence in and understanding of technology, with concerns about how they would have to relate to it within care. It emphasises the importance of providing help with using the technology and many older adults volunteered what they would need to this effect. This ranged from being shown how to use it, a "*simple*" manual, encouragement and information, the ability to contact someone, or even a "*personal technology assistant perhaps*". It emphasises what the academic research has been reiterating: attitude to technology and training in its use are essential areas to address for build confidence and encouraging adoption.

Data security has come under the public spotlight in the last few years, partly because of the data breaches by social media companies such as Facebook and partly because of the General Data Protection Regulation that came into force in May of 2018. These may have reduced confidence of citizens in technology, especially if it holds sensitive care information.

We asked specifically about sharing data that can personally identify the older adult. In general, the response was encouraging regarding trust in the services that would hold these data:

- Less than 10% would not share with their general practitioner or other NHS organisations;

- 15% would not share data with family members; and

- Nearly a third would not share data with formal carers and social care services. (A higher proportion of informal carers (40%) said they would not share personal data with formal carers and social care services).

This suggests that work needs to be done on the trust relationship between carers and older adults with respect to the use of technology.

When exploring relationships between the questions, most were unsurprising, such as:

- A positive relationship between being interested in learning and interested in smart gadgets; and

- A strong relationship between level of technological competence and level of prior education.

A less obvious relationship is between education and the number of care visits; the higher the education, the fewer the number of care visits received. This may be due to socio-economic factors but could also suggest better ability to use self-help resources.

The above give some pointers; however, the results from the questionnaire as a whole provide a fuller picture of what kind of input is required to increase the chance of successful adoption of technology.

2.1.1 Conclusion

The questionnaire responses have provided encouraging support for the use of care technology in the home:

- Respondents have a reasonable level of technical knowledge and are willing to learn.

- They are open to using technology in their health and social care, even to the extent of reducing the number of care visits.

- Loneliness, which was highlighted as a common issue for older adults, might have been seen as a barrier to using technology but respondents appreciated how technology could positively address rather than amplify loneliness.

- Data security could have been seen as a barrier, especially given the importance of being able to share data in co- creation of health and social care. However, a minority were absolutely opposed to sharing data and most were happy with NHS organisations having them.

- The fact that more concerns were expressed by the formal and informal carers than by older adults does suggest trust and collaboration need to be constructed for technology to be successfully adopted.

The academic research was in agreement with the findings.

2.2 Questionnaire for Professional Carers

It was more difficult to get respondents for the professional carers' questionnaire in the time available.

23 questionnaires were completed and available for analysis:

- Only two were from male carers.

- Most respondents had been in the role for less than five years.

- Technical competence was felt to be generally good with:

  o only two saying they had no experience; and

  o nearly everyone had used a desktop or mobile computer of one form or another.

- Most respondents were educated to the age of 18 or beyond.

The carers were asked to assess how useful various applications of technology would be to their roles. Looking up information on the web was universally useful and, surprisingly, only two carers thought that developing material for publishing online was not useful at all. Carers may be appreciating the reasons for uploading their own experiences in blogs, newsletters, and other outlets because they like accessing it themselves.

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Knowing how to maintain confidentiality and privacy is seen as universally useful. This result should increase the confidence of care recipients in sharing their information with carers, as older adults were more concerned about sharing their data with carers than with healthcare organisations.

With relation to different forms of care technologies, a large majority of respondents saw them as very useful or quite useful. These included systems/devices that:

- monitor health status;

- detect movement/activity;

- provide automated alerts;

- assist with moving/handling situations;

- manage administrative work;

- provide prompts for medication and other activities;

- support the care relationship itself; and

- maintain people's ability to live at home.

Encouragingly, carers were aware that they would need to know how to set up the digital technologies for themselves or for the older adults, and would need to help with training older adults (only one person thought this was not required).

Three carers did not see the usefulness of social networks for collaborating with other care workers, however, most (76%) could see how such networks might help them link up with patients. Slightly more thought that patients communicating with each other via social networks would be a good idea.

When it comes to how much help or training the carers have had with using these technologies and delivering the related services:

- In general less than half have been taught how to use direct care technologies.

- Carers were aware of the usefulness of being able to train older adults to use technology, but 80% of carers had not themselves been given any training.

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2.2.1 Conclusions

Professional carers are very positive about the role technology can play in care provision. They can see the possible breadth of its application, including the use of social networks, and they understand the importance of supporting older adults in using technology. However, there appears to be a lack of support and training for the carers themselves in using technology.

2.3 Questionnaire for Informal Carers

Only eleven completed questionnaires were received from informal carers within the time available for the research and, because of the low number, the findings are not reported in detail here. However, the results were similar to those received from the other questionnaires.

3. Semi-structured Interviews

The questionnaire developed for use with older adults was also used to support semi-structured interviews conducted with recipients of home care alongside the care provider's visit.

For example, during a visit with a 90 year old citizen, the interview turned to daily life tasks. While climbing a mountain might be a step (or two) too far, completing these little life tasks, as she had always done, is important. Opening and closing the curtains, turning things on and off, were some of a hundred little things that gave her independence, kept her active and kept a sense of normality in her life. This is an important lesson for technology and care providers: equipment might be able to close the curtains or turn the television on and off to save physical effort but is this a good thing and is it what the person wants?

