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Participatory design facilitates Person Centred Nursing in service improvement with older people: a secondary directed content analysis

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ORIGINAL ARTICLE

Participatory design facilitates Person Centred Nursing in service improvement with older people: a secondary directed content analysis

Daniel Wolstenholme, Helen Ross, Mark Cobb and Simon Bowen

Aims and objectives. To explore, using the example of a project working with older people in an outpatient setting in a large UK NHS Teaching hospital, how the constructs of Person Centred Nursing are reflected in interviews from participants in a Co-design led service improvement project.

Background. Person Centred Care and Person Centred Nursing are recognised terms in healthcare. Co-design (sometimes called participatory design) is an approach that seeks to involve all stakeholders in a creative process to deliver the best result, be this a product, technology or in this case a service. Co-design practice shares some of the underpinning philosophy of Person Centred Nursing and potentially has methods to aid in Person Centred Nursing implementation.

Research design. The research design was a qualitative secondary Directed analysis.

Methods. Seven interview transcripts from nurses and older people who had participated in a Co-design led improvement project in a large teaching hospital were transcribed and analysed. Two researchers analysed the transcripts for codes derived from McCormack & McCance's Person Centred Nursing Framework.

Results. The four most expressed codes were as follows: from the pre-requisites: knowing self; from care processes, engagement, working with patient's beliefs and values and shared Decision-making; and from Expected outcomes, involvement in care. This study describes the Co-design theory and practice that the participants responded to in the interviews and look at how the co-design activity facilitated elements of the Person Centred Nursing framework.

Conclusions. This study adds to the rich literature about using emancipatory and transformational approaches to Person Centred Nursing development, and is the first study exploring explicitly the potential contribution of Co-design to this area.

Implications for practice. Methods from Co-design allow older people to contribute as equals in a practice development project, co-design methods can facilitate nursing staff to engage meaningfully with older participants and develop a

What does this paper contribute to the wider global clinical community?

- Co-design methods and practice have much to offer the health service and nursing.
- Practical methods derived from co-design allowed nursing staff to realise aspects of the Person Centred Nursing theory.
- The project showed through using these co-design methods, the attitudes of nursing staff were challenged and developed, alongside benefits for the older people involved.

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shared understanding and goals. The co-produced outputs of Co-design projects embody and value the expressed beliefs and values of staff and older people.

Introduction

The NHS is facing an unprecedented drive for increased efficiency alongside improved patient experience, choice and quality (Department of Health 2010, 2011, 2013). This study describes the evaluation of an innovative service improvement project undertaken in 2010–2011 that, using methods derived from Co-design practice, sought to improve medical outpatient services for older people. A central theme of the project was to bring hospital staff, patients and carers together to 'co-design' improvement. The background and methods of the service improvement project are discussed in Wolstenholme *et al.* (2010) and analysis of the participants' experience is available in Bowen *et al.* (2013). By way of a very brief overview, the approach involves using narrative from interviews to surface lived experience of older people and staff together and use a series of creative workshops to both prioritise and deliver service changes.

Person Centred Care (PCC) is a central principle of health policy and practice.

Person Centred Care is the driver behind the 'no decision about me without me' subtitle to the United Kingdom's Department of Health document about shared decision making in the UK NHS (2012). It is also expressed in the devolved countries of Scotland, Wales and Northern Ireland policy documents (McCormack & McCance 2010) and internationally the Institute for Healthcare Improvement (IHI) supports a person-centred approach through many of its tools and methods (Balik *et al.* 2011).

Person Centred Care is professionally recognised as a key aspect of nursing practice, and is core to the Royal College of Nursing's principles, with principle D stating:

'nurses and nursing staff provide and promote care that puts people at the centre, involves patients, service users, their families and their carers in decisions and helps them make informed choices about their treatment and care.' p35 (Manley et al. 2011)

This study intends to demonstrate and evidence Co-design methods as the means by which the concepts of PCC and PCN might be achieved.

Background

Person Centred Nursing

McCormack and McCance describe the Person Centred Nursing Framework as

'a lens that enables the operationalisation of person-centred care and can be used to evaluate developments in practice and hence demonstrate outcomes.' p3 (McCormack & McCance 2010).

Their book describes the development of the framework from previous empirical research, concept analysis and subsequent iterations to the framework that is recognised today.

