

## **Public Money and Management**

### **Translating employee driven innovation in Healthcare: bricolage and the mobilisation of scarce resources**

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### **Abstract**

With top-down models of innovation failing to address the entrenched problems of healthcare, policy makers have proposed that staff working on the front line might be better placed to innovate solutions. Drawing on a study of Employee Driven Innovation in UK public healthcare we explore the process through which staff innovate without the resources that support policy implementation, showing how the translation of ideas from problematization to practice is underpinned by bricolage, the appropriation and repurposing of resources 'at-hand'.

### **Impact**

Our paper contributes to contemporary debates on innovation in healthcare and explores the potential for employee driven innovation (EDI) in resources constrained public health. Examining the processual, collective and interested character of EDI,

sheds light on the creative appropriation and repurposing of funding, labour, and space required to translate innovations in this context. It reveals how innovation by staff at the local level is ad-hoc and contingent. The emergence and sustainability of EDI cannot be assumed by policy makers without also recognising the resources required to formally support the whole innovation process.

### **Keywords**

Bricolage, Healthcare, Employee Driven Innovation, Translation, Resources

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## **Translating employee driven innovation in Healthcare: bricolage and the mobilisation of scarce resources**

### **Introduction**

Healthcare demands brought about by populations living longer with complex chronic conditions are an increasingly pressing challenge for governments and policy makers across Western nations. These demands, in the context of shifting political paradigms and attendant fiscal policies, shape the delivery of healthcare and public services (Hartley 2005; Ferlie et al 2013; Tuohy 1999). In many countries the public sector, and particularly health services, have been subject to regular reform throughout recent decades with wholesale structural changes including the introduction of new public management, marketization and largescale technological innovations (Osbourne and Brown 2013; Exworthy and Halford 1999; Hartley 2005; Ham 2014). Despite this, it is clear there has not yet been a 'structural fix' for the sector and the sustainability of public healthcare systems is increasingly called into question (Ham 2014; Fitzgerald and Mcdermott 2017). With top-down models of reform and innovation failing to deliver effective change, stakeholders and policy makers have increasingly looked to 'bottom up' or employee driven innovation (EDI) as a way to resolve entrenched problems of healthcare (Department of Health 2011; Ham 2014). Staff-led development of new products and services promises a cost effective way to increase quality and efficiency utilising the resources already present i.e. the workforce, and by-passing implementation challenges by enrolling those required to enact change into the heart of the innovation process. Yet, whilst EDI holds powerful appeal for scholars and policymakers alike (Høystrup 2012; Borins 2006), expecting employees to design and implement innovations poses challenges in a context in which multiple professional groups and stakeholders operate, practice

is often highly regulated, resources are increasingly scarce and change has traditionally been imposed from on high (Ham 2014; Fitzgerald and Mcdermott 2017). How might those challenges be overcome so that ideas for service innovation coming from staff working at the coalface, are recognized, resourced, and implemented to provide new ways of delivering services?

Debates on innovation in healthcare and the public sector more widely have proliferated in public administration, organisation studies and management literatures. Scholars examining the specific issues of managing organisational change and innovation in a public sector context shed light on the processual, networked, and interest-led nature of innovation in the sector (Nahlinder and Eriksson 2018; Nicolini 2010; Fitzgerald and Mcdermott 2017; Pope et al 2006; Exworthy and Halford 2010). Yet, healthcare innovation debates have focused primarily on the challenges associated with the adoption and diffusion of large-scale, policy interventions and reforms (Dopson 2005; Greenhalgh et al 2004). There is a need for better understanding of how innovative ideas might emerge from the bottom up, and how they might take root without the formal implementation infrastructure and funding provided by national policy programmes. Entrepreneurship debates provide insights into how innovative ideas for products and services are designed and implemented in what are often contingent and resource constrained conditions (Baker and Nelson 2005). Scholars have drawn on Levi Strauss' notion of Bricolage (1966) as a metaphor to illuminate the process of innovating by acquiring, adapting, repurposing and combining whatever is 'at hand' in a context of scarce resources (Garud and Karnoe 2003). As such bricolage offers a useful conceptual tool for understanding the resourcing of innovation in the public and third sector outside the context of top down reform and large-scale innovative programmes.

