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‘NHS at home’ – delivering consistent care in inconsistent environments

Aim of the project:

To co-design a dedicated bag and mobile workstation to help community matron’s deliver safe, high-quality care to patients in their homes.

Collaborations:

David Swann is a PhD candidate based in the Vehicle Design Department at the Royal College of Art. With the College already a key collaborator in the design and development of ‘Smart Pod’ vehicles (giving Emergency Care Practitioners a mobile base from which to assess and treat patients in the community) David saw an opportunity to extend the concept to community matrons – the practitioners at the heart of the Neighbourhood Care Teams, delivering planned healthcare in the home. As well as collaborating with the NHS Institute for Innovation and Improvement, and gaining valuable support from NHS Yorkshire and the Humber – he has forged a close and creative partnership with clinicians, innovation leads and service improvement managers at NHS East Riding of Yorkshire. Several of these now sit on the steering group that is supporting and shaping the project.

Context:

The NHS-wide drive to shift more services out of hospitals and into convenient, more cost-efficient community settings is, by now, a familiar one (*Our Health, Our Care, Our Say*, Department of Health, 2006).

The statistical picture of current and future demand for health services offers a powerful argument to support the shift. We are living longer, but with more long-term conditions such as diabetes, coronary heart disease and respiratory problems. Of the 45 million outpatient appointments in the NHS each year, it’s estimated that half could be delivered in the community - often in people’s own homes. The potential benefits are well-recognised, particularly in terms of reducing the burden on hospitals and better health outcomes for patients who are helped to stay independent and in their own homes for longer.

However, despite a significant amount of work around the service structures, capacity and skill

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mix of community healthcare teams – little, if any focus has yet been given to the equipment needed to support community matrons and other clinicians working in the challenging and varied environments of patients' homes.

Early research as part of this project quickly revealed the wide variation in how community matrons typically carry their equipment and medicines to people's homes. Camera bags, accountant's cases and plastic toolboxes were favourites among an eclectic mix. These would need to be loaded into the boot of a car, and then opened up and used on floors, tables, in bedrooms, kitchens, living rooms or wherever best in the often confined spaces available in each patient's home. Given that matrons can see around 17 patients in any one day – the potential for germ and dirt transfer is significant.

Methodology:

Observation: This included shadowing community matrons, watching and recording how they typically transported their bags to people's homes; how they set up their equipment; carried out treatments; cleaned and cleared away. Several similar treatments (eg wound dressing) were also observed in a hospital setting to provide a useful comparison. This gave rise to some valuable insights, including the relative ease of disposing of medical waste in a hospital compared to a domestic environment.

Case studies: David developed several detailed case studies to explore how world class services were delivered in confined and challenging spaces. He looked at companies such as Apple – market leaders in simple, intuitive and transportable IT products, and Virgin Atlantic Airlines – whose service philosophy is to do the basics consistently well, while delivering 'magic moments' for their customers. David maintains that looking at how other world class services deliver is an important part of pitching your own aspirations at the right level.

Lego Serious Play (LSP) workshop - metaphor and narrative: David's positive first-hand experience of Lego Serious Play meant he was keen to use it in this project as a way of encouraging and capturing people's personal stories and experiences of care delivery.

A one-day LSP workshop was organised with a cross-section of NHS clinicians and staff. The aim was to define even further what structures and products were needed to enable community matrons to deliver a world class service in people's homes.

'The beauty of Lego is that it's inherently fun and non-confrontational,' explained David. 'But what was equally exciting was how the model-making process triggered progressively deeper and more detailed discussions between the team – and we captured all this on video.'

Along with the Lego, the concept of 'metaphor' was an important part of the co-design methodology. Participants were asked a series of metaphor-related questions designed to reveal more about their perceptions of the service and their own experiences of it. They were asked:

- If the NHS was a type of bag, would it be a suitcase, a handbag, or a plastic carrier bag?
- If it was a supermarket, would it be Tesco, Waitrose or Lidl?
- If it was a car, would it be a Ford, a VW, a Toyota or a Jaguar?

The participants agreed that the NHS was a carrier bag, Tesco and a Ford.

They were then asked to build a simple model to help articulate their everyday experiences of delivering services. One clinician built a roof of a patient's home, signifying the desire to care for patients in a space that wasn't wedged between tables, chairs and other furniture.

When the group was asked to identify the aspirational values of the new product, consistency was a key theme, with one community matron saying:

'With any environment we go into, I think we should have a uniform approach to give the patient a sense of quality and standards.'

The last task of the day was for participants to come together and design a simple Lego model encapsulating their aspirations for the service structure and the products needed to support this. Still a very abstract concept at this stage – David then interpreted the group's ideas for an 'environment' that could provide a consistent treatment experience in an inconsistent setting. Essentially a bag, this would be simple, with minimal detail; open out to provide a clean and safe workspace; and use a drawer system that would allow equipment supplies and medicines to be pre-loaded into a dedicated patient basket.

Prototyping and testing: The next phase, says David, was to produce a basic functioning prototype that could be tested and developed with clinicians.

As part of this phase, a second workshop has simulated the application of a leg ulcer dressing and the replacement of a catheter. This is part of an iterative process that will continue with clinicians until Easter. It will look specifically at ergonomics, refining its design and simplicity. The bag will need to perform equally well on the floor, as on a table or a stand. And, after evaluating a variety of shapes and forms (using UV gel to assess germ levels) it is likely that the next prototype will offer a circular shaped work-zone, rather than having corners that can trap bacteria and be easily missed during routine cleaning. As part of the next phase of development, the sustainability

and manufacturing aspects of the new bag will be further explored to ensure its viability.

Lessons and surprises:

According to David, one of the biggest and most welcome surprises to come out of the co-design process has been the level of support from NHS partners.

'The whole programme is genuinely embedded at all levels,' he says. 'I didn't anticipate the depth of support I would get from clinicians and other NHS partners and it's been a major asset.'

Next steps:

The next stage is to produce a more detailed prototype which will be evaluated with both clinicians and patients. This will involve simulating a range of care scenarios. The team has also put in a bid to the Regional Innovation Fund to support the next phases of development.

To give feedback or any comments, contact:

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The journey in pictures...



Home truths: a community matron sets up a makeshift workstation on a patient's living room carpet during the project's observation phase. The camera bag (on the left of the matron) is just one of the many methods community matrons commonly use to transport medicines and supplies.

Serious play: clinicians get creative at the co-design workshop. Lego is a fun but effective way to help clinicians articulate their own everyday experiences of care delivery, and explore how a consistent, high-quality, NHS at home service might look and feel.





Starting to feel real: a functional prototype shows how the bag might open out into a dedicated workspace. Later prototypes are likely to explore a circular shape to define the work zone – making the space much easier to clean properly.

Drawing on experience: the drawers slide into the bag and can be preloaded with a patient's dedicated supplies basket – something that reinforces the key values of safe, personalised, hand-delivered care that the team identified at the start of the co-design process.



Find out more:

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