

Co-designing tools for dissemination

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1186. Co-designing tools for dissemination

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ABSTRACT *If the potential of design for health is to be fully realised in the future it is necessary to find a language to communicate our research across disciplines. This paper describes the outcome of a study that explored the role of design in communicating the findings of a positive deviance clinical research study in the UK.*

Positive deviance is an asset-based, bottom-up approach to behavioural and social change within communities. Whilst the approach has demonstrated much potential in public health and broader community contexts few studies have sought to apply the principles of positive deviance to in-patient healthcare settings. In the handful of studies that have sought to apply its principles to medical and clinical practice, issues have arisen in relation to how to disseminate and implement the findings of the research.

This paper describes a study examining the role of creative practice and co-design methods in communicating findings generated from a positive deviance research study undertaken across medical wards in the UK. Baxter's study (2015) had identified 14 positively deviant behaviours enacted by staff across medical wards, which led to improved patient outcomes. The challenge was how to disseminate these findings, given the abstract nature of these behaviours.

Design researchers from Lab4Living worked with staff across medical wards in hospitals in the North of England and through an iterative co-design research process generated a series of artefacts that embodied/reflected the positively deviant strategies. Ward teams evaluated these. The artefacts provided a mechanism through which to promote and scaffolding conversation, thereby promoting engagement with the research. In the final phase of the research the artefacts were shared with staff from other hospitals who had not been directly involved in the co-design workshops. The paper will reflect on the design methodology and its potential to be applied to other contexts.

Keywords: co-design; communication; inter-disciplinarity; positive deviance

Introduction

Positive deviance is an asset-based, bottom-up approach to behavioural and social change within communities. It draws on individual and community strengths and pre-existing resources considered positively deviant (Tuhus-Dubrow 2009; Singhal et al. 2009).

The approach assumes that problems can be overcome using solutions that already exist within communities. Despite facing the same constraints as others, 'positive deviants' identify solutions and succeed by demonstrating uncommon or different behaviours (Baxter et al. 2015, 2).

This approach holds much promise and attention has turned to how it might be applied within health service contexts. However, whilst there is a growing interest in a positive deviance approach within healthcare, there is still 'limited guidance on how to operationalize each step' (Baxter 2015, 2). To date the majority of studies demonstrating positive change based on this approach are located in public health and in business. However, some promising studies of research in healthcare settings with specific reference for treatment of acute myocardial infarction have recently emerged. Within these settings a four-stage approach has been proposed as illustrated below (Bradley et al. 2009).

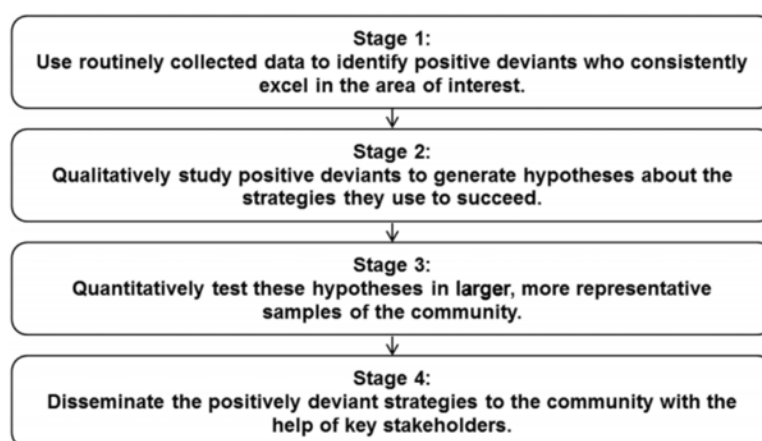


Figure 1: The 4 stage approach to positive deviance

Whilst there is a growing body of literature in relation to identifying positively deviant strategies and building understanding as to how they succeed, what is less clear from the literature is how these are disseminated and how research teams move beyond stage three of the model (Baxter et al. 2015).

If the potential of the positive deviance approach within healthcare is to be realized it is necessary to find ways to identify positive deviant wards, cultures and individuals within complex and ever-changing systems and create mechanisms to communicate what these are to create the potential for their implementation.

Current study

This paper describes a study that investigated whether creative practice and co-design methods can be used to support the dissemination of positively deviant strategies for improving quality and evidence about newly characterized best practices within elderly patient medical wards. It focuses on the potential for design methods and co-creation approaches (Zanetti and Taylor 2016) to support knowledge-transfer amongst autonomous ward teams.