This article makes an important conceptual contribution to current debates on innovation in healthcare by integrating a translation approach with the notion of bricolage to illuminate how employee driven innovation (EDI) happens from the bottom up in a resource constrained environment. It draws on an empirical study of EDI within and on the periphery of the UK's National Health Service (NHS), whose publicly funded healthcare model has come under increasing strain from the twin challenges of an ageing population and increasing fiscal constraints. The three-year ethnographic study aimed to explore how innovations emerge in everyday work and learning practices of staff, and how they are embedded and sustained (Fuller et al 2018; Halford et al 2019). Three case studies were selected; a healthcare intervention for homeless in-patients, a community owned GP (General Practice) surgery, and a programme to support young people with chronic conditions transition to adult services. These innovations were not the result of policy initiatives or management sponsored programmes, but involved staff at various levels within the NHS and in third sector organisations, designing and implementing innovative solutions to inadequacies in local healthcare services. As such they provide an opportunity to understand how ideas for service innovation come about for those working on the front-line and how staff implement those ideas by mobilising resources.

Our article proceeds by briefly outlining how agendas in healthcare policy shifted from top down reform to EDI. We examine international scholarly debates on innovation in health showing how they provide an indispensable vocabulary for understanding the innovation process in complex organisational contexts. We explore how the notion of bricolage has been used in entrepreneurship debates and suggest how this might provide a useful analytical framework for examining EDI. This

background is followed by a description of our methodology and an outline of the three cases. Our findings make an important theoretical and empirical contribution to contemporary debates on innovation in healthcare. Exploring the process through which employees innovate – from problematisation to implementation - reveals how translation is underpinned by the creative appropriation and repurposing of diverse resources found at-hand including funding, labour, and space. The ad-hoc and contingent process, often positioned on the boundaries of the NHS and third sector, raises questions about the sustainability of these innovations; their capacity to make positive long-term changes to healthcare cannot be assumed.

## **Background**

Healthcare policy: From Top-down Reform to Employee Driven innovation

Tracing innovation in healthcare over the past 50 years reveals a series of paradigm shifts. The late 20th century marked the beginning of a phase of fundamental changes to the public sector as it had developed previously, under the auspices of a largely administrative approach (Hartley, 2005). Public policy and subsequent legislation by political administrations around the Western world have imposed waves of reform grounded in private sector philosophies of managerialism, marketization, and metricisation (Exworthy and Halford, 1999; Osborne and Brown, 2013; Ashburner et al., 1996; Ferlie, 1994; Tuohy, 1999). The impact of these changes has been profound across the public sector, and across nations. The British NHS for example has been a paradigmatic test-bed, with the reorganisations coming so rapidly and regularly that it has been on ‘a roller coaster of reform for at least 25 years’ (Ham, 2014; 8).

By the turn of the 20th century a growing consensus had emerged that previous approaches to public sector reform had reached their limit (Leadbeater 2004). As governments sought to rationalize healthcare and improve efficiency in the face of ever-increasing costs (Pettigrew et al., 1992; Ashburner, 1996), the concept of 'innovation', offered a new and 'seductive' approach (Osborne and Brown, 2013: 1335). In healthcare, rapidly evolving technologies promised new ways to promote modernisation on a grand scale. The implementation of technological innovations in Telehealthcare and electronic data collection (Halford et al., 2010; May et al., 2005) was widespread across Western nations. Nonetheless, whilst the nature of the policy solution had shifted from structural reform to technological intervention, the mode of implementation remained top-down. These innovations did not always deliver the anticipated benefits (Hartley, 2005). Diversity at the local level made nationwide schemes challenging to implement consistently (Pettigrew et al., 1992) and staff adoption of innovations were poor (Halford et al., 2010; Hartswood et al., 2003; May et al., 2005) or required considerable additional investment (Pope et al., 2013). Perceived failures in the top-down model of innovation, shifted the policy focus from legislators and policy makers, to those involved in delivering services on the ground.

In the UK's NHS, the promotion of EDI by policy makers can be traced back to healthcare reforms of the early 2000s. The new focus on the 'talents of all the NHS workforce', linked to a decentralisation agenda, was positioned as a way to generate innovation and improve patient care, offering 'clinicians and managers the freedom to shape services around patients' needs' (Secretary of State for Health, 2000, p. 30). Since then successive administrations have sought to devolve responsibility to regional and local NHS organisations with clinicians and GPs, 'liberated' from top down control, seen as best placed to understand the challenges (Department of

Health, 2010, p27). The National Medical Director made this point explicitly: “Many of the problems we suffer in the NHS are solvable if we use the intellectual capital of the 1.4 million people who work in the service.” (Bruce Keogh, BBC Radio 4, 29/5/13). However, the policy rhetoric does not address the question of what EDI looks like in practice or how employees might innovate in strictly governed and under-resourced organisational environments like the NHS in which change has traditionally happened via top-down and institutionally supported programmes.