The Person Centred Nursing Framework fig. 1 p.34 (McCormack & McCance 2010)

The framework (see fig. 1) describes the factors required to deliver PCN, which include having developed interpersonal skills, a commitment to the role and the ability to reflect, these they call 'prerequisites'. The next level is that of the context in which care is delivered, how the team works, organisational hierarchy and the opportunity to innovate, under the umbrella term of 'The Care Environment'. The 'Care Processes' are engagement, shared decision making and valuing the beliefs and values of patients and these are means by which the 'Person Centred Outcomes' are delivered, they include patient satisfaction, alongside transformational leadership and an environment where innovation is supported.

Co-design

Co-design is an approach to designing that has emerged from the broader term participatory design recognising a drive to considering the 'user as subject' to the 'user as partner' (Sanders & Stappers 2008). Participatory design emerged from Scandinavia in the 1970s in response to a comprehensive modernisation of industry. It focused on participatory processes of improvement where both the
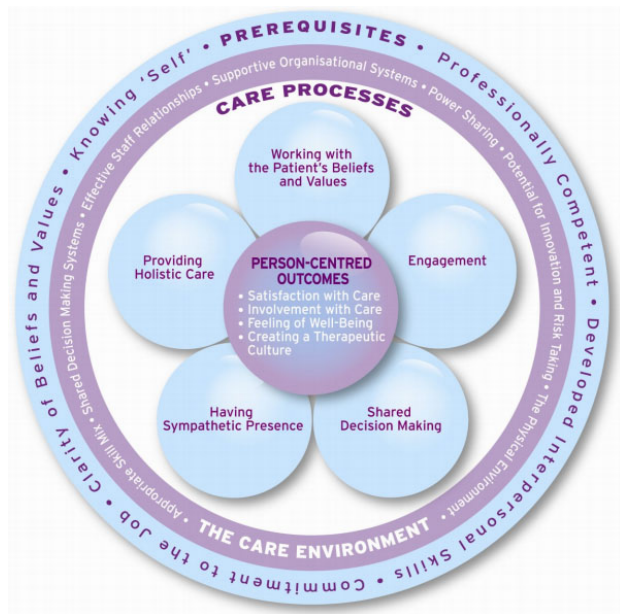
Figure 1 The PCN Framework [Colour figure can be viewed at wileyonlinelibrary.com]

users of the system and the researchers themselves gained from being involved in the process (Bødker 1996) and the design focused not only on efficiency but also on the professionalism of the workforce and their wider needs.

Ehn (1993) describes participatory design as having both political and technical components. Carroll and Rosson (2007) expand these components to a moral and pragmatic approach. This is to say that there is a moral proposition that those who are ultimately likely to be affected by something have the right to have a substantive say in the outcome, and pragmatically that by directly involving the users the chances of success are improved.

The Practice of Design involves three key attributes that make it different from many other activities, namely; design makes ideas *tangible*, and that through *making* further insights are gained into the problem itself, design is human centred, in that it is the perceived or unrecognised needs of the end user that drive the process and that design is *collaborative* (Hunter 2013). Increasingly there have been increasing examples of design and co-design being applied to public services (Cottam & Leadbeater 2004, Bate & Robert 2006). User-centred Healthcare Design (UCHD); www.uchd. org.uk was a five-year project funded by the UK National Institute for Health Research (NIHR) as part of the Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for South Yorkshire. The project was multidisciplinary, drawing on experience in health and design; specifically methods that come from a rich tradition of Co-design research.

Methods

The aim of this secondary analysis of a qualitative data set was to explore how co-design might facilitate the key concepts of Patient Centred Nursing.

This project was classified as service improvement and registered with the Hospital's Clinical Effectiveness Unit. All participants were able to provide written informed consent including use of their data for both further academic and dissemination purposes. The evaluation of the project was reviewed by Sheffield Hallam Universities Ethics Committee, in the Cultural Communication and Computing Research Institute (C3RI).

The original data collection comprised a series of interviews with a sample of 11 project participants. Interviewees were selected to reflect the composition of the co-design led service improvement project group. The subgroup of seven interviews examined in this study (all older people and nursing staff chosen purposively to explore the key attributes of person-centred nursing) comprised all the original patient participants (two older people and one older person's advocate) and all the nursing staff (Staff Nurse, Sister), one middle manager (Matron) and one senior manager (Nurse Director). Non-nursing, nonolder person participants were excluded.