Co-creation is an approach that seeks to involve all stakeholders in the design process to help ensure the results match their needs and is usable. A key tenet of co-design is that users are experts of their own experience and are therefore central to the design process. Involving ward staff in the design of materials and strategies to disseminate research findings seems a highly appropriate approach and reflects well the bottom-up, asset-based nature of positive deviance.

The starting point for our study was a research project undertaken by Baxter (2015) who examined whether a positive deviant approach could be used to identify ward teams in the UK who were performing exceptionally well on patient safety. Using a multi-method observational study, she assessed the concurrent validity of identifying positively deviant elderly medical wards using NHS Thermometer data and staff and focus groups.

Hypotheses about strategies, behaviours, team cultures and dynamics that facilitated the delivery of safe patient care were generated and 14 key themes representative of positively deviant elderly patient medical wards were identified. These were: Knowing Each Other; Trust; A Multidisciplinary Approach; Integrated Ward Based AHPs; Working Together; Feeling Able to Ask Questions or for Help; Setting Expectations; It's a Pleasure to Come to Work; Learning from Incidents; Acquiring Additional Staff; Stable and Static Teams; Focus on Discharge; Directorate Support; and Keeping Patients and Relatives Informed.

Whilst Baxter's research demonstrated success in relation to the first two stages of Bradley's model, she also identified that there was 'limited guidance on how to operationalize each step' (Baxter 2016, 2) particularly in relation to the implementation of findings. Our study investigated whether creative practice and co-design methods could be used to support the dissemination of positively deviant strategies within elderly patient medical wards. We were interested in understanding the experience of staff involved in the process of co-design. We also wanted to understand whether there was a difference in the experience and impact of the critical artefacts between wards engaged in creative practice and co-design of creative interventions and those that were not.

Two elderly care wards at different hospital sites within the North of England were recruited to take part in this study. These were chosen because they best reflected the population of Baxter's original study. An intervention was co-designed with site 1 that was then installed in site 1 and site 2. This was to build understanding of whether the artefacts developed through the co-design process had a validity that extended beyond the site of creation.

Study intervention development

The overall study design followed the UK Design Council's Double Diamond process model (Design Council 2015) with the initial phases of the research adopting a more exploratory approach, asking questions, conceptualizing possibilities rather than offering solutions. A thinking through things methodology based on 'exhibition in a box' (Chamberlain and Craig 2013) was utilized throughout the study.

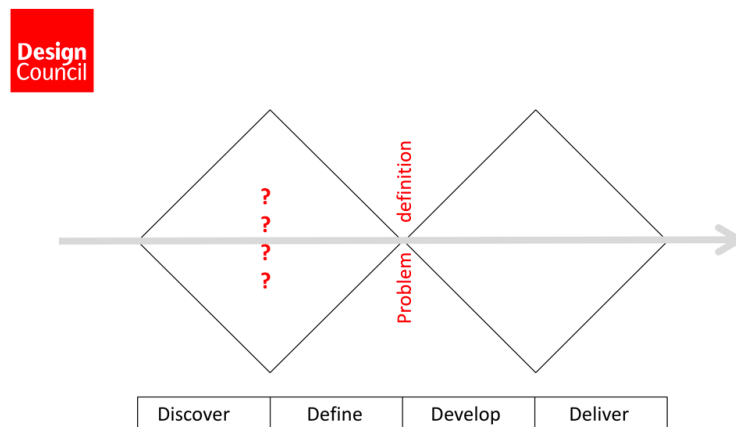


Figure 2: Design Council double diamond (Design Council 2015)

Discover

During the immersion phase of the research, site visits by the Lab4Living research team provided the opportunity to build understanding of Baxter's themes in the context of the hospital setting (site one). During these visits it was noted that the ownership of space varied across the hospital and poor décor and the busy visual language were also highlighted as considerations. The research team developed a series of critical artefacts (Chamberlain and Craig 2013) based on these observations for the first co-design workshop.

