Connecting Care Homes
A Leeds City Council Project

A Discovery Phase Review for the Social Care Digital Innovation Programme

How we got here

Making Leeds the best city to grow old in is one of Leeds City Council's breakthrough projects. The city has a growing older population with the over 65 population expected to increase from 130,000 (16.4% of population) in 2019 to more than 170,000 (20% of population) by 2039. As people live longer they also live with increased complex health problems. To meet the demands of a growing elderly population Leeds has an expanding independent care sector providing over 5200 care beds across 88 older people's care homes, with a further 8 homes and 300+ beds directly provided by the local authority.

This report builds on initial research that identified pain points in the process that occurs when a person in a care home injures themselves and is taken to hospital. It provides a summary of the information and insights we have generated during the discovery phase of of our project in an effort to answer the question…

> *'How might we improve the experience for individuals living in care homes, their family, and for staff, when an emergency transfer from a care home to hospital takes place?'*

Our problem statement

We delivered the project aims through a range of activities, including:

▼ Desktop research

● Surveys

▌ One to one interviews with stakeholders

▼ Ethnography (focused observation) of stakeholders in care homes

● Journey mapping with stakeholders

▌ Ideation workshop with stakeholders

▼ Development of wireframes (simple prototypes)

● Roadshow style event to gather feedback on the wireframes and concept.

What we found

Stakeholders

Key stakeholders were identified and the challenges they experience in relation to the problem statement are outlined below:

People living in care homes

Challenges identified include:

▼ The time it takes for a health and care professional to arrive on scene

● Paramedics, other health service staff or new care home staff not knowing them as an individual

❚ Being resuscitated against their own or their families wishes

Families of people living in care homes

Challenges identified include:

▼ Concerns about the individual needs of their family member being met

● Concerns about instructions on a ReSPECT form* not being followed

❚ Being accurately kept up to date on the status of their family member

(*ReSPECT is a process that creates personalised recommendations for a person's clinical care in a future emergency in which they are unable to make or express choices)

Care home staff

Challenges identified include:

▼ Confidence in what actions to take upon arrival at the scene

● Completing paperwork to hand over to the paramedics when the arrive

❚ Handling repeat requests for lost paperwork and information already sent

▼ Gathering real time information on the status of their resident

Health & care service staff

Challenges identified include:

▼ Attending an incident that does not require their expertise

● Lack of information on the individual and incident

❚ Information only received when on site of an incident

▼ Volume of paperwork to do

"When they work with us it really makes a difference. You feel you've done something right"

Requirements and barriers

Reviewing and processing the outputs of the activities undertaken has enabled us to generate user stories (requirements) and identify potential barriers to the success of an innovative digital intervention.

User stories:

- ▶ As a **council care home staff member;** I want **to be able to carry a mobile device with me whilst on duty;** so that **I can contact emergency services more quickly when I respond to an incident.**

- ● As a **family member of a person in a care home;** I want **clear and up to date information on their status after an incident;** so that **I can understand the severity of the situation and make an informed decision on how to respond.**

- ▌ As a **family member of a person in a care home;** I want **the services engaging with my family member after an incident to know them as an individual;** so that **I can feel reassured that their needs are being met and their individual requirements are taken into account.**

- ▶ As a **care home manager;** I want **clear and up to date information on the status of my resident after an incident;** so that **I can understand the severity of the situation and make an informed decision on how best to manage the situation.**

- ● As a **care home manager;** I want **an audit trail of which service has ownership of the residents Red Bag*;** so that **I can track its whereabouts.**

- ▌ As a **care home manager;** I want **health & care services to manage and track the transfer of the residents Red Bag* between them** so that **me and my team don't have to waste time dealing with queries about lost Red Bags*.**

- ▶ As a **paramedic;** I want **information about the person in a care home and the incident they've been involved in before I arrive on scene;** so that **I can take a proactive approach to managing the situation and feel prepared.**

> **"With the red bag scheme the documents are meant to be returned to the care home. It is common for the documents to return after months, and one time it was even years!"**

Key barriers identified:

- ▶ No mobile device allowed whilst on duty policy in Council owned care homes.

- ● No dedicated budget for mobile devices in council owned care homes.

- ▌ WiFi coverage within care homes.

- ▶ Lack of confidence in using new technology amongst staff.

- ● Many different databases and systems used by private vs council care homes.

- ▌ No access allowed to health & care system data for private care homes.