> **Lesson learned**: just because technology *can* remove activities and tasks from a person doesn't mean that it should or that the person wants it to.

When it comes to the users, firstly, we need to ensure that the individual remains front and centre. The interviews quickly revealed that 'one size fits all' is not the answer to how technology will improve citizens' lives. Each person is different and understanding their specific needs and attitudes is critical.

4. Workshop

A workshop on technology, which included break out focus groups, had 30 attendees. These included citizens from independent-living villages, full-time carers, parent carers for those with learning disabilities, and service users.

The attendees fed back that they did not know what technology and equipment was currently provided or where to look for new and emerging technology.

The barriers to using technology identified by workshop participants echo those found in academic research and in the results from the questionnaires. Trust in technology needs to be built, particularly with its reliability and what happens if it fails, and older adults require more training and support to use it. As one person said:

> *"Happy to try new technology but don't just leave me the box and walk away. Provide drop in centres and workshops to help us."*

A summary of the feedback from citizens attending the workshop is provided in Appendix 2.

5. Overall Summary and Conclusions

This research included an extensive review of the latest academic research into technology. It was supplemented by some recent and current investigations by local authorities into how their own home care provision could be improved by the use of such technologies. We then explored the technologies and strategies in progress within the three partner authorities of the project. (A copy of the full review of user and desk based research is available in Appendix 3).

Surveys of older adults and carers were conducted using specially-constructed questionnaires accompanied by some semi-structure interviews. The consistent message from the various avenues of investigation is that both carers and older adults, including current recipients of homecare, are willing to explore the use of technology for supporting and supplementing home care.

The enormous range of technology that is available is off-putting at the same time as representing an opportunity. Choosing the right set of technologies is a daunting task and the best place to start is with the end users, especially the older adults.

Once their needs have been identified, it is possible to select the general types of technology that can meet them. The questionnaires developed for older adults and carers could be a tool for achieving this because they help to identify individual needs.

6. Appendix 1 - Questionnaires

Older Adults

questionnaire-older-adults-ldf-paper final.pc

Informal Carers

questionnaire-informal-carers- final.pdf

Professional Carers

questionnaire-carers-ldf_final.pdf
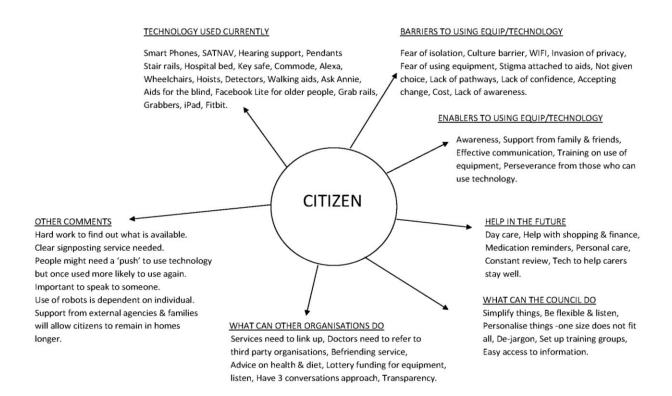
7. Appendix 2 - Feedback from Workshop

Summary of feedback from citizens attending a workshop on technology where focus groups were held:

TECHNOLOGY USED CURRENTLY

Smart Phones, SATNAV, Hearing support, Pendants Stair rails, Hospital bed, Key safe, Commode, Alexa, Wheelchairs, Hoists, Detectors, Walking aids, Ask Annie, Aids for the blind, Facebook Lite for older people, Grab rails, Grabbers, iPad, Fitbit.

BARRIERS TO USING EQUIP/TECHNOLOGY

Fear of isolation, Culture barrier, WIFI, Invasion of privacy, Fear of using equipment, Stigma attached to aids, Not given choice, Lack of pathways, Lack of confidence, Accepting change, Cost, Lack of awareness.

ENABLERS TO USING EQUIP/TECHNOLOGY

Awareness, Support from family & friends, Effective communication, Training on use of equipment, Perseverance from those who can use technology.

CITIZEN

OTHER COMMENTS

Hard work to find out what is available.
Clear signposting service needed.
People might need a 'push' to use technology but once used more likely to use again.
Important to speak to someone.
Use of robots is dependent on individual.
Support from external agencies & families will allow citizens to remain in homes longer.

WHAT CAN OTHER ORGANISATIONS DO

Services need to link up, Doctors need to refer to third party organisations, Befriending service, Advice on health & diet, Lottery funding for equipment, listen, Have 3 conversations approach, Transparency.

HELP IN THE FUTURE

Day care, Help with shopping & finance, Medication reminders, Personal care, Constant review, Tech to help carers stay well.

WHAT CAN THE COUNCIL DO

Simplify things, Be flexible & listen, Personalise things -one size does not fit all, De-jargon, Set up training groups, Easy access to information.

8. Appendix 3 - Copy of User and Desk Based Research Report

Copy of review of user and desk based research on improving homecare for older adults:

ldf-research final report.pdf