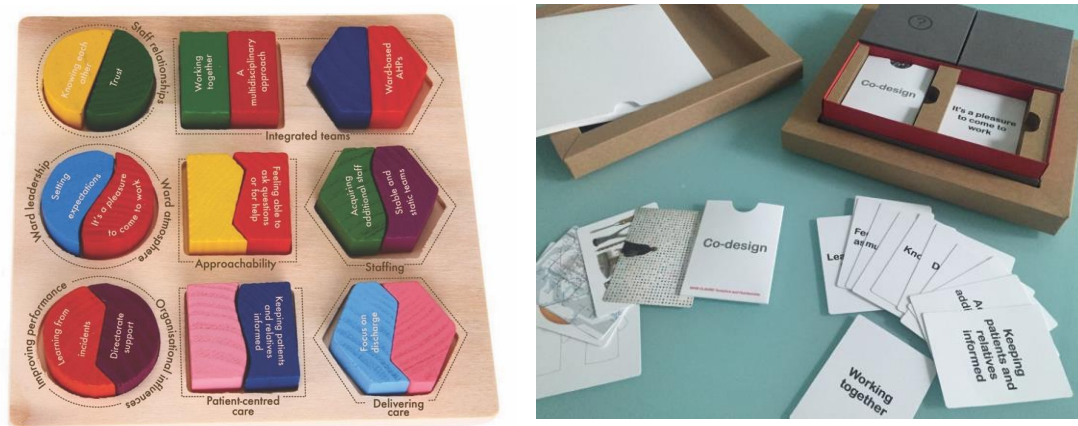


Figure 3: Critical artefacts

The purpose of the first workshop was to identify and prioritise positively deviant ward behaviours, practices or characteristics. Eight ward staff participated in the workshop which briefly consisted of an introduction to the project and verbal consent, three themed tasks, written consent and de-brief. The workshop was audio recorded and visually recorded (figure 4)

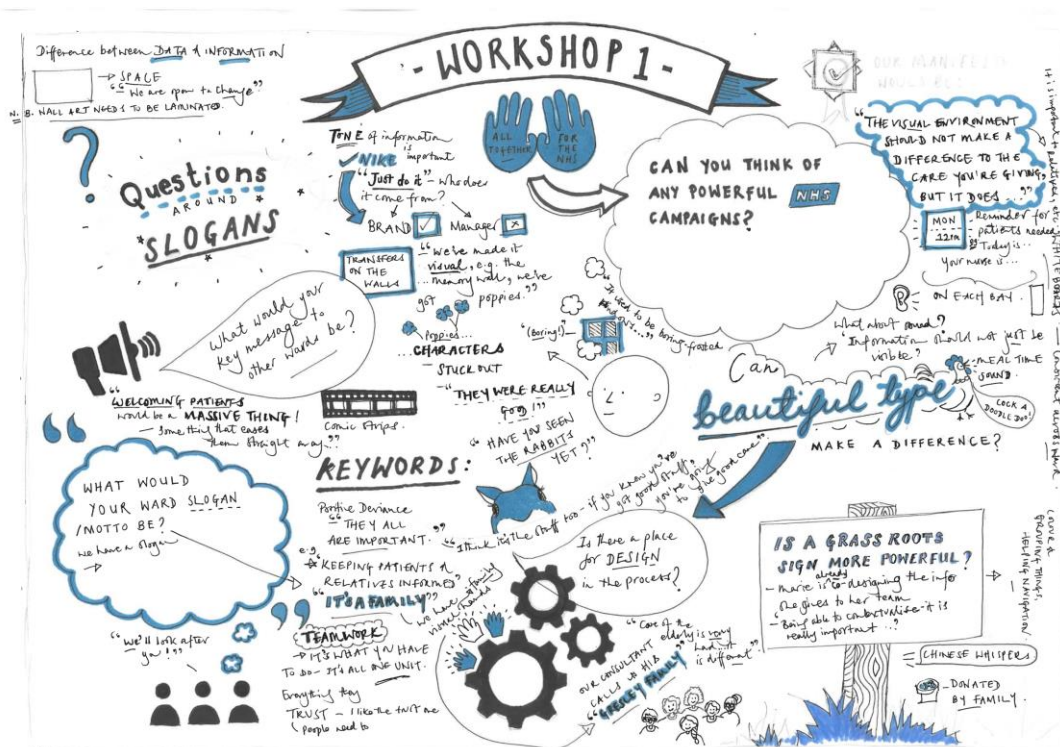


Figure 4: Recording of the workshop

Ward staff shared how they currently send and receive generic information in both their work and private lives. Information was shared and mapped on blank cards from the co-design tool kit developed by the design researchers. Baxter's positive deviant themes were discussed in detail and revealed insights set against the context of the ward. The ward staff confirmed that all 14 positive deviant themes were relevant and important but when prompted to select the most important they selected 'Trust' and 'Working together'.

'probably one of the most demanding wards'...'we wouldn't get through it without your colleagues'(workshop participant)

Identity was also an important theme. Significantly this was not one of the original themes noted in Baxter's findings.

Define (post workshop)

The workshop further confirmed that any intervention developed to promote the dissemination of the positive deviant themes would be challenged by the limitations of ward staff time to engage with the intervention. Additionally, it highlighted that the ward itself

was the only viable location to site an intervention where the staff had some level of autonomy and control. However, space to accommodate any form of intervention was at a premium on the ward. Consequently, the design research team began to focus on how to paraphrase information through poetry (Grisham 2006), metaphors and data visualization.

