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Design-Led Service Improvement for Older People

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Service Improvement

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Abstract

In the UK, outpatient services are a major element of the health service for older people and large numbers are required to attend hospital-based outpatient clinics. However, it has been reported that outpatient clinics have fallen behind improvements in inpatient and primary care and they are seldom the focus of the patient-centred quality agenda that promotes personalised care. Significant proportions of older people fail to attend their appointments and there are few studies into the experience of older patients using outpatient services.

In this paper we report on a design-led service improvement project that involved older people using a medical outpatient service and its staff. The project was facilitated by an interdisciplinary team of practitioners and researchers from design, software engineering and healthcare. This team is developing new user-centred and participatory design methods that apply design thinking and practices to healthcare settings.

A significant finding of the project is that an outpatient service extends beyond both the clinical encounter and the physical extent of the building, with many touchpoints before and after an appointment, such as confirmation letters, journeys, wayfinding, and staff interactions. These significant interfaces and interactions constitute critical factors in the experience of patients and staff, and impact upon the ability of the service to perform its clinical role.

Key Words
Design, Service Improvement, Older people, Outpatient services.

Background

Health context

The population of Europe is ageing and it is estimated that almost one in three Europeans will be older than 60 years by 2030 and most will still have many years of life ahead of them.[1] In the UK it is projected that those aged 65 and over will constitute 23 per cent of the population by 2034.[2] Whilst this demographic change is a success in terms of life expectancy it also represents a challenge to health care services in terms of preventing this growing sector of the population becoming unwell and treating those living with chronic and age-related conditions that remain difficult to prevent or delay such as dementia, Parkinson's disease and osteoarthritis. [3]

Hospital outpatient services are a major component of the healthcare system in the UK. Patients are typically referred to outpatients by their general practitioners to obtain specialist consultations, follow-up monitoring and access to hospital-based services, procedures and diagnostic tests. In the year 2008-2009 nearly 20 million people aged 60 years or more attended an outpatient clinic in England.[4] However, it has been recognised that outpatient services have not kept pace with developments in inpatient and primary care[5], and whilst patients report more positive experiences in comparative surveys[6], there remain substantial areas for improvement.[7] A particular concern is the number of missed appointments which are estimated to cost the NHS £600m per year[8] and may result in patients not receiving the clinical care and treatment they need.

Project context

Sheffield Teaching Hospitals is a provider of acute health care including outpatient services. In 2008-09 over 300,000 older people attended outpatient clinics at the hospital. There was anecdotal evidence suggesting that whilst the service consistently achieved good levels of clinical quality (determined through conventional measures), the total experience could be problematic for some older patients and their carers. It is likely that when the service fails to meet the particular needs of individual users their independence, dignity and confidence may be compromised

or undermined. Consequently older people may regard an outpatient visit with apprehension or as simply impossible and this may prevent them from receiving the treatment and support they require resulting in a deterioration in their health, wellbeing and independence.

Methods

This project aimed to take a fresh look at some of the experience of older people using outpatient services by taking a design approach. We followed the methods of *Experience Based Design* (EBD) [9, 10] as developed by the UK *NHS Institute for Innovation and Improvement.* [11] The EBD approach has many parallels to forms of participatory action research and practice-based research in terms of the central role of the people who share the problems, the primacy of experiential knowledge, the systemic perspective and the co-creation of new knowledge and solutions. As a design-based approach EBD focuses on the significant interactions and touchpoints that users have with outpatient services, and places "…the experience goals of patients and users at the centre of the design process and on the same footing as process and clinical goals." [12]

The EBD approach is based upon a four phase process: (i) capturing the experience of the patients and staff; (ii) understanding the meaning of experience and identifying problematic elements; (iii) co-designing and implementing improvements; and (iv) measuring the improvement (fig.1). The project was conducted over the course of 12 months by the User-centred Healthcare Design (UCHD) team[13]. The EBD approach is not considered a form of research but an improvement methodology consequently it does not require review by a research ethics committee in the UK. However, we conducted this project using similar ethical principles to research including voluntary participation, informed consent and the scrutiny of our work by peers.

