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**Employer choice and job quality: workplace innovation, work redesign and employee perceptions of job quality in a complex healthcare setting**

**Abstract**

This article examines employer choice in relation to job quality (JQ). Acknowledging the important role of market, institutional and technological constraints, we highlight the role of employer agency in shaping JQ by reporting on an employer-led service redesign initiative in hospital pharmacy services in Scotland. This redesign initiative aimed at upskilling employees and redirecting their work effort towards high value added, patient-facing work using robotics implementation.  The article provides a critical assessment of the success of the initiative in enhancing JQ and explores a range of factors constraining and shaping employers' job quality choices.

Keywords: job quality, pharmacy, healthcare, automation, partnership.

This article examines whether and how employers can exercise strategic choice in relation to job quality (JQ) in the context of resource, institutional and technological constraints. Employers are, on the face of it, the architects of JQ. Yet they face constrained and conflicting choices in their JQ 'offer'. Despite frequent calls on employers by policymakers and others to take remedial action on bad jobs and constructive action to create good jobs, employers' scope for choice, why and how they exercise choice and the impact of their JQ interventions are not widely researched.

The extant literature focusses heavily on market and institutional influences on JQ. We build on this, drawing on Gallie's (2007) concept of employment regimes, but emphasising also the role of employers' strategic choice (Child, 1972). From an intensive multi-stakeholder case study of one large public healthcare provider, the article examines the scope for employer choice over key components of JQ in a resource-constrained environment where quasi-market forces, competing institutional pressures and technological opportunities shaped but did not determine managerial priorities.

The empirical findings suggest that employers can choose to enhance JQ, even in challenging circumstances. Resource and institutional constraints were real and pressing, but did not eliminate scope for employer strategy. The findings suggest that, in this case, senior management blended a strategy that aligned work and organizational innovation to JQ benefits for most (though not all) pharmacy technicians and support workers. The strategy chosen reflected the organizational context and prevailing values as well as professional norms. Crucially, improving JQ

was an input to organizational redesign as well as better job quality being an outcome.  A key message is that the multidimensional nature of JQ creates a wide canvass on which employers can choose to design better (or worse) jobs; though this broad scope makes it challenging to evaluate employer-driven JQ initiatives. However, the findings also suggest that multi-level employer interventions can have unintended consequences for JQ. Our analysis endorses calls for greater understanding of how managerial behaviour impacts JQ (Bazen, Lucifora and Salverda, 2005).

Following this introduction, the article reviews key themes from the JQ literature, focusing specifically on employer agency. We then describe the research methods deployed in analysing a major service and work transformation project within the National Health Service (NHS) in Scotland that harnessed robotics technologies and job redesign to improve the effectiveness of pharmacy distribution services[1]. The article then presents the findings of in-depth, qualitative research with 45 employees, managers and other stakeholders on the design, implementation and outcomes of service and work redesign. Finally, we draw conclusions and discuss implications for future research on employer agency and JQ.

**What shapes JQ?**

There is substantial academic interest in how to promote JQ as a route to greater equity in the workplace, employee wellbeing and improved organizational performance (e.g. Kalleberg, 2012). JQ is increasingly recognized as a

multidimensional construct with no one accepted definition (Muñoz de Bustillo, Fernández-Macías, Esteve and Antón, 2011). The literature identifies discrete JQ components such as pay and skills use, as well as multiple component indicators (Carré, Findlay, Tilly and Warhurst, 2012). JQ research is most commonly located at individual level, though national and organization level measures also feature. Despite the lack of definitional consensus, there are distinct areas of study: intrinsic work factors (such as skill level, skills use, autonomy, control, pace of work and task variety), employment factors (contractual status and security, pay and hours), work environment factors (physical, social and emotional components of work), and more development-oriented factors (training and opportunities for career progression). Less commonly, some discussions of JQ highlight the importance of voice and representation (such as union presence and access to due process).

Increasing recognition of the costs of poor JQ for individuals and societies has stimulated debate on how to make 'bad' jobs better and how to maintain the quality of 'good' jobs (Carré et al., 2012). Addressing either of these requires analysing the factors that influence JQ, most notably the impact of markets and resource pressures, institutions and technology and the role of actors, primarily employers.