‘Trust’ and ‘Working together’ emerged as key themes from the co-design workshop along with a strong feeling of identity. In response, the design researchers developed a personalized ward logo (figure 5). In addition, the notion of a welcome pack for staff and patients was developed. The pack included for example a mug, pens, maps, poetry book, notebook, water bottle and lanyard.



Figure 5: Refreshed personalized ward logo

Develop (workshop 2)

Four members of staff from site one participated in the second workshop. Due to staff sickness and staff shortage, the number of participants in attendance was smaller than scheduled and this is a limitation of the study. Three of these participants had been present in the first co-design workshop.

Design interventions inspired by the co-design workshop 1 were shared with participants and feedback collected and collated. The concept of the staff/patient welcome pack was very well received however the co-design activity highlighted problems with much of the contents. For example, the ward staff had recently ordered a new set of mugs, distributing water to patients in jugs was the normal practice, content and purpose of maps for patients and staff was conflicting. The participants suggested other items could be added for patients such as hair and toothbrush for example. However, the most significant challenge identified was that of the sheer number of packs that would be required for patients and the logistics of cost and supply. Further interrogation revealed creative potential and relevance in terms of the study objectives in focusing on a staff welcome pack.

Logistical consideration played a core part of the co-creation activity where the participants imagined where and how the range of interventions might work in practice. For example, ward staff access to printing facility, rules and regulations on fixing to walls, hygiene regulations, location of electrical, power sources. Another focused survey of the ward and surrounding spaces, kitchens, staff rooms, toilets once again revealed the extremely limited space available to utilize for an intervention. As in workshop one, the session was audio and visually recorded.

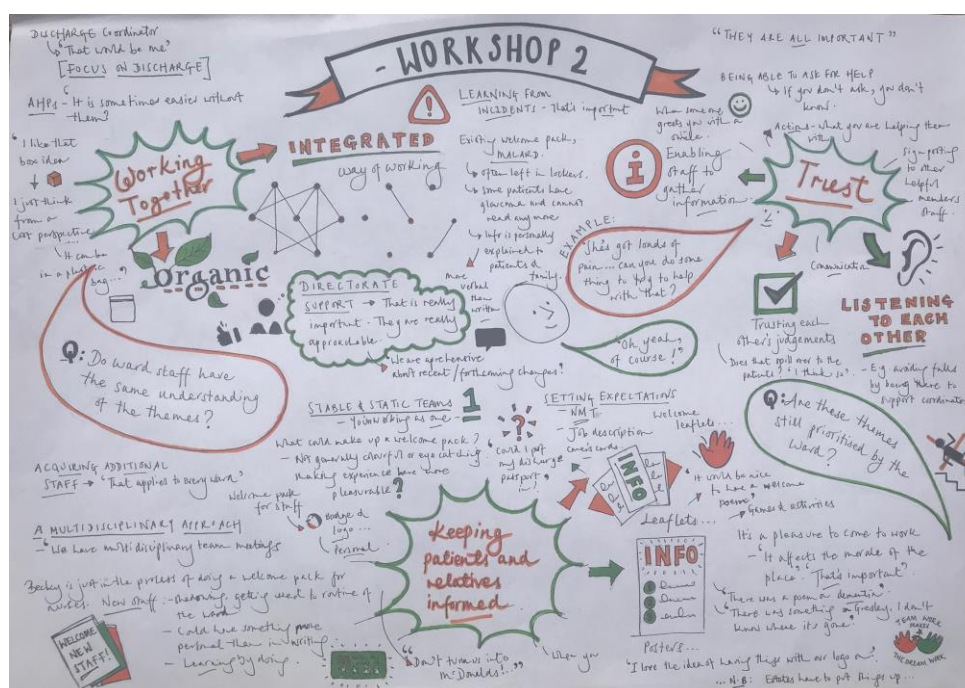


Figure 6: Visualization of Workshop 2

Develop (post workshop 2)

The second co-design workshop had further highlighted the logistical challenges that would significantly influence the design of the intervention. The ward environment presented an enormous amount of visual and textual information, and to achieve the aims of the study it was important any intervention would have to compete with the visual noise across the ward.

Following the second co-design workshop the design research team focused on the delivery of the final intervention which sought to embed Baxter's 14 positive deviant themes in a precise visual form within the restraint of a visually cluttered ward. The intervention would have meaning an identity for the site one ward, informed by co-design workshops but hopefully have relevance for the site two hospital ward also.