The original interviews were conducted by two interviewers, who were not members of the original project team. These took place in person or over the telephone, and lasted between 20 and 60 minutes. To ensure consistency, each interview followed the same semi-structured format, using an interview schedule consisting of open questions, all interviews were recorded and transcribed. The transcripts were anonymised and entered into Dedoose an online programme for collaborative data analysis (SocioCultural Research Consultants LLC 2012). It was these transcripts that were used for the purposes of this study.

An initial phase of familiarisation was undertaken, less to allow familiarisation with the context or the data, but more to verify the presence of data pertinent to the secondary analysis research question.

Researcher 1 created an index based on all of the constructs of Person Centred Nursing and their subcategories within the Dedoose programme (see Box 1).

An initial analysis created 71 excerpts (sections of text), which were indexed to codes from the person-centred nursing constructs. The data were independently coded by another researcher with in-depth knowledge of the PCN framework to explore consistency. The second researcher created 94 extracts.

Box 1. Constructs of PCN and their subcategories.

Prerequisites, which focus on the attributes of the nurse:
- Being professionally competent,
- Having developed interpersonal skills,
- Being committed to the job,
- Being able to demonstrate clarity of beliefs and values,
- Knowing self.

The care environment, which focuses on the context in which care is delivered;
- Includes an appropriate skill mix;
- Systems that facilitate shared decision making;
- Effective staff relationships;
- Supportive organisational systems;
- The sharing of power;
- The potential for innovation and risk taking and
- The physical environment.

Person-centred processes, which focus on delivering care through a range of activities;
- Working with patient's beliefs and values,
- Engagement,
- Having sympathetic presence,
- Sharing decision making
- Providing for holistic care

Expected outcomes, which are the results of effective person-centred nursing;
- Satisfaction with care,
- Involvement in care,
- Feeling of well-being,
- Creating a therapeutic environment defined as one in which;
  - Decision making is shared,
  - Staff relationships are collaborative,
  - Leadership is transformational
  - Innovative practices are supported.

Both researchers identified instances of all the codes being expressed apart from in 'the care environment construct', that of 'appropriate skill mix', potentially due to the project taking place in an outpatient setting where skill mix is not given so much priority and therefore is not as evident.

When the coding assignments for both researchers were reviewed, the four most assigned codes were from the prerequisites: 'knowing self'; from care processes, 'engagement', 'working with patient's beliefs and values' and 'shared Decision Making'; and from Expected outcomes: 'involvement in care'.

Results

Knowing self

McCormack and McCance (2010) in their PCN Framework describes 'knowing self' as

'the way they construct their world can influence how they practice as a nurse and how they engage with patients' (p57).

They discuss gaining this insight through, among other approaches, professional and clinical supervision. Early in the project, staff undertook an experience/emotion mapping exercise looking at their own working day, but ascribing positive and negative emotions to each stage. This was later shared with a similar experience map generated by the Patients and Carers and led to a shared understanding of the service.

A reflection on this process was that what allowed the nurses to gain this insight was not solely the intervention of the project team, but in some cases just the opportunity to have time to reflect. Meeting with the patients added to this, but this will be discussed in the section on 'working with patient's beliefs'. Co-Design has at its heart a coming together, the mutual understanding of the world as viewed by the different players. Experience in the interpretive anthropological sense is about trying to make sense out of how other people make sense (Bate & Robert 2007), the narrative and shared understanding enabled by the emotional mapping helps individuals position their 'self' within the shared culture of the clinic.

'It made me, you know the patients, it made me think you know some of these people expect us to be, its difficult when you are working because you've just got to get on with it and you don't, a patient is just a name that you call. Do you know what I mean? You don't think of the, you know the patient having to wait or having you know an old relative at home or something like that. They're just here and have to wait to be seen but sometimes there are stories behind the person.' (nursing sister)

Experience is not just something to capture, it is a key expectation of informed consumers and good service design (Stickdorn & Schneider 2012). Experience in many interactions is the differential between an experience that surprises and delights and one that leave the participant cold. One of the key expected outcomes of the PCN is satisfaction with care, which will be strongly influenced by the experience.

