

Development of an integrated telehealth system to facilitate self management of long term conditions

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Background to SMART2 project

- Focusing on three long term conditions; stroke, chronic pain, congestive heart failure
- Creation of a home based Personalised Self Management System out of commonly encountered technologies
- Participants (health care professionals, end users and carers) centrally involved to inform prototype design and function

Establishing user requirements

Focus group and semi structured interviews:

- Views towards technologies

Technology audit; likes/dislikes; reasons technology not used

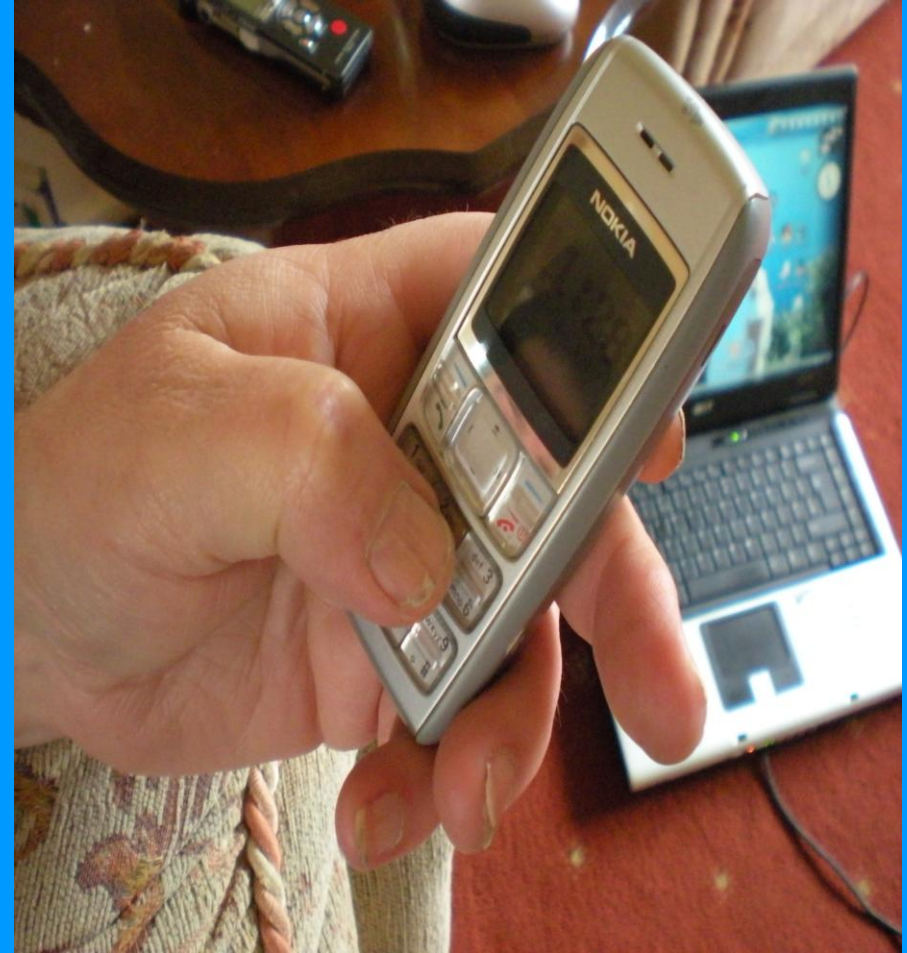
- Living with heart failure

Ways in which their lives had changed since their diagnosis; managing their condition

Cultural probes (Gaver et al. 1999)

Physically usable

‘Everything’s getting smaller and smaller but like with the mobile phone, if they make that any smaller forget it I can’t use it. You get to the point where the human hand isn’t getting any smaller so they’ve got to stop’. (Graham)



Accessible

*'I had a computer but it was sitting upstairs and I was going upstairs all the time and it seemed as if you were out of the way'.
(Peter).*

His partner commented:

'I was downstairs and he was upstairs we were not together'. (Liz)

Non intrusive

‘We go out for a meal and this particular friend put her phone down at the side of her knife and fork and was looking at it all the time and somebody phoned her and she’s answering the phone. I get angry’. (Liz)

‘Telephones to me are taboo. They’re an anathema. People always ring me up now whenever I’m sitting down for a meal. They keep trying to give us holidays, insurance, banks’. (Ron)

Intuitive

‘You should know what people my age are like and no different from anybody else. If it's taxing on the mind we don't want to know’. (George)

‘I don't think they don't explain things nowadays in instructions. (Manufacturers) put too much. Instead of saying do this, do that, it's books full’. (Doreen)

Living with heart failure

Impact of symptoms on daily lives:

‘When you’ve been in the shower you have to rest. Then you go and get dressed and you’ve to rest again. By dinnertime you can’t wash up quick enough to sit down’. (Doreen)

Loss of confidence:

‘If something physical needs doing, even if it’s just pushing a wheelbarrow and someone offers to do it I let them. Before I would have done it’. (Graham)

Living with heart failure (2)

Curtailment of hobbies and interests:

‘So many things you've had to give up. All your social life ... fishing, dancing, golf, walking long distances all things that take energy basically’. (Derek)

Added impact of co morbidities:

‘I used to go hill walking. I can't do that now. Two reasons, one (is my) heart but above that (my) knees. Ever since I had the first heart attack and the bypass it's given me arthritis’. (Peter)

Living within limitations:

‘When we retired we aspired to go walking and sightseeing and that's a thing that we can't really do, we can't think right we'll go for a long trek because Ron knows his switch goes off and he's tired'. (Joyce)

Pacing activities:

‘Tomorrow morning I will be going exercising (to cardiac gym), so before I go I don't do anything else physical'. (Ron)

- To increase self management skills
 - To build confidence (empowerment)
- Personalised/flexible
 - Fits into daily lives
 - Approaches self management in more than one way
- Considers co-morbidities
 - Not benefiting HF symptoms at cost of worsening any co-existing health problems

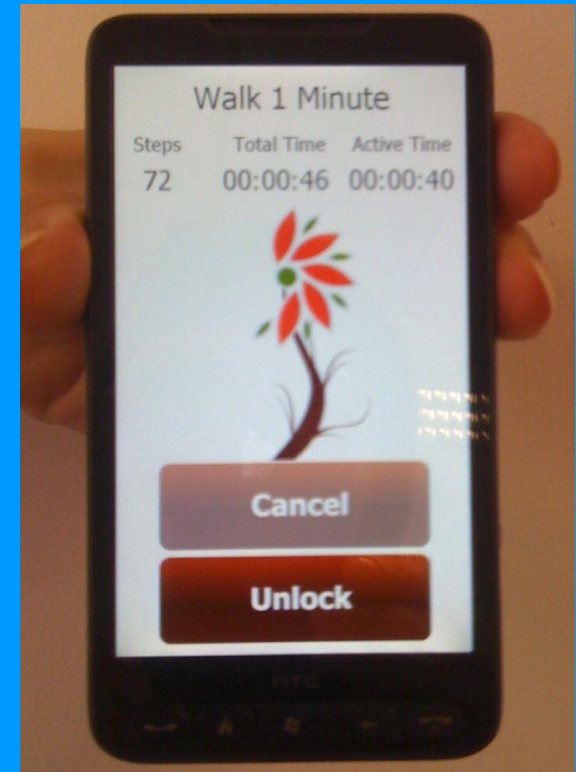
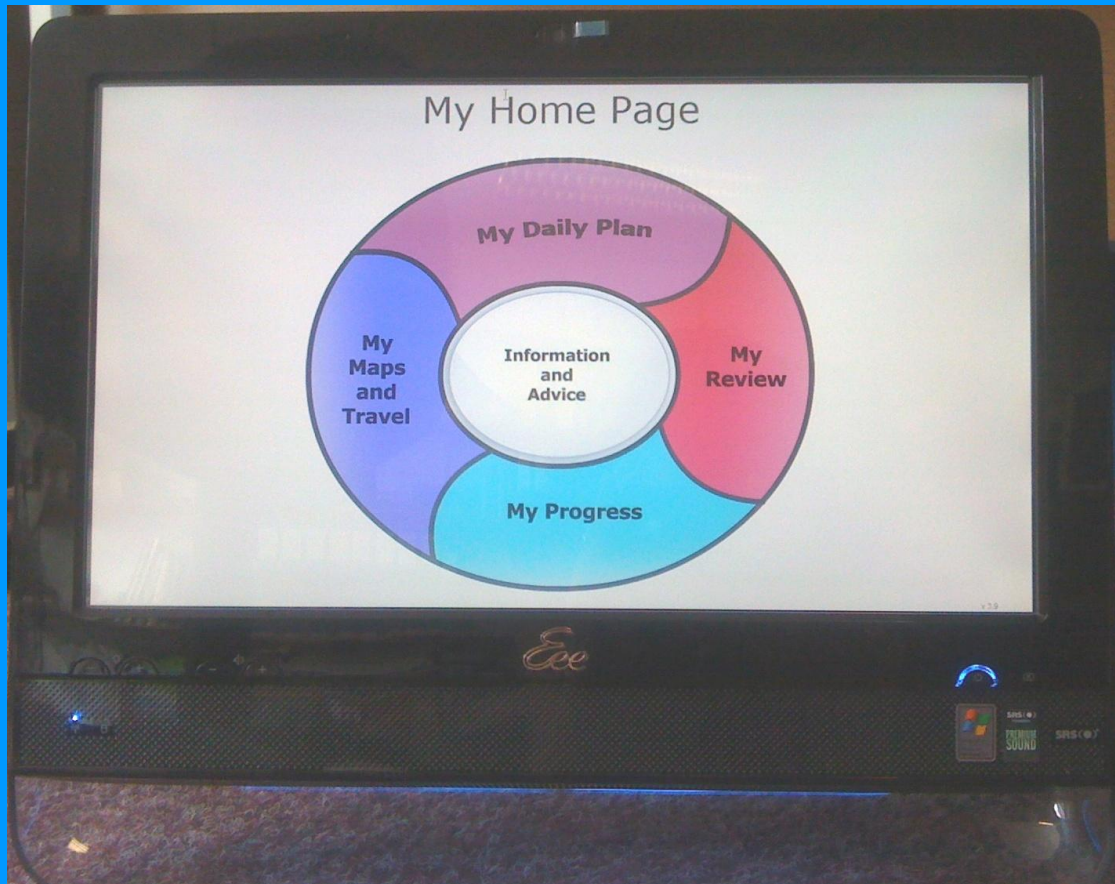
Cognitive walkthrough:

Expert walkthrough checking all actions and their effects identifying actions that the users may fail to understand.

Cooperative evaluation (Monk et al. 1993)

Actual users carry out tasks with the help of an expert. 'Think aloud'. Successes, errors, mistakes, misunderstandings and frustrations they experience are recorded.

The SMART2 System for CHF



Evaluation

- Realist Evaluation. A method of evaluating complex interventions. (Pawson & Tilley, 1997)
- ‘What works for whom in what circumstances’
- Tests ‘Context, Mechanism, Outcome’ configurations from hypotheses generated from theory

References

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