### *Innovation, Translation and Bricolage*

The intersecting fields of public administration, organisation studies, and management studies, have housed long running and productive debates on organisational change and innovation in healthcare. The sophisticated models of the innovation process that have emerged, highlight the differences between public and private sector innovation in their essential principles (Nahlinder and Eriksson 2018). They acknowledge the complex and diverse organisational contexts (Hargrave and Van de Ven 2006) and multiple stakeholders - clinicians, patients, managers, policy makers, and professional bodies - implicated in the process (Ferlie et al., 2013; Pettigrew et al., 1992; Ashburner, 1996; Barlow, 2013). Their focus has been primarily on the implementation and diffusion of the large-scale policy reforms and transformation programmes that characterise Healthcare (Ashburner, 1996), as well as drugs and medical devices that serve particular patients and specialisms (Barlow, 2013). Debates have grappled with the spread of practices and tools across organisations, the problem of why some ideas are widely diffused and others not, and the sustaining of institutional change (Greenhalgh et al., 2013; Dopson, 2005; Fitzgerald and Mcdermott, 2017). Scholars focusing on technical innovation in Health (electronic patient records and forms of tele-healthcare), have shown how



interventions from the top must be adjusted to fit the local context; what matters in bringing new technologies into use are the everyday activities and priorities of the staff who (are supposed to) use them (Halford et al 2010; Pope et al., 2006 Buchanan et al., 2006).

In these debates, the notion of Translation (Callon, 1986) has provided an indispensable vocabulary for understanding innovation as a process rather than an outcome; illuminating the chain of transformations that takes place as ideas travel through time and across complex organisational contexts and settings and moving beyond binary understandings of success or failure (Nicolini, 2010; Fitzgerald and McDermott, 2017). Translation reveals how innovations are made and remade on their journey from 'problematization', to implementation through the 'mobilisation' of 'indispensable' actors (Callon, 1986 p196). These moments are understood as transformative, contingent and fortuitous, powered by the diverse interests of heterogeneous actors (clinicians, senior managers, administrators, policy makers) that are assembled, enrolled, and authorized to act (Nicolini, 2010). Service models, job descriptions, protocols, and research evidence are also enrolled in these networks, serving as intermediaries that formalise meanings, processes and practices (Nicolini, 2010).

However, with a focus largely on top down policy innovation and diffusion there has been less attention paid to processes where new ideas, services and programmes arise from the ground up and the everyday work of staff in local contexts. Here we shift our attention to emergent debates on employee driven innovation that are concerned with how workplace learning, and everyday work practices contribute to the innovation capabilities of staff (Høyrup 2012; Tegleborg et al., 2012). Debates focus on the centrality of team based and collective working practices to the

innovation process, not only those on the frontline or shop floor, but staff at all levels (Price et al., 2012; Borins, 2004), distinguished from those in research and development roles or policy teams specifically charged with innovation (Kesting and Ulhoi, 2010; Hoyrup et al., 2012). Drawing on learning theory, scholars explore the interplay between learning processes and organizational culture as staff seek to bridge gaps in and remake work practices in various ways (Hoyrup, 2012; Price et al., 2012). Where studies have focused on EDI in the public sector they highlight its ubiquity and diversity of forms; from ad-hoc and often incremental change or 'tinkering' to more substantial and transformative innovations producing new products and services. (Bugg and Bloch, 2016; Fuglsang, 2010; Borins, 2004).

The debates outlined above provide tools that can contribute to our understanding of EDI in healthcare, however, they do not provide a specific account of the resource constraints that characterize the public sector and healthcare (Borins 2004). To address this final piece of the jigsaw we turn to debates within the entrepreneurship literature which explore the innovation of new commercial products and services. For scholars of entrepreneurship the concept of bricolage has provided a language for understanding aspects of the innovation process that happen outside a research and development context. Bricolage, originating in the work of Levi Strauss (1966), describes the creative practices of individuals who address particular needs in their community, network or organisation by assembling, adapting and repurposing the 'stock' of resources they find around them. Unlike the engineer (or policy maker) who starts with clear project goals and the right tools and materials, the bricoleur's 'universe of instruments is closed and the rules of his game are always to make do with "whatever is at hand"' (Lévi-Strauss, 1966, p18). Scholars have highlighted practices of adapting, recombining, repurposing and the creative bundling of

resources to innovate new goods and services; to 'create something from nothing' (Baker and Nelson, 2005; p333). Bricolage provides a metaphor for understanding how this happens in resource constrained environments such as small firms (Baker and Nelson, 2005), public sector organisations (Fuglsang 2010), social enterprises (Di Domenico, et al., 2010), or large firms where the innovation is 'intrapreneurial' and may challenge organisational business models (Halme et al., 2012). These explorations of bricolage, in different ways, highlight how innovation outside formal organisational structures and resource is often but not always small scale, ad hoc, bottom up and necessarily a collective endeavour involving the 'distributed agency' of a multiplicity of actors in different organisational locations, requiring dialogue and negotiation to access knowledge and resources (Dujmedjian and Ruling, 2010; Garud and Karnoe, 2003).