Markets and quasi-market forces
Competitive strategies variably shape JQ. While employers choose competitive strategy (Child, 1972), once chosen, management's room for manoeuvre over JQ may be highly constrained. 'High road' market strategies are often cited as drivers of good JQ, requiring higher skilled and rewarded workers to deliver product and service quality and innovation (Kalleberg, 2012). 'Low road' market strategies based

on cost competition are more associated with poor JQ (Schuler and Jackson, 1987) – jobs that are repetitive, offer limited training, seek efficiency through downsizing and use performance systems to drive greater worker effort.

Of course, 'high road' market strategies do not unequivocally deliver on JQ. High performance work systems (HPWSs), for example, may contribute to employee performance, productivity and well-being (Alfes, Shantz and Truss, 2012), but may also harm JQ. Some public sector studies identify HPWSs as a source of disengagement, anxiety and role overload (Jensen et al., 2013). The public sector also represents interesting ground for debates on high and low road strategies. Public sector managers must navigate a range of non-market pressures reflecting policymakers' and citizens' priorities regarding the quality and cost of public services. This may encourage managers to pursue high road, collaborative approaches to employment relations and HRM practice to facilitate joined-up, inter-professional working that responds to complex user needs (Waterhouse and Keast, 2012). But many UK researchers have pointed instead to the dominance of 'new public management' (NPM) approaches that introduce pseudo-marketized relationships, intensive performance management and lean staffing (Carter et al., 2013). There is some evidence that NHS Scotland – the overarching body in which our case study organization HealthBoard (anonymised) is located - has proved less fertile ground for NPM (Bacon and Samuel, 2016), to which we will return. Where there is some employer and employee consensus on the continued viability of a 'public service ethos' (Needham and Mangan, 2016), then shared values around improving the quality of services may outweigh NPM concerns that prioritize performance incentives and cost containment. Nevertheless, it is likely that both collaborative and

NPM-oriented themes in work organization and HRM will be influential in public sector workplaces (Lindsay et al, 2014), reflecting real and pressing cost and service quality challenges.

Institutions

Institutional factors can shape and define market strategies and can mitigate and mediate market-type impacts on JQ. Liberal market economies (LME), of which the UK is considered an exemplar, are seen as offering fewer routes to JQ given their emphasis on minimal employment regulation. Gallie's (2007) employment regime theory focuses on the degree of inclusiveness of organized labour in the regulative system, with high quality work more commonly associated with the inclusive employment regimes of co-ordinated market economies. Yet there are important variations within national institutional configurations. One specific way that employment regimes might impact on JQ even in LMEs relates to the embeddedness or otherwise of social partnership and other forms of trade union involvement. Some studies have identified a positive relationship between trade union presence and aspects of JQ such as access to learning and employee voice (Hoque et al., 2014). However, the capacity of unions to influence JQ will be affected by their engagement with management (Simms, 2015). The often adversarial nature of employment relations in LMEs like the UK, and the increasing marginalization of unions even in the public sector, might lead us to expect limited union influence over JQ (Esser and Olsen, 2011).

However, the specific institutional context of NHS Scotland is of interest here. NHS Scotland is distinctive in the UK in driving employer-union partnership as a key tool

in managing workplace change and employment relations, with implications for all of its Health Boards as employers. Well-established partnership structures promote collaborative approaches at all levels and "union participation in strategic decisions produced extensive co-operation to… improve services and enhance staff terms and conditions" (Bacon and Samuel, 2016: 1). As the case below illustrates, this means that the employer's approach to managing change was both shaped by, and gained the support of, trade unions – an example of "consensual policymaking… sharing early-stage thinking on 'big ticket' issues" (Bacon and Samuel, 2016: 10). While it is important not to overstate the direct impact of partnership, an over-arching consensus-based approach had tangible impacts on the parameters of employer decision-making – for example, a 'no detriment' agreement meant that the introduction of new technologies could not be used as cover for downsizing (although according to some employees a recruitment freeze imposed lean staffing) (Lindsay et al, 2014). Consequently, the institutional legacies that defined the employment regime in NHS Scotland constrained and shaped the service and work redesign analysed below.