(*Red bags contain standardised information about a resident and are handed to ambulance crews by carers. The bag travels with residents to hospital where they are then handed to the doctor)

The ideation workshop

The workshop was designed to build on the work already undertaken by encouraging participants to consider solutions to the problem areas identified.

The activities undertaken on the day included:

Persona creation

An activity that encouraged participants, working in pairs to develop a character that represents them, their motivations, goals and challenges they face in a work context.

The personas generated during this project will be used to underpin and steer the direction and design of any prototype development.

Future focussed journey mapping

Based on the journey of a resident being found injured and being sent to an accident and emergency department, workshop participants were encouraged to forget existing constraints and create a more efficient journey.

They were encouraged to utilise different technologies to design their journey.

Prototyping

An activity that involved participants working in groups and drawing / cutting and sticking onto paper templates in order to generate ideas of how a solution may look and function.

The solution

During the workshop four groups created different prototypes based on the future thinking journey maps they had developed earlier in the session. The prototypes developed all shared similar functionality:

▼ The sharing of data between stakeholders

● The sharing of more 'in depth' information about a person living in a care home

▌ The recording of information regarding an incident

Paper prototypes designed by workshop participants

From these

Workshop participants were then encouraged to work as a single group to identify and agree the key features and functionality that could be used to create one single solution. On the basis of these outputs we generated the wireframes on the page opposite.

Using these wireframes we ran a short, workshop style session as part of Digital Innovations in Care Homes event. The session involved a brief presentation and then rotating participants through a number of user-centred activities to elicit their opinions on the wireframes and broader concept of the proposed solution. Feedback gathered at the event included:

'You'll need to develop a response protocol for staff attending an incident'

'You could share this information with the residents family'

'Two people should have to click respond before the alert switches off'

'Looks simple and easy to use. Caters well for different user groups'

Next steps

We will develop and test a digital product that supports care home staff to input, collate and share information regarding an individual person, their needs, preferences and information regarding any health incident they experience with health & care services in real time.

Wireframes

Below are screens from the clickable wireframe prototype. They were created in response to the stakeholder generated workshop outputs.

To this

1

⚠ Alert

Mrs Smith

📍 LOCATION in Room 10

HEART RATE	99bpm
BLOOD PRESSURE	120/80mmHg
DNAR	Yes
HIGH FALL RISK	

Respond ✔

🎤 VOICE ACTIVATE

2

Call 999   👤 ABOUT ME

Incident checklist

Step 1
Was the incident witnessed?

Witnessed   Not witnessed

CHECK BREATHING
Are they breathing?

Yes   No   Not sure

Are they concious?

Yes   No   Not sure

Are they going blue?

Yes   No   Not sure

CHECK ENVIRONMENT
Have they suffered a head injury?

Yes   No   Not sure

What is their pain level?

NO PAIN
DISCOMFORT
DISTRESSING
INTENSE
UTTERLY HORRIBLE
UNIMAGINABLE UNSPEAKABLE

Indicate area/s of pain

FRONT   BACK
Right Left   Left Right

Select by dropdown

Select ▾

👤 ABOUT ME

DNAR

Yes

Allergies

3

Call 999   ← BACK TO INCIDENT

Mrs Smith 79
DOB 26/06/1940

| DNAR | Yes |
| DoLs | Yes |

HIGH FALL RISK

COMMUNICATION NEEDS
👓 Wears glasses

BEHAVIOURS
Has dementia
Forgets she's taken medicine

MEDICAL ISSUES
Dementia (severe)
Asthma
Medication
Warfarin
Clozapine

ALLERGIES
❗ Penicillin

FAMILY INFO
Kiera Smith (Daughter)

Call next of kin

4

Incident report summary

Mrs Smith

| 👤 ABOUT ME | View |

| ⚠ INCIDENT | Make changes |

Witnessed
They are breathing
They are not concious
They are no going blue
They have not suffered a head injury

Pain level
😕 **Distressing**

Area of pain
Right leg, front right arm

Share digital red bag

with emergency services

5

⚠ Incident report **shared**

Mrs Smith

| Incident report | Review |

🚑 Ambulance called

| 👤 ABOUT ME | View |

NEXT OF KIN   Contacted ✔
Kiera Smith (Daughter)

Continue incident report

The full version of the clickable wireframe can be viewed at:
https://projects.invisionapp.com/share/ZQTKWTQVKR8#/screens/380332473

Stakeholder benefits

The following benefits of utilising the proposed solution have been generated through discussion with stakeholders and analysis of the problems stakeholders currently experience vs the functionality of that solution.