Engagement, working with patient's beliefs and values and shared Decision making

McCormack and McCance (2010) describe the constructs of engagement, working with patient's beliefs and values and shared decision making as being closely related. In

these data the extracts that were coded for engagement were also coded for sharing decision making and working with patient's beliefs.

Working with patient's beliefs and values

McCormack and McCance (2010) describe using stories to understand the historical precursors that influence and make someone who they are. The storytelling or 'experience capture' within this project allows the same understanding, but for a group of people using a service. Those moments of insight when both older people and nursing staff started to see what was important to each other, through stories.

'I knew everyone who went but I didn't know-know them if you know what I mean. So I got to know them a bit better and some of the patients it was weird because although you know those patients when you meet them socially as it were, they're totally different people' (nursing sister)

'I think for both groups of people to be able to talk about their own particular, you know, experiences and the way they felt about it and I think this is where really the two groups began to gel together because many of the experiences were virtually the same … emotionally and I think from a staff point of view it helped them to begin to understand and articulate how they felt about patients' (older person)

Its just sort of crossing that bridge and going-, and putting yourself in their shoes and it's a lot, it is a lot different and how they see us and how we see them. (Staff Nurse)

This is particularly interesting as many of the stories captured through the emotional mapping were recorded prior to the joint sessions, but were represented at the events by members of the research team or older people's advocates. Allowing individuals usually excluded from the research process to be involved. This exercise did not result in a complete understanding of the individual, but of a composite of experiences that afforded a range of beliefs and values from staff and patients to be made visible.

Bisset (2011) talks about service (co-) design methods as allowing and supporting motivation in those who we work with, and of a continuum of disengagement – through engagement alongside a motivation, extrinsically motivated to intrinsically motivated individuals. The sense in which PCN describes engagement as one of the means by which the outcomes are delivered, so service design looks to create motivation to deliver staff who can be intrinsically motivated, to expand their personal sense of

autonomy, social relatedness and competence (Deci & Ryan 1985). This sense of creating motivated participants through co-design's methods of developing deep understanding of users can also be seen in the literature around empathy in co-design (Wright & McCarthy 2008).

Shared decision making

'I think the high points, the very positive thing for me was the fact that people were prepared to listen to my experiences and not just to listen to them but to take some notice of them and the fact that I still have some use!'(laughs) (older person)

The co-design sessions explicitly challenge participants to work together around a shared goal. Working as equal partners and working on aspects of the service delivery that were often patient facing allowed everyone the opportunity to contribute equally. This again was made easier by the focus on experience.

'It was good, it was, it felt, it felt as though the Trust and the professional staff were really interested in what patients were experiencing and having to say about making improvements and it must be said that members of staff also were part of that process … and together we worked on possible improvements or solutions to these problems.' (older person)

'Just listening to the experience of patients and their carers and their own stories… I think was really, really powerful, I think it really hit a lot of nurses in a way that sort of formal training can't do but I think the patient stories are a real powerful tool.' (nurse director)

We do have to be cautious here as we are talking about involving older people not in their own care as such, but in the improvement of a service. Having said that the service is the 'care environment' in which the day-to-day interaction between staff and patients occurs and if Person Centred processes develop the overarching service, the chances that individual interactions will be more Person Centred is greater. This is supported by the work of Plas and Lewis (2000) around Person Centred Leadership, which they claim is about influencing all levels of the organisation to be 'person centred', to embedding the person in the way the systems deliver care.

Engagement

The discussions around engagement in McCormack and McCance (2010) draw on work by Benner and Wrubel (1989). They talk about three levels of engagement: full

engagement, partial disengagement and complete disengagement. What changes through these levels is the amount to which the nurse is able to ensure both the values of nurse and patient are equally present in the relationship, but that the professionalism and pragmatism of the nurse's role underpin and support shared decision making.

The co-design team reflected that often it was difficult to get NHS staff to move beyond the 'you can't do that' mode of thinking. It is very difficult to allow for the form of engagement described above to flourish where the staff themselves feel disempowered and are in a closed mindset.