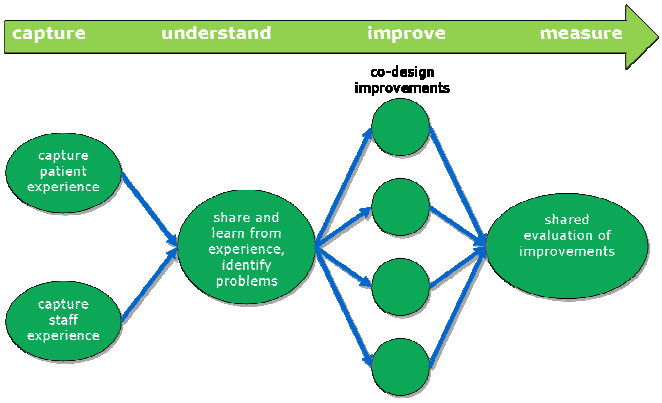

Figure 1. Project process.

Unlike many projects where participants can be expected to attend sessions without difficulty we were aware that this patient group faced a range of issues that limited the usefulness of conventional approaches. In particular some older people rely upon patient and public transport services, and some clearly find it difficult to attend at all given their circumstances and condition. We therefore worked with a local third-sector organisation, Sheffield Churches Council for Community Care (SCCCC) who had an existing relationship with the hospitals in providing support to older people being discharged from hospital. We provided a training session to the volunteers from SCCCC on informal interview skills and how to use audio recorders. Subsequently the volunteers were able to interview their clients and carers who had experience of using hospital outpatient services, in their own homes. These interviews were recorded and transcribed. The volunteers attended the project sessions on behalf of their clients and represented their stories thus enabling a wider range of experience than would have otherwise been possible.

Outcomes

The project had multiple outcomes operating at many levels including individuals, systems and strategy. In this paper we report on three examples that demonstrate this range: (i) the letter of appointment, (ii) wayfinding, and (iii) the practice of staff. What underpins all our outcomes are the narratives of lived experience that provided the human context for the project, a critical reference point for all proposals, and the creative base for imagining alternative possibilities and solutions:

"When you're going to hospital the anxiety starts a long time before. When you get your appointment you begin to get anxious: what's going to happen, what are they going to do to me? Dealing with patients is a very difficult, time-consuming, and emotional responsibility. All the relationships between staff and patients are caught up in this anxiety. Particularly for older people who aren't as able as they used to be to cope with difficult situations: where am I, what am I doing here, have they forgotten me, am I in the right place, am I going to get to my appointment in time? This project is beginning to unpick what I call the leviathan of the hospital which is so vast, and so big." (Patient participant)

I. Letter of appointment

Patients reported that a significant feature of their experience was associated with the letter of appointment they received for the outpatient clinic. These letters are generated by an administration system and constitute a critical touchpoint with the outpatient service. The original appointment letter was described as impersonal, lacking necessary information, negative in tone and potentially confusing, and yet this was the only document patient's received. It was difficult to discern necessary information from the way the letter was constructed and laid out. The content included information that could be irrelevant for some patients about prescribed medication, and it described hospital policy on missed appointments. There was no named person on the letter for patients to ask for and it was signed off anonymously by the "Appointments Clerk".

Patients and staff were supported by the project team to form 'co-design groups' to investigate the various aspects of the service they agreed needed improvement. One group produced a new letter drawing upon what they considered good examples of letters that they had received from other organisations and their own experiences. The new letter has a clear structure which begins with a welcome to the outpatient service and sets out the key information they need to attend clinic. The letter explains what patients should bring to clinic and what they should expect when they attend. Patients are asked to contact the service if they are unable to attend their appointment and provides a single telephone number and a named member of staff to talk to. A distinctive and simple feature of the letter is that it contains a picture of the entrance to the outpatient service which avoids a lengthy written explanation. Finally, the draft letter was edited by an external organisation, *the Plain English Campaign*, who specialise in helping organisations produce clear and concise information that can be understood after a single reading by the intended readership[14]. This letter is now in use by the outpatient service, it has been positively received by other departments across the Trust, and it has become a template letter for use across the organisation.

II. Wayfinding

Wayfinding refers to the ways in which people navigate through an environment from one place to another, and the systems that facilitate this including signs, maps, building layouts and landmarks. Patients and staff identified significant negative experience around the process of navigating from the outpatient clinic to other departments in the hospital where they were required to go for the purposes of diagnostic procedures such as Electrocardiography (ECG) and Radiography.