The broad ranging debates on translation, innovation and bricolage outlined above provide a valuable conceptual framework for examining our three cases of EDI in UK healthcare. First, the framing draws attention to the extended character of the innovation process, the multiple moments of translation, - problematisation, enrolment, and implementation, - that capture the transformation of ideas through time and across organisational settings. Second, it focuses attention on the collective and networked character of EDI in healthcare; the roles interests and relationships between staff at all levels of the organisation, and actors within and on the periphery of the NHS and its wider networks. Third, the concept of bricolage captures how EDI takes place in a resource constrained Public Sector environment outside policy and programme development. It draws attention to the mobilisation of the stock of resources available locally that must be creatively modified, repurposed and

combined in particular ways to underpin and sustain the translation in the absence (at least initially) of formal support.

## **Methodology**

Our three-year study was designed to examine how EDIs emerge in the everyday work and learning of staff in healthcare and how they are implemented, embedded and sustained. We chose a qualitative ethnographic case study approach (Yin 2009) that would enable us to construct a richly detailed picture of the innovation process illuminating the insights provided by different NHS contexts and stakeholders.

### *Case selection*

The main selection criteria were to find cases that were innovative healthcare services developed and implemented at a local level by staff or employees. Not all were employed by the NHS. We sought to include interventions both within the NHS and on the periphery, in third sector organisations delivering public healthcare services. Cases needed to be established enough that we could retrospectively study their emergence and also observe their development and ongoing practice. A number of potential cases were identified from sources that included NHS 'Innovation Awards', media reports and researcher knowledge and networks. Three cases agreed to take part; Side by Side (SBS), an intervention for homeless in-patients, City Community Health Centre (CCHC), a community owned GP practice, and Moving Up (MUP), a transition programme for young people with chronic conditions (see Table 1). They had been operating for different durations, and varied in size, scope, resources and organisational location as well as the degree to which

they were established or embedded. Their varied character illuminated diverse organisational contexts with different configurations of staff and stakeholders. Ethical approval was obtained from an NHS Research Ethics Committee prior to the study. Pseudonyms for the cases, locations and individual participants have been used throughout this article and details have been changed to protect participants' identity.

Table 1 here

### *Data collection*

Qualitative ethnographic methods were used to collect rich and multi-layered data over a two-year period. Depth interviews were conducted with staff involved in the design and establishment of the innovation and those involved in the every-day work of delivering the service. At CCHC, which had been operating for over 20 years, we were able to interview 3 staff (including one who no longer worked there), who had been involved in the innovation process, helping to mitigate potential recall issues. Interviews were semi-structured and explored broad themes: how the innovation came about, how it was developed, implemented and sustained, the stakeholders involved in delivering it and the challenges for the future. For each case the researcher also engaged in observation of the day-to-day work delivering the innovation, internal meetings and organisational events. Finally, documentary data were collected from each case including annual reports, forms, policies and protocols and online publicity material. These tools provided an opportunity to

observe first-hand the way services were delivered on the ground, the internal politics and strategies, and the way the case presented itself.

Interviews were recorded and transcribed verbatim. Some informal interviews were not recorded and were written up as field notes, as were all the observations. One member of the research team took the lead in organising and conducting fieldwork in each case, with other members involved in data collection in all three cases. We conducted 40 interviews and amassed 60+ hours of observation data across our three cases.

### *Data analysis*

The analysis of the data involved three stages. Case study reports produced by the case lead drawing on fieldnotes, documents and recollections, provided a snapshot of the innovation process, the organisation, the work and the learning. Transcripts and field and observation notes were imported into Nvivo 10/11 and coded by all team members to broad cross cutting themes that included 'organisational identity and history', 'organisational structure', 'everyday work', 'roles relationships and networks', and 'resources'. These were generated at project meetings involving coding and discussion that helped ensure consistency. In-depth coding happened later with conceptual free nodes and sub nodes created in relation to analysis for specific outputs. This article draws on transcripts and field notes related to the participants who were involved in establishing each of our innovation cases, and coded data on organisational history, relationships and networks, resources, bricolage and moments of translation. These enabled us to explore how the innovation emerged, how it was implemented and the resources that were mobilized in this process.

## **Translation and bricolage in employee driven innovation**

The first part of our findings explores the translation of the innovation for each of our cases through two notions, problematisation - how a gap or failing in service provision was framed collaboratively, how interested actors were identified, and solutions developed - and implementation - how alliances and conflicts between actors' interests were negotiated to deliver a new service. The second part examines the bricolage activities of key actors that underpinned that translation process; specifically, the protracted appropriation of local and available resources that were adapted to support and sustain the innovation.