Technology

Research also highlights the potential impact of technological development – and computing and telecommunications technologies in particular – on JQ. Technology might reduce skill requirements - a key dimension of JQ - but also facilitate upskilling by removing lower skilled tasks as in models of skills-biased technical change. As Green notes, "the consequences of modern technologies for the quality of work … are hard to trace in detail, and adhere to no ironclad law" (Green, 2006: 8). Hence, employers have options in technological adoption and deployment that can

significantly influence JQ, although these options become more constrained post-adoption. The polarization in JQ in some organizations and sectors has been in part a consequence of deploying technology to standardize and control work (Kalleberg, 2012). Technology may not require deskilling, but is often used in ways that lead to deskilling, arguably as an easier option than creatively aligning technology with work to retain or improve skills, with managerial choices "… made by omission as much as by commission" (Rubery and Grimshaw, 2001: 166).

Some studies of robotics-enabled work re-organization in public health pharmacy services have sought to engage with these issues. Petrakaki et al. (2011: 182) highlight the potential for pharmacy robotics either to enforce "predictability, quantification and centrally controlled rule-based decision-making" that might "deskill professionals and undermine their claims to professional status", or to "transform work processes… by eliminating unnecessary activities [and] providing back to professionals processed information upon which they can act". There is some evidence that pharmacy robots can have powerful impacts in "reorganizing work among different occupational groups… altering roles and relations across diverse work contexts" (Barrett et al., 2012: 1448). These can "enable shifts in tasks, roles and relations, producing new patterns of interaction among occupational groups" and "knowledge sharing across professional and organisational boundaries" (Barrett et al. 2012: 1450). Given these differing potential outcomes, it is important to understand more about the decisions that shape technology adoption and its interaction with JQ.

Employer agency

Resource pressures, institutional influences and technology all influence JQ, but they do not determine it. Since Child's (1972) analysis, the role of strategic choice as a political process reflecting agency and structural interactions and tensions, and the role of a dominant coalition in shaping and developing collective actions and responses to environmental challenges, have been widely recognised. Employers are the primary actors in designing jobs, employment and workplace relationships (Metcalf and Dhudwar, 2012) and "the extent to which an employee has autonomy, control and decision latitude will depend largely on the organization of work, the design of jobs and the quality of management" (Coats and Lehki, 2008: 15). Employers make choices about JQ, even within the same product markets (Le Fevre, Boxall and Macky, 2015), and their capacity and autonomy to shape workplace change is important to how employees experience JQ (Hoque et al., 2014). Yet employer agency and strategic choice is underexplored relative to structural and institutional factors in the JQ literature (Bazen et al., 2005). Purcell (2005: 9) among others has argued for greater attention to "… other explanatory tools … like strategic choice, management cognition and leadership values, for example the belief (or not) among senior managers that employees are a strategic resource" and to the need for within-firm studies that can highlight how these impact on the quality of work. Acknowledging the scope of employers' strategic choice over JQ focuses attention on how that choice is exercised. The role of other strategic actors like unions is also important "…the quality of jobs and mobility opportunities depends importantly on managerial choice and union presence" (Batt, Hunter and Wilk, 2005: 271).

Analysing the interplay of quasi-market, institutional and technological factors with employer choice is crucial to understanding how employer strategy in this case was designed, constrained and implemented and how it impacted JQ. Our research examined the interaction between agency, structure and environment, highlighting how leading groups – and senior management in particular – shaped organisational change in alignment with their perceptions of professional and organisational values and organisational constraints. We address two key research questions: what was the role of JQ in employer choices over service redesign, and how did the choices made impact on JQ outcomes including employees' perceptions of JQ? The multidimensional nature of JQ offers multiple domains for employer intervention, but the extent of an employer's scope to enhance JQ may vary across domains. Put simply, employers who face constraints that preclude improvements in pay may, for example, have options to enhance other JQ dimensions such as autonomy and skills use. Yet as we show, even with high employer commitment, designing and delivering JQ improvements is complex and challenging and outcomes are uncertain.

**Methods**

The research design comprised a single, intensive, multi-stakeholder case study. Primary data was collected over 2012-13 through intensive semi-structured interviews and focus groups with 45 respondents across relevant stakeholder groups (senior managers, line managers, clinicians, technicians, support workers, employee representatives and trade union representatives) and work sites. Normal ethical approval applied. A multiple stakeholder approach was used to deliver a balanced understanding of the redesign initiative and its outcomes. Process tracing was

undertaken using an agreed timeline to support retrospective accounts. One-to-one interviews lasting up to 2 hours and workplace focus groups were conducted, recorded and transcribed verbatim. Data was coded thematically, sorted using NVIVO10 and checked for validity. A thematic analysis was undertaken which is used extensively in healthcare and organizational change research (Williams, 2012). Findings were shared with all respondents and stakeholders to check for inaccuracies or differences of interpretation.