'Team working' and 'Trust' which were highlighted by the co-design workshop participants as particularly important would be manifested in a staff welcome pack, which would also reflect and disseminate the 14 positive deviant themes.

Intervention (Deliver)

The final intervention that emerged through the process of co-design activity with the site one ward was a welcome pack for staff (and a framed illustration/artwork, which embodied the themes of Baxter's (2015) research (figure 7). The illustration/artwork was produced A2 size to allow more scope for siting within the wards. The two interventions would offer an individual and shared approach to support the dissemination of the positive deviant themes.

The playful staff welcome pack would offer opportunity for staff to recognize and reflect upon the creative activities and positive deviant characteristics they already engage in. In addition, the pack would prompt communication between individuals in the ward teams. The artwork reflected the busy working of a hospital and illustratively conveyed the 14 positive deviant themes for staff and patient engagement.



Figure 7: Final design



Figure 8 : sharing of the final artefacts with ward teams

The interventions were well received by staff:



‘The books have gone down a treat with established members of the team as well as new starters’.

‘The picture is a real talking point - every time you look at it you see something else and you have a different conversation’.

Discussion

Whilst there is a growing interest in positive deviance approaches within healthcare, there is still ‘limited guidance on how to operationalize each step’. There is an increasing body of literature related to identifying positive deviant strategies and Bradley et al. (2009) propose a four-stage model for operation within these settings. What is less clear from the literature is how these are disseminated and how research teams move beyond stage three of the model.

This study set out to explore the value of co-design in supporting the dissemination of positive deviant strategies, as stage four of Bradley’s (2009) model, within a health service context.

The study has highlighted the challenge of conducting co-design within a healthcare setting due to the prohibitive access to potential participants. Whilst enthusiastic to engage in creative collaboration, the workload of ward staff meant opportunity for collective gatherings are difficult to schedule. Exploring other modes of communication to continue dialogue between co-design workshops proved unsuccessful. Consequently, it was important for the design researchers to maximize the limited opportunity for co-creation with the ward staff and involved thoughtful preparation and development of co-design tools for use in the workshops.

Healthcare systems and environments however present many challenges for new innovation. The risk adverse culture in healthcare makes it difficult to adopt new, untried and tested ideas. The design researchers witnessed across the two hospital sites involved in this study a proliferation of diverse information which range from text to visual, corporate to amateur, important safety information to trivial decoration. While there is sound evidence to support clear graphical communication, generally information was ad hoc with little thought to hierarchy of importance.

This visual noise created makes it difficult to constructively intervene with yet more information. This finding from this study suggests the visual illiteracy in the hospitals needs to be addressed to be more effective and a more informed considered approach to how information is displayed in hospital environments through the development of design guidelines might be explored through further study.

In the search for a solution that had meaning for the ward, the co-designers explored local history as inspiration to create an identity for the intervention. However, in the final design of the intervention, the welcome pack and the illustration/art work, references to local history were dropped in favour of more subtle visual references to the ward team. This

presented greater opportunity for translation and adoption to site two and potentially other hospital wards.

Conclusions

It is difficult to determine within the limits of study any change to the ward teams as a result of the co-design from the pre and post study data collected. However, the post interviews with the participants reveal some encouraging positive outcomes.

Despite the extremely challenging restraints to deliver a series of co-design workshops within a healthcare setting, a creative intervention to disseminate Baxter's 14 positive deviant themes was co-created with hospital ward staff. The post installation interviews with staff suggest the key themes identified in the co-design workshops were shared and disseminated. Further evaluation at a later stage may reveal further dissemination of the positive deviant themes as will determining whether the dissemination of the positive deviant strategies have a measurable lasting impact on the ward. The design rationale was to co-create interventions that prompted conversation that in itself would promote the likelihood of dissemination.

The interview participants however did find the co-design workshops '*enjoyable and thought provoking*'. Consequently, their personal reflections on current ward practices may in time demonstrate positive impact.

Increasingly co-design is employed as a method within research studies. There are a number of reasons why co-design in the context of healthcare is very challenging noted in this paper. The role of the designer has evolved into a more democratic role, which turns the designer into a facilitator, conversationalist and provocateur within co-design. Consequently, in an attempt to facilitate authentic co-design it is important appropriate and effective tools are designed and utilized to prompt creative conversations between participants. In this study, due to limited access to the ward staff participants, there was little opportunity for co-production and consequently it relied on the design researchers to act as interpreters utilizing their design skills to synthesize the thoughts and ideas generated in the co-design workshops into tangible outcomes.

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