### *Problematisation; evidencing gaps, finding solutions and identifying interest*

At City Community Centre, problematisation was a collaborative process. Katie, a community worker, and her mostly unpaid colleagues (artists, activists and volunteers) became increasingly concerned about the failure of statutory services to meet the needs of their local community. The specific case of poor NHS care provided to a local mother with young children who died from cancer unsupported by primary healthcare services, was a trigger for their concerns. Research they conducted in their neighbourhood revealed poor practice, squalid settings, and corruption in GP surgeries. They framed 'the problem' as being the quality of local primary care; its inability to adequately serve an already marginalized community. Problematizing primary care in this way enabled Katie and colleagues to position themselves as indispensable actors in the development of a solution. Katie recalls meetings where they discussed how they could '*do it better*' and asked themselves '*what would it be like if we provided those services?*'. Despite little experience in

providing healthcare, they sketched out ideas for their own GP surgery within their centre that would enable them to draw on their community development practice and deliver quality primary healthcare in a different way.

In the case of Moving Up (MUP) the problematisation was initiated by Seema, a consultant working at a large university hospital. As part of her role on a regulatory working-group at the hospital she volunteered to investigate the transition of young people with chronic conditions to adult services, an issue she already had experience of in her own specialism. Her initial review of the research evidence revealed poor outcomes (increased morbidity and mortality rates) for patients caused partly by a disengagement from services following this transition. Seema framed 'the problem' as the absence of targeted transition support for young people and began to work on its resolution; a generic transitions programme that addressed current NHS guidelines. She sought out colleagues interested in working with her to develop the programme, specifically specialist nurses in relevant disciplines who were already under pressure to improve outcomes in this area: *'I said to the cardiac team, "Look, you've got to get transition. Instead of us all doing separate policies, why don't we join our work together, [...] develop something"'*

Seema established a small 'steering-group' of nurses who were enrolled in the problematisation based on the issues they faced in practice and who would work with her to develop the innovation. The intervention that they produced, Moving Up (MUP), was a transition programme delivered by clinical staff, structured by a questionnaire designed to help young patients with chronic conditions work through a series of issues that would prepare them to make a steady transition to adult services. The programme was designed to meet UK guidelines, facilitating its



potential integration into existing practice within a range of relevant specialism at the hospital and more widely.

For Side by Side (SBS), Liam, a senior clinician in his Trust, instigated the problematisation. Concerned by the death of a homeless man on the steps of his hospital, he commissioned research on homeless patients' care within the Trust. The report highlighted areas of concern including frequent Accident and Emergency visits, 'bed blocking' and revolving-door readmission. The evidence enabled Liam to frame 'the problem' as poor quality and fragmented services for homeless people in secondary care, and to highlight cost implications that legitimized a need for improvements. Liam investigated practices in other locations and sought indispensable actors to assist in the design of a solution, based on their expertise and interest but also a characteristic he saw as vital to high quality care – compassion. He identified Simon, a GP serving homeless patients in another city and arranged a meeting to establish his interest.

*What persuaded me about him was that he had two rooms for in-patient homeless people on the ground floor, with two kennels (for homeless patients' dogs) So I said, "This guy cares."*

Liam also enrolled Frances, a retired nurse he had previously worked with whose compassion he valued. Frances and Simon were tasked with designing an intervention for homeless in-patients. Simon recalls *'[Liam] just sort of gave us the freedom to see what we could come up with in a hospital setting'*. The innovation that emerged through their discussions involved a multidisciplinary team providing holistic treatment to support homeless in-patients. They envisaged a role for ex-homeless

staff providing key support to patients as 'experts by experience' and coordinated by SBS workers.

The three innovations that emerged from the problematisation process were, at least initially, localised solutions to immediate problems framed by a group of interested actors. However, their forms and dimensions were reshaped through further translation as the assembled actors sought to implement the innovation.

*Implementation: alliances and conflicts*

In all three cases the translation process involved a core group of staff enrolling and mobilising a wider group of stakeholders and mediators and revealed conflicts of interest which had to be navigated for implementation to happen. At the Community Centre, the plan to build and run an on-site health centre was ambitious. There was no procedural precedent within the NHS and they required land and capital for buildings and GPs to staff it. Gaining the allegiance of indispensable actors - the local council and local health authority (LHA) - was crucial but revealed differences in interpreting 'the problem' and conflicts of interest regarding the solution. Suggesting the necessity of a new health centre drew attention to '*the inadequacy of the way [LHA] were organising their resources*' (Katie). Whilst the LHA eventually allowed the health centre to go-ahead they refused the translation in various ways including awarding the contract to existing local GPs, those same GPs Community Centre actors had defined as part of the problem. Katie and her colleagues engaged in strategic actions to try to enrol LHA actors in their vision for the innovation. Following the departure of the initial GPs, they persuaded two 'progressive' and sympathetic GPs from a neighbouring borough to apply for the contract, invited the LHA to hold the GP interviews at the centre and provided lunch. Inviting herself to the lunch,

Katie described how she ‘took the opportunity to say to the interview panel “..here’s the things that matter really most to us about the kind of GPs that you appoint...”’.