**Case study context: 'PharmaServ'**

Most healthcare in the UK is funded publicly through taxation and the national insurance system and delivered through 4 organizationally distinct national entities with significantly different systems of commissioning and delivery. There are huge resource pressures across all national health services, recently exacerbated by austerity policies, and the putative relationship between competitive strategies and JQ finds parallels with contested narratives on how best to deliver efficiency and effectiveness in public services. Since the 1980s, successive waves of NPM reforms have driven a 'low road' model of securing efficiency and reducing labour costs (and power) in many public organizations through lean staffing and job redesign, leading to work intensification and de-skilling (Carter et al., 2013). Work has been redesigned around IT systems that have undermined professional discretion and imposed 'system-level' bureaucratic controls, and intrusive performance management has reduced the autonomy of some public service workers while re-directing their work effort towards the achievement of top-down imposed KPIs (Procter and Radnor, 2014). Yet these practices appear inconsistent with an

increasing (if sometimes rhetorical) interest in improving the quality of employment and public services. 'Customers' also matter: policy makers and public service managers must aim to deliver high quality, personalized services tailored to individual needs. Accordingly, there is some interest in progressive projects that upskill employees and design flexible, 'boundary-spanning' roles (Williams, 2012), albeit that these often share a space with apparently contradictory 'low road' staffing policies (Lindsay et al, 2014).

Notwithstanding resource challenges, the NHS is one of world's most respected healthcare providers. Innovation in medical technologies and service design facilitates healthcare enhancement, and is driven by the increasing scale and complexity of healthcare demands. NHS Scotland comprises fourteen organisationally distinct regional NHS Boards, seven Special NHS Boards and one public health body. HealthBoard is one of the largest regional health Boards, serving a substantial proportion of the population. Prior to the redesign initiative outlined here, HealthBoard's pharmacy service (PharmServ) was delivered on 14 main hospital sites by approximately 530 staff (including clinical pharmacists, pharmacy technicians, pharmacy support workers and administrators). Below we examine the employer strategy and objectives, the redesign process, substantive changes in the JQ of pharmacy technicians and support workers and how staff experienced these changes.

**Findings I – employer strategy**

Drivers of work redesign

From the early 2000s, PharmServ engaged in organizational, service and occupational restructuring to respond to three inter-related drivers emanating from HealthBoard and NHS Scotland: improving patient safety, increasing hospital patients' access to pharmaceutical services and cost containment. Patient safety analysis had highlighted medicines reconciliation during hospital admissions as an area of high risk and cost, while distributed pharmaceutical services across hospitals had generated wide variations in prescribing and dispensing practice:

> *"There were a whole lot of work streams, one of which was around medicines reconciliation at the point of admission to hospital, which … we had identified* in 2002 was one of the key risks for patients. *We had … ten different versions of how to treat somebody with Warfarin, how to use an antibiotic … that was* becoming dangerous because junior staff rotate across sites, nurses rotate across sites, and we wanted pharmacy to be working across sites. I needed acute care to be working as a single system.*"*
>
> Senior manager A

The second driver was the need to expand the reach of pharmacy services in hospitals as too few hospital patients were accessing the services of a clinical pharmacist. Alongside safety concerns, this focussed management attention on minimizing time spent dispensing medicines to 'free up' pharmacists for patient-facing work. One option was to separate dispensing from clinical pharmacy services with medicines distribution externalised to a private company, an option in operation in other UK health boards. This option was rejected because of the scale and

complexity of medicines distribution in PharmServ and because of concerns over ceding control:

> " … we had management consultants … and they looked at whether the private sector could do that or not, and the private sector didn't have the *capacity or the capability to do it … I would lose an element of control for* which I was accountable, because I'm accountable for making sure patients get the medicines they need. If it was contracted out I would feel as though I *had less control of that and that's what the people at local pharmacy level feel* would feel".
>
> Senior manager B

Another option was to insert a new cohort of general managers to free pharmacists from day-to-day tasks within hospital dispensaries. With this option, clinical pharmacists would become more patient-facing, but pharmacy technician and support worker roles would have stayed the same, undermining prior investments in the training and certification. This option was rejected in favour of a strategy of upskilling and improving skills utilization with technicians taking over tasks traditionally reserved for pharmacists, including dispensary management and 'final release' of medicines. Lower-qualified support workers were to take over technicians' task of assembling and distributing medicines, while administrative workers were upskilled to undertake some tasks previously done by support workers.