"Well it's not too bad now, I've been once or twice you know but prior, first or second time I've got to find out whether I'm in the right building because it's not very well signposted" (Patient participant)

Staff and patients explored potential solutions through a co-design process, drawing on their experience of other hospitals and from wayfinding in non-health organisations. Simple principles from the retail sector were explored with 'store guides' being cited as a useful model to address some of the complexities of signage. Prototype signage was commissioned from two postgraduate graphic design students at a local university. The new signage was piloted with patients and staff and designed to complement prototype destination maps produced utilising the same visual cues and colour palette (Fig.2). We also produced a map for staff and patients showing the entire outpatient department and the main destinations that patients had to visit including the main reception desks for individual departments, toilets, stairs and lifts. The maps were designed as diagrammatic representations of the architectural plan and radically simplified for legibility and usefulness. The prototypes were evaluated using a patient and carer "secret shopper team", and both found different aspects of the system helpful.

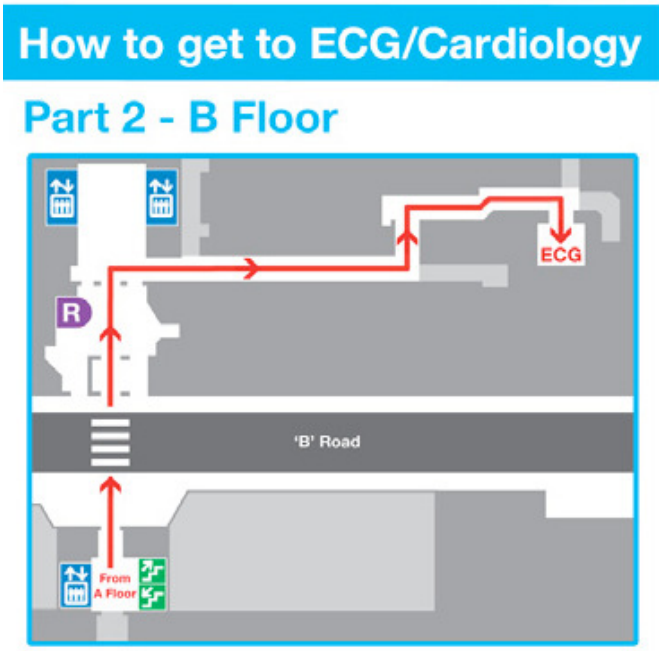

Figure 2. Destination map

III. Staff Practice

"I mean, but when you're in the middle of it and of course I don't want to criticise the staff there because they were all excellent, but how much they really understand or are sensitive to how people are feeling in that process, I am not sure. I mean they have a job to do and they can only do it by doing the procedures and in a sense not looking too closely at what is happening to the person." (Patient Participant)

Interactions between patients, carers and staff were critical touchpoints in the experience of using outpatient services. The hospitals provided 'customer care' training in the form of an e-learning educational package, but it was evident from our in-depth inquiry of experience that this was a very limited approach to addressing negative emotional factors and promoting positive attitudes and behaviours. We therefore commissioned a local theatre group (*Dead Earnest*) to produce an interactive learning event based on the techniques of applied theatre.[15]

Figure 3. Photograph from the event

The result was a piece of drama with a script devised from staff and patient narratives titled "Don't Lose Your Patients"

(fig.3) It followed a day-in-the-life-of a patient and member of staff in outpatients and paid particular attention to the back stories of Eric (the patient) and a nurse (whom he would meet later in the day) as a device to bring out the complexity buried within the familiar and everyday. The event began with performing a play, in this case a scene from outpatients, which the audience of staff and patients observed. The scenes were then replayed, and a facilitator encouraged audience members to stop the action, challenge or comment on what they were seeing and suggest changes in behaviour. Characters could be asked questions to explore their motives and expectations, and following each scene a facilitated discussion dealt with the issues raised. Finally, those who attended were asked to commit to making a change to their practice which was noted on a postcard that will be returned to the individuals as a reminder at a later date. Evaluation on the day was very positive "Totally different way of training that works well", "Very good entertaining and enlightening".