These strategies were successful, and the practice was eventually staffed by the preferred GPs who were enrolled into the innovation and prepared to incorporate the centre’s ethos into their practice.

Implementing SBS in Liam’s hospital, Simon and Frances faced similar conflicts between the aims of their programme and the interests of statutory actors and existing organisational practices. They found their problematisation initially prevented the alignment of stakeholder interests. Simon noted ‘*the fact that we were there talking about compassion implied that there was a lack of compassion in the current service, which wasn’t something people wanted to hear.*’ In addition, staff from various occupational groups working within the hospital were reluctant to work as part of the new multidisciplinary team: ‘*they had a housing advisor who was very good, very well-regarded; he didn’t want us there because we were on his turf.*’ (Simon). Overstretched staff were unclear about the benefits of the programme to them and resisted the innovation: ‘*there was actually a petition up at one stage to get rid of us*’ (Simon). Liam drew on his seniority at the hospital to resolve these conflicts taking ‘*irate phone-calls from consultants*’ and ‘*smoothing things over*’. His interventions and the persistence of the team eventually paid off as various stakeholders saw how the program could benefit them and SBS became the accepted model for supporting homeless in-patients at the hospital.

For Seema and the steering group, the MUP programme was initially piloted in their own specialisms and then promoted and implemented in other specialism at the Trust and in other hospitals. Whilst it had been designed to be user friendly it required clinicians to incorporate the questionnaires into their existing patient

appointments. The work of training and enrolling both clinical and administrative staff meant; *'It was a slow process. we knew we were never going to win instantly with it'*, (Lizzy, specialist nurse). Various strategies were deployed to encourage adoption and use. The nurses targeted receptive specialism and consultants first to *'get them on board'*, *'hopefully then their influence starts spreading out a bit more'* (Lizzy, specialist Nurse). Agreement to adopt the programme did not always translate to practice. In one specialism the nurses advertised the programme directly to patients in the waiting area, creating 'consumer demand' which made it more difficult for clinicians to resist the programme.

In each case tracing the moments of translation illuminates the collective and interested character of these innovations. What has been taken for granted in these accounts, is how these moments of translation were possible; how they were resourced in a context of resource constraint and without implementation budgets and infrastructure.

#### *Bricolage: appropriating and repurposing resources*

Key actors in each case were engaged in an ongoing process of bricolage, the work of mobilising necessary resources to support the translation of the innovation. The bricoleurs used their networks and knowledge to identify and appropriate funding, space, labour and even governance structures, and to creatively repurpose and adapt these to underpin the innovation process. The bricolage and the resources mobilized were different in each case, shaped by the requirements of the innovation and the constraints of specific contexts.

The problematisation stage, required space and time for staff to meet, undertake research and discuss ideas to improve services, to assess the interests of other

actors and to enrol them in the process. The scope for actors to do this work within or outside existing roles varied considerably in the three cases. At City Community Centre, fluid roles and embedded unpaid work provided flexibility and capacity to have conversations and conduct local research that provided the foundations for their innovation design. As the centre navigated a period of development workers and activists saw innovation of services as intrinsic to their role and the focus of their meetings. For MUP and SBS however, stretched clinical staff struggled to fit the translation work into their existing roles and Seema and Liam became bricoleurs in a quest to appropriate resources that would facilitate the problematisation.

Seema's application for financial support from the Hospital to fund the development and implementation of the programme was refused on the grounds that, as she was already providing the service, it was not a funding priority. She sought to assemble a steering group of specialist nurses already involved in transitions and repurposed their labour in the service of the innovation. For the nurses, joining the steering group involved a tacit understanding that, as interested actors, they integrate work on the innovation within their existing roles and responsibilities. Several nurses described the challenges involved in implementing the innovation within their role and acknowledged that they also 'donated' their labour in after-hours work developing the programme... *'there's lots of (laughs), working in our own time, we've had to do a lot of that, stay late,* (Kerry, specialist nurse). This appropriation created an ongoing tension for the nurses by taking time away from the tasks they were expected to perform in their formal role. The substantial time pressures faced by Seema and the steering group working in this way also led to a further example of creative bricolage. Designing a transition programme from scratch was not feasible in the time they had, but their research on transition practices across the hospital

and in their clinical specialism networks, identified several existing programmes that could be adapted to provide a generic model... *'we simplified lots of programmes out there and took the best of those'* (Seema). Their repurposing of existing programmes enabled them to ensure their programme met NHS guidelines and was packaged in an *'easy to use', 'colour coded' and 'user friendly' way.* (Seema)