'And, a bit, I don't want to sound too dismissive or harsh about it, but there seemed to be a bit of resentment [from the staff], it wasn't expressed in words, but there was a feeling that, that, you know, how is this going to work out, and what are people going to say about us? And what criticisms are they going to make about us?' (older person)

'they [hospital management] actually asked us and the staff side, how they can save money and it's the first time they've done it and they wanted us. Now whether they've listened to us or not is a different matter, but you know they asked us ideas on how to save money. We gave them some good ideas to take on board, if they do – they, if they don't – they don't but you know. They asked and they got told and that was that.' (nursing sister)

The creative methods employed such as sketching, drawing or using props to facilitate participation (toy cars and maps to discuss parking) by the co-design team allowed people to imagine 'what if' placing them in a more open state of mind. These approaches also relate to the idea of designing as 'processing', of the bringing to bear on complex problems the knowledge that we have through doing, tacit knowledge, that people might find hard to articulate, but can access and demonstrate through creative processes (Polanyi & Sen 2009).

'So what S did and his colleagues was to say to us, 'right forget what's there, forget about all the problems, you're starting with a clean sheet of paper. What would you do to actually make that space viable, comfortable, useable, not congested...' and yeah we were able to do that...' (older person)

The ideas that came out of these discussions always prompted a deeper understanding of the situation, done in collaboration with the older people and the older people's advocates, a shared ownership of ideas led to them carrying a greater strength or legitimacy. This ability to understand through making is a key attribute of co-design theory and practice and coupled here with the participatory nature of the project allowed a real sense of engagement and shared purpose for all the participants.

Involvement in care

As highlighted in the background demonstrating that people are involved in their own care is a key policy direction. In this project patients were 'only' experts of their own experience, but through the person-centred processes detailed above were able to contribute in a meaningful way, on equal terms with nursing staff.

An example is the collaborative work done to address the problem of parking as described in several participant stories and anecdotally by staff and researchers. Initially the co-design group working on this area developed a written report to give to the hospital Estates Department. The next step was to bring one of the older people, a nurse and the designers together with a traffic planner from the local council. Together the shared understanding from the older person and nurse that had been established through the project and the technical expertise of the traffic planner allowed the development of a proposal to radically rethink parking and drop off.

'We looked at-, we had scale plans of the place and tried to move things around and make things easier and we made several suggestions about how the traffic could be better managed in order to make it easier, or more comfortable for people to be dropped off but as I say-, and we had experts in' (older person)

The map produced was of high technical quality and allowed the participants to not only provide the estates department with a list of problems but with a potential solution, many aspects of which have been subsequently implemented.

'the feedback into the traffic system which I think is still on the table and people are still looking at how those things can be improved but the richness of the feedback that came from the project into that bit of work as I say, yet to be realised but I think that will make a big difference in the long run.' (nurse director)

Design facilitates the production of tangible high-quality outcomes, this values the contribution of staff and patients and provides a key resource demonstrating the involvement in care. Within the wider field of service design, there are a wide range of methods to allow the visualisation and understanding of complex service situations (Stickdorn & Schneider 2012). They are also more accessible for equal participation of a wide range of participants, rather than the default position of healthcare to have a meeting and develop a report. We showed within the project that genuine involvement in care could be facilitated through these methods.

Discussion

Secondary analysis of qualitative data is by no means as common as the secondary analysis of quantitative data, however, there is increasing discussion in the literature about the pros and cons of such an approach (Irwin 2012). One criticism is that in secondary analysis the individual undertaking the analysis is distant from the context. In this instance the analysis was undertaken by one of the original research team, so the context was apparent perhaps more so than to the interviewers. There is potential criticism that the content of the original interviews is guided by the initial research question so much so there is not enough room to answer-related questions (Hinds & Vogel 1997). But as detailed in the background there are many shared characteristics of a successful co-design and processes that deliver person-centred outcomes.

As the research question is explicit about the framework we are looking to draw upon for our analysis, a directed content analysis approach. Potter and Levine-Donnerstein (1999) describe this approach as deductive and suggest that there are many different ways to approach content analysis and that they all have limitations.

Directed Content Analysis seems initially at odds with other forms of exploratory qualitative analytical approaches as it explicitly sets out the codes applied to the data. Where there is an established theory or framework it is likely that the researcher is already influenced, consciously or unconsciously, by this, and the results of the analysis will be affected. So although some might argue that it is a limitation of the method, it is perhaps a more 'honest' or transparent method of analysis (Hsieh & Shannon 2005).