Rationale and actions shaping change

Three key influences shaped the redesign approach. First, the redesign reflected a core organizational value (common in healthcare) of putting patients first. We identified a genuine shared commitment among managers and employees at all levels to delivering high quality services that were 'closer to the patient' (Lindsay et al, 2014). Second, the redesign connected with a broader 'professionalization' project within NHS pharmacy services centred on the need to better utilize clinical pharmacy skills. Almost all senior managers were clinical pharmacists who perceived that the profession was too far from patients, that their clinical status required pharmacists to be full members of ward-based clinical teams (Goodrick and Reay, 2011), and that eliminating routine tasks would facilitate more strategic positioning of pharmacists around key organizational challenges such as hospital-acquired infections. As one senior manager noted:

> *"Most of our staff were tied up in dispensaries and inside pharmacy buildings* doing a supply distribution dispensing service and we wanted to release staff out onto wards for pharmacists to be working with the multidisciplinary teams and for technicians *to be managing patients' medicines at ward level."*
> Senior manager A

Third, senior management were committed to leveraging the skills and talents of the wider pharmacy workforce. Better use of the skills and expertise of all staff - that is, improving intrinsic JQ - was, therefore, located at the epicentre of the redesign project. While the business case for the redesign focussed on better patient care, the mechanism for delivering this centred on higher quality work for technicians and

support workers. By 2004, a well-articulated vision of patient-facing pharmacy supported by technician-led and managed services had been constructed.

Yet this vision needed three significant supports. First, managers acknowledged that existing decentralized pharmacy structures could not deliver the scale of change required. This resulted in the establishment of a single organizational unit covering all HealthBoard's pharmacy services, with an operational budget of £28 million and a medicines budget of £360 million. Second, senior management recognised that beyond an aligned structure, redesigning work and services required training, development, accreditation, employee consultation and negotiation. Simms (2015, and this volume) has noted the potentially important but overlooked role of trade unions in regulating JQ. As we indicated previously, NHS organisations in Scotland and recognised trade unions work in a partnership that seeks ambitious levels of staff involvement, and prior collective agreements enabled partnership-delivered organizational change by protecting healthcare workers from consequent job loss or pay detriment. At all stages, therefore, the redesign was delivered with agreement from employee representatives through partnership structures. Yet the length of time from consultation to strategy development and implementation impacted negatively on perceptions of employee involvement, and not all employees believed that formal partnership arrangements had translated to effective influence over workplace change:

> *"We'd involved partnership in the discussions and in the vision.* If I was to go back and be very frank with what we were bad at was in this long hiatus *where we were scurrying about … we didn't do enough at telling the staff this*

is still it, this is the *way we're going. That vision that you helped us create with the workshops, and we had lots and lots of people at workshops working it all through. But what we didn't do was keep going back and saying we haven't forgotten, it's not off the cards …. So when* we came to them in 2008 and said *right, green light, we're off, they kind of went [breathes in sharply], didn't think that was ever going to happen."*

Senior manager A

Third, PharmaServ needed to deliver the redesign without increasing operational or staffing costs. However, a separate capital budget offered a way forward in terms of a technology-facilitated solution. Management efforts thereafter coalesced around establishing a credible plan for investment in automation. Robotics offered the prospect of dispensing efficiencies via labour substitution for routine tasks, with displaced staff being re-deployed. Yet all senior managers acknowledged that automation alone would not deliver effective and sustainable care and safety improvements. Aligning automation with job redesign and upskilling that maintained pharmacy skills was, therefore, identified as facilitating service redesign.

In 2008, HealthBoard approved the construction of a bespoke centralised robotics-facilitated pharmacy distribution centre (PDC) to replace 11 in-hospital pharmacies, the largest pharmacy automation project in the UK. Operational from 2011, the PDC hosted eight robots working in tandem as an integrated storage and distribution system, with an additional robot installed within a vault for safe and secure handling of narcotic agents. The PDC would become responsible for the procurement and

automated distribution of medicines to replenish ward and site pharmacy stocks for approximately 4000 hospital and community clinic destinations.