Benefits for people living in care homes

▼ **More staff available more of the time to support their needs**
through a reduction in the number attending incidents and dealing with repeat requirements for missing Red Bags.

● **Understanding of their individual needs**
Because health & care services will have their information available at the touch of a button.

Benefits for families of people living in care homes

▼ **Reassurance**
that the individual requirements of their family member are going to be taken into account in the event of an incident.

● **Better informed**
through access to realtime information on the status of their family member.

Benefits for health & care service staff

▼ **Better provision of information**
through the sharing of real-time, relevant information digitally.

● **Efficiency saving**
To provide the right care to the right person at the right time, consistently. To provide the right treatment to the right person more quickly, releasing NHS resource.

Benefits for care home staff

▼ **Better provision of information**
through the sharing of real-time, relevant information digitally.

● **More time to spend with residents**
through a reduction in the amount of time spent and requesting copies of the documentation contained in the Red Bag.

Critique of the discovery phase

What we liked

▼ Good rapport built with participants enabling them to be open and honest

● Wide range of stakeholders engaged in the process

▌ Rapid and agile process that led to a tangible concept

What we lacked

▼ Representation from stakeholders in the wider regional health and care ecosystem

● Enough time to explore problems in more depth

▌ Enough time to explore the links and impacts of existing public sector programmes on the potential solution

Ideas we didn't pursue

On review of the key areas of functionality identified by workshop participants (see page 5) we have made the decision not to pursue the development of a tool that manages the initial response to a potential incident. The challenges associated with this element of functionality include:

▼ Possible classification as a medical device

● Risk to the safety of people living in care homes if the system doesn't function correctly

▌ Integration with wearable devices

▼ Acceptability of wearable devices topeople who live in care homes

Although there was demand for this function from the workshop participants, an assessment of the potential risk associated with this specific aspect of functionality (it would fall under the definition of a medical device) and the potential resource required to mitigate against these risks have led to the conclusion that its development is not feasible at this stage.
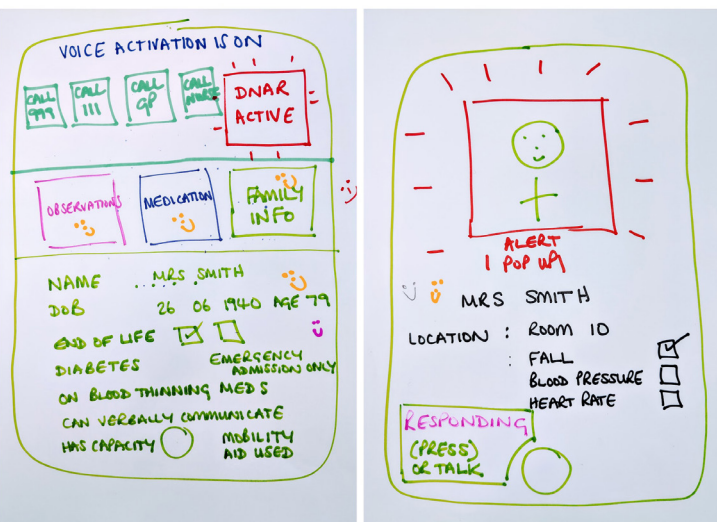
Paper prototypes produced by workshop participants that represent the ideas not being pursued.

Next steps – a roadmap

1. Assess feasiblity and generate business case

- ▼ Legislative and regulatory compliance
- ● Standard compliance (e.g. clinical safety)
- ❚ Strategic ambitions
- ▼ Sustainability

2. Identify skills and roles

- ▼ Product manager
- ● Service/product owner
- ❚ Delivery manager
- ▼ User researcher
- ● Service designer

- ❚ Content designer
- ▼ Designer
- ● Developer
- ❚ Technical lead
- ▼ Accessibility lead

3. Develop prototype core features

- ▼ Incident checklist
- ● Profile of person living in a care home
- ❚ Alert and response system
- ▼ Linking with alarms / wearables

- ● Auto completion of incident report
- ❚ Sharing information with families
- ▼ Sharing information with health & care services

Testing

4. Test the riskiest assumptions

- ▼ That health & care services will utilise the information shared with them
- ● That integration with existing health & care systems / hardware utilised across public and private sectors is possible

Testing

5. Develop tech spec

- ▼ Build (web app)
- ● Work in the open
- ❚ Interoperability
- ▼ Security
- ● API development

6. Review

- ▼ Does the product meet user needs?
- ● Is the product cost effective and safe?
- ❚ Is ongoing funding secured?

Decision to move onto BETA