Conclusion

The idea of design as being human centred resonates with McCormack's concept of person centredness (McCormack & McCance 2006). The ability of design to make ideas tangible facilitates many of the care processes as described by the framework and the collaborative nature of design provides methods to support staff in delivering the person-centred outcomes (fig. 2).

How the attributes of Co-Design map onto the PCN Framework fig. 2

The original project did not set out explicitly to use the PCN framework to effect a change in culture in the clinic, however, from being immersed in the data and developing an understanding from the nursing staff as to the areas that the project had influenced their practice, the author chose to re-examine the data using the framework. The fact that the aims of the original project were to improve the experience of older people using the service through a co-design process might explain why there are common themes identified between co-design practice and the constructs of Person Centred Nursing in this instance. The authors recognise the limitations of such an approach, the original interviewees were not asked about person-centred nursing, and themes from the interviews that fell outside the person-centred nursing framework would not have been coded. However, the authors have been transparent in their approach and would reference the study by Bowen *et al.* (2013) that is the primary analysis of the interviews which focus on processes rather than the outcomes of the co-design process.

In their recent study looking at culture and behaviour in the English NHS (Dixon-Woods *et al.* 2013) discuss having
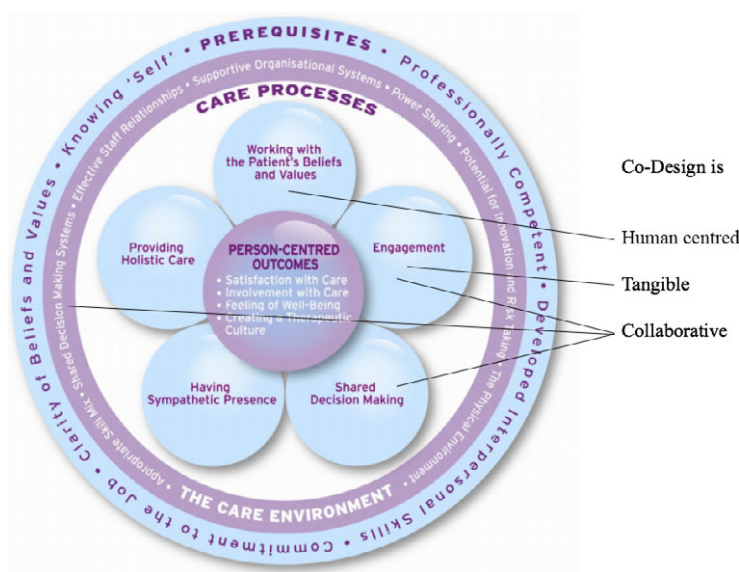

Figure 2 How co-design maps to the PCN framework [Colour figure can be viewed at wileyonlinelibrary.com]

a person-centred culture as key to delivering a positive cultures. They say this is more likely to be seen in areas where staff are supported to be reflective and critical, and where organisational silos are challenged. The analysis of the experiences and reflections of key members of the Nursing team shows that the practical methods of bringing patients and staff together delivered the opportunity to be reflective and highlighted, if not reduced the impact of silo working in this case.

This analysis demonstrates that some of the constructs of PCN have been facilitated through creative activities suitable for nursing staff and older people to undertake together, and supports the continued investigation of this burgeoning field of intradisciplinary work.

Relevance to clinical practice

The collaborative nature of the work in itself had a benefit in fostering a better understanding of the nurses and older people. Seeing older people out of the hospital and the 'work' context afforded nurses the ability to see patients as people, to remember the stories behind each of the names on the clinic list. Story capture is recognised within the PCN literature, interviewing older frail people in their own homes and allowing them to be represented in project work through these stories is a powerful way of widening the range of voices staff are able to use to inform their practice.

The undertaking of this work as service improvement aligns it to the narrative about practice development as the means by which PCN can be established. Co-design methods and practice have much to offer the health service and nursing, not least in being a set of practical methods that allow staff and patients to work together productively.

Co-design theory and practice is being increasingly used in health and social care, as suggested in a recent review of the literature (Chamberlain *et al.* 2015) and this study evidences the effect of co-design, in delivering cultural change to a hospital environment, the staff and patients who use it.

Conflict of interest

No conflict of interest has been declared by the author(s).

Contributions

Study design: MC, DW, SB; Data analysis: DW, HR; Manuscript preparation: DW, SB, MC, HR.

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