Evaluation

The project enabled the co-production of knowledge that is contextual, reflective and orientated towards specific practices. This resulted in multiple outcomes operating at different levels (individual, systemic and strategic) and in different time frames from short-term implementation to long-term plans. This presents a methodological and practical challenge of how to measure and evaluate a project of this nature. The final phase of the EBD process recommends measuring improvements in terms of subjective outcomes (e.g. patients' experience) and objective outcomes (e.g. waiting times) throughout the project but does not provide an explicit process. In this design-led project we suggest that evaluating the application of knowledge to practice and its efficacy must address the particularity of distinct interventions using data corresponding to specific design solutions and their implementation.

We have reported in this paper on a number of the project's intermediate outcomes but other outcomes require further evaluation. We are therefore developing a mixed methods evaluation framework that can assimilate the multiple inputs, processes, data and outputs of the project. This approach is informed by Realistic Evaluation[16] and the methodological principles of Action Research[17]. The framework captures outputs, impacts, processes and outcomes of the various design solutions. Impact evaluation includes reach (number of people exposed to the intervention), participation (number of people involved and their level of involvement), and influence (changes in attitudes, behaviours, knowledge). Process evaluation includes the effectiveness of techniques and activities used for implementing a design solution, variations from the work plan and the experience of participants[18]. We aim to report on this in more detail in another publication.

Discussion

The narratives of people using outpatient services revealed an experience that extended far beyond medical pathology, the brief encounter in clinic, and the visit to hospital. Patients have a relationship to outpatient services that is highly dependent upon a range of factors including the responses of individual staff; the performance of hospital systems; the layout, legibility and accessibility of buildings; and transportation between home and hospital. Interestingly patients rarely mentioned the primary purpose of attending an outpatient clinic (i.e. medical care and treatment), and when they did it was unconditionally positive.

A design approach has enabled a holistic view to service improvement through its creative interest in people as embodied, living within particular social contexts, and situated within larger ecologies. In this project we have demonstrated that the service is about more than people presenting with age-related clinical conditions. Equally, the outpatient clinic exists in a dependent relationship with the wider healthcare system (allocated resources, other departments, wayfinding), General Practitioners (patient referrals), passenger transport services (ambulances), and the local council (road layouts and public transport).

The patient experience is increasingly referred to in policy documents and guidance regarding the quality of health care [19] and it is used as an indicator in the performance frameworks of health care systems.[20] These measures of experience are often based upon aggregated feedback that can headline areas for improvement. An example of this is the results of the national outpatient survey conducted by the UK's Care Quality Commission that reported that patients did not always know what would happen during their appointment. [21] Similarly we have national and local statistics on missed appointments suggesting problems that need addressing. However, we argue that the stories behind the statistics are more meaningful and useful when attempting service improvements. This is where the humanities have much to offer a bio-medically driven health care service. For example a qualitative study of patients using outpatient services reported three interconnected barriers to attendance: emotional barriers to keeping appointments, perceived disrespect of the patients' beliefs and time, and a lack of understanding of the appointments scheduling system[22]. In particular the use of experience based design has made tangible what can be hard to represent in less direct and more abstract forms.

The project created an abundance of design ideas, solutions and material that could not be implemented either within the timescale of the project or within the strategic and resource limits of the outpatient service. For example road layout and transport were identified by patients as a serious problem but this requires major capital investment, planning and the cooperation of multiple stakeholders. We have been careful therefore to create a project legacy of data, narratives, prototypes and proposals that will inform

strategic thinking and long-term plans. A DVD of patient experiences has also been produced to support learning beyond the project consisting of audio and video recordings of critical patient experiences.

Conclusion

The health service in the UK has many tools at its disposal for the purposes of service improvement [23]and most operate at an abstract level (e.g. statistical process control) and use reductionist techniques (e.g. satisfaction surveys). Whilst these can be successful in achieving operational improvements we suggest that they are weak in improving critical human factors because the people who experience healthcare (as users or practitioners) are largely absent beyond a consultation stage. Our project has demonstrated the benefit of a design-led approach which foregrounds the lived human experience, embraces diverse forms of knowing and knowledge, and develops creative possibilities and practical solutions to significant real-life healthcare problems.

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CONFLICTS OF INTEREST

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