At SBS Liam needed to raise funds to financially support a team to work on programme design. Liam's bricolage involved utilising his research as leverage, and making numerous applications for small pots of funding from local health bodies. None of this funding was formally intended to support homeless health or indeed, service innovation, but Liam was able to repurpose it to that end. He lobbied local Primary Care Trusts (PCTs) for 'year-end' money that was not committed. *'I'd say, listen, this (homeless health) could be managed up stream. What do you think? And the sweet number was 70,000. I got £70,000 off each of them'*. The monies raised by Liam were bundled together to provide an initial fund to pay Frances and buy Simon out of his existing leadership role so they could work on designing the innovation.

Further resource mobilization was required for the enrolment and implementation moments in the translation of the cases. For CCHC, the pressing concern was not financing staff time but finding the physical space to operate a health centre and funding for building. Katie and her colleague's identified a resource very close at hand that might be repurposed; the small, rundown public park next to the community centre could potentially provide the location for building their GP practice. After lobbying various actors in their Local Authority, they finally met a senior member of the neighbourhood council who enabled them to buy the park for a nominal cost. This was a fortuitous decision which Katie described as *'an anomaly'*:

*'He was somebody who allowed things to happen'*. Appropriating the park provided the necessary leverage for fundraising from trusts and charities and meant they were able to build not only the health centre but also a community garden for the centre and a more attractive and useable public park.

The bricolage activities of key actors continued to sustain the innovations over time. Both CCHC and SBS sought out, appropriated and pieced together alternative organisational structures and forms of governance to deliver the innovation in the longer term. Liam, following Simon's experience converting his homeless health centre into a social enterprise, established SBS as a charitable company; a legal body, separate to the NHS and governed by Trustees. They modified the charitable structure into a somewhat hybrid form that provided organisational independence, fewer regulatory constraints and fundraising opportunities whilst exclusively serving and remaining accountable to the NHS Trust. Similarly, whilst CCHC was embedded in mainstream NHS infrastructure for GP services, some creative bricolage remodelled the traditional surgery governance structures and working practices of the GPs so they reflected the co-production ethos of the Community centre.

## **Discussion and conclusions**

In each of our cases, key actors engaged in a time-consuming and ad-hoc process of bricolage; appropriating, modifying and combining resources found at-hand or within reach through professional and community networks. The various resources acquired were diverse and not ring-fenced for innovation or programme implementation. As Levi Strauss notes, the bricoleur's 'stock' is *'heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project,'* (1966 p18). These resources included the labour of existing staff

(the MUP nurses; the worker/volunteer collective at CCHC) and staff recruited and appropriated from wider disciplinary networks (Simon the homelessness specialist and Liam's ex colleague Frances at SBS; the GPs at CCHC). They included material and practical items; the local park (CCHC), transition delivery models (MUP), organisational structures (SBS); small monies from local NHS Trusts and local charities (SBS, CCHC). These resources were repurposed, modified and assembled to serve the needs of each innovation at a particular point in time (Baker and Nelson 2005). Staff roles were extended and unpaid work incorporated at MUP, the local park was redeveloped in various ways at CCHC; small pots of money were strategically combined at SBS; existing transition models were amalgamated and repackaged at MUP; organisational structures were adopted to create hybrids for the innovation delivery at CCHC and SBS.

Emergent findings make an important contribution to debates on innovation in healthcare. First, exploring EDI as a collective endeavour, involving the necessary mobilisation of wider networks and interested actors, also revealed how aligning the interests of multiple stakeholders required considerable time and resources. In all three cases, for example, the problematisation was initially rejected by some stakeholders because it challenged existing organisational practices, relationships and cultures. Work was needed by key actors to bring actors on board including senior staff who were not necessarily supportive. The decision by the Trust not to provide MUP with internal funding appeared to curtail the implementation and diffusion of the programme. Where stakeholders in senior roles were supportive it could serve to release resources and overcome friction or challenges. The local authority stakeholder who enabled the park to be sold to CCHC was pivotal in moving the innovation forward. Given that the collective endeavour of the translation



of EDI often operated between the NHS and related organisations in the third sector, ways of communicating and collaborating across organisational boundaries was for two of the cases a key challenge for aligning interests and providing access to resources.

A second theme that contributes to current debates is revealed by exploring the challenges faced by actors engaged in EDI to resource the translation throughout its journey. Even the initial problematisation process required time, labour and resources. Only at the community centre, were workers able to undertake the required discussion, research and planning comfortably within their daily work. For SBS and MUP both operating in conditions of resources scarcity problematization required resource mobilisation. Further, bricolage was not a one-off activity or single moment in the process but ongoing and piecemeal (Baker and Nelson 2005), driven by the need to find specific resources that would resolve challenges to the translation at a given moment. Whilst it constituted a refusal by the bricoleurs to enact the limitations imposed by the organisational context (Halme et al 2012) it also raises a third questions about the translation of the cases into the future; their sustainability.

Each case faced the questions whether and how to scale up beyond the local level, and to move the innovation to a more formal funding structure that could support long term sustainability. Whilst CCHC had been operating for 20 years with GP funding providing security, replicating their health centre model elsewhere was not within the remit of the centre. SBS, operating in a rather different context, faced the challenges of a being a third sector organisation selling their specialist delivery model to other NHS trusts. Although they had some success with establishing the programme in other hospitals it was by no means nationally available or embedded and its sustainability depended on the stability of these partnerships and the funding

arrangements with specific NHS Trusts. MUP was the least secure of the three cases. The nurses struggled to manage their workload with the unpaid labour required to deliver and promote the innovation outside their trust. With neither NHS funding nor the independence provided by charitable status, the challenge was how to resource the implementation and diffusion of the programme more widely. The bricoleurs discovered that paradoxically it was harder to raise financial resources from within the NHS than as third sector organisations operating at the boundaries yet embedding innovations in mainstream NHS provision helped ensure their sustainability and capacity to transform public healthcare in the longer-term.

There are some potentially useful lessons here for the NHS and policy makers keen to promote the innovation capabilities of healthcare staff and facilitate employee driven innovation in the development of health services. The support of senior staff is crucial in endorsing new projects, helping build relationships and networks that reduce frictions and facilitating access to resources. Training and development for staff at all levels and roles (clinical, medical and administrative) could support changes in organisational cultures to reward innovation. Recognising that overstretched and under-resourced staff are not in a strong position to generate innovative ideas and translate them into practice, managers might instead make resources for EDI readily available, potentially through small awards and competitions at a local level.

Examining the role of bricolage in the translation of EDI has provided an analytical tool to critically interrogate our empirical cases. It brought to the fore key themes in current debates - the processual, collective, networked and interested character of innovation in the sector – whilst drawing specific attention to the issue of resources. Applying this framework to three EDI cases has enriched and extended these

debates; first by broadening the focus beyond diffusion to the problematisation and emergence of innovative ideas from the bottom up, and second by revealing the bricolage that key actors undertake to mobilize necessary resources and underpin the innovation. Our sample was small and there is a pressing need for further scholarship examining the diversity of EDI in healthcare, the resource mobilisation required not only to support emergent ideas but to overcome the challenges to, sustainability, scalability and diffusion of those ideas.

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Table 1 The cases

Name/ Year established	Aims	Innovation	Location and funding
<b>Side by Side</b> (SBS)  2010	To improve the experiences and outcomes of homeless people in primary and secondary care	Coordination of multidisciplinary teams (GPs, consultants, social workers, nurses, housing support, care navigators etc.) within a hospital setting to ensure homeless patients are cared for in a holistic way and discharged into an appropriate environment.	A third sector organisation, operating in a large NHS teaching hospital. Funded by the NHS, central and local government and charitable trusts
<b>Moving Up</b> (MUP) 2011	To support young people with acute conditions leaving paediatric care and transitioning to adult services	A programme consisting of a series of questionnaires that provide a way for clinicians and nurses from any specialism to talk to young people about their condition and ongoing needs prior to their transfer to adult services and embed transition requirements in practice.	A cross specialism group of nurses promote and deliver the (unfunded) programme in a large NHS teaching hospital.
<b>City Community Health Centre</b> (CCHC)  1997	To provide high quality co-produced primary care in a deprived urban community.	A community owned GP practice situated in a community centre facilitating social prescribing.	A Health centre/GP practice based within a third sector organisation and funded by the NHS, the Local Authority and charitable trusts.

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Rebecca Taylor's research interests include understanding working lives and careers; paid and unpaid work across occupations and sectors and digital labour in the digital economy.

Alison Fuller has been researching, and publishing in the field of workplace learning, education – work transitions, apprenticeship, vocational education and training (VET), for over 25 years.

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Ann-Charlotte Teglborg's interests focus on the transformation of the workplace in innovation driven economies and the development of alternative approaches to traditional R&D innovation over the last few decades.