Introducing robotics was a key facilitator of the redesign initiative. Pharmacy technicians in the PDC were upskilled to adopt day-to-day management responsibilities, while hospital-based technicians developed a more prominent role in supporting pharmacists and other clinical professionals in hospital wards. Senior managers and employees alike acknowledged that these changes required major role redefinition and substantial investments in training, development and career progression, all of which could enhance job quality:

> *"We* needed technicians out on wards and technicians were scared of going out onto wards because they had never worked in a multidisciplinary team. *They'd always worked inside the pharmacy department wi*th pharmacists telling them what to do, and suddenly we were asking them to go out and make their own decisions, and so we recognized that in order to create that breed of technician we were going to have to train them, and if you trained people then you h*ad to give them a career to move on."*
>
> Senior manager A

**Findings II – impacts on JQ**

The redesign initiative involved changes in the work location, job roles and responsibilities of technicians and support workers across their three post-redesign

work locations: hospital wards, hospital dispensaries and the PDC. Employees reported on four dimensions of JQ consistently highlighted in the literature (Green, 2006; Carré et al., 2012): intrinsic JQ; work environment; employment quality; and career progression.

Intrinsic JQ

Intrinsic JQ is a multidimensional concept that includes skill level, task variety and autonomy/control. Improving skills was an explicit objective of management strategy in this case. Looking at ward and dispensary settings, upskilling required additional training and accreditation for some staff; for others, particularly higher graded technicians, the redesign resulted in greater deployment and utilization of existing skills. For technicians and support workers at the PDC, additional skills were required to work alongside the robotics installations.

Ward-based technician and support staff were unanimously positive about their new roles which involved less repetitive work and offered greater task variety as well as greater levels of interaction with other staff and patients.

> *"(ward based settings are)* more interesting, more complex. You're getting to see every aspect. More varied, definitely. More challenging, which is good, keeps you on your toes, keeps you interested, keeps you wanting to keep *going …* the knowledge base and the skills I've got have certainly improved.*"*
> Support worker 1 (Ward)

"I prefer to be up on the wards … doing *the job that I'm doing now … because every day is different when you're up on the wards. And you're me*eting different people *… finding out different things every day, new things that you didn't know. Whereas when you were down here (i.e. dispensary) you w*ere just doing the same things every day.*"*

Support worker 2 (Ward)

However, while ward-based technicians and support workers were positive about impacts on intrinsic JQ, other dispensary-based staff reported a narrower range of tasks and a more demanding pace of work:

"(Previously) I did ward supply, I did ward top-up, I did clozapine clinics – different things like that – *which we don't do here … it's also very repetitive … because I'm in dispensary a*ll the time.*"*

Technician A (Dispensary)

Even for some dispensary-based technicians who now engaged in the final release of medicines and were exercising higher level skills and responsibilities, dispensary work was described as repetitive, and some reported anxiety over their new responsibilities:

*"I do, I suppose, feel sometimes like a bit of a robot…just production line* checking prescription after prescription after prescription. And that was

certainly something I never, ever wanted to do. I always liked the safety net of having my work chec*ked by a pharmacist."*

Technician C (Dispensary)

PDC technicians undertook the same level of dispensing tasks as previously and supervised the robotics line, but mourned their loss of patient contact. A few employed the metaphor of the 'warehouse' to describe the PDC setting with some prior skills subsumed by automation:

> *"I suppose* you don't really feel as much a pharmacy technician here because *it's more just the robot does all the work and you don't…where* (before) you would know what any drug looked like. Now it's in the robot you forget all that, you forget names and stuff (of drugs) because you would see it all before, now everything's packed away in that robot, you forget some things. You don't feel as much as a *pharmacy technician as you did on site…* You definitely *don't feel your skills are used like they were at the sites."*
> Technician B (PDC)

Respondents described their working lives at the PDC and hospital dispensaries in strong contrast with their previous roles, highlighting the greater 'pace' and reduction in task control and discretion that were associated with fewer staff in both settings:

> *"I think I was better able to plan my day and manage my time a lot before.* Now, it's just kind of crisis management all the time, you know, it's just picking *up the work as it comes in. When I'm here, it's intense and I do it"*

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Technician C (Dispensary)


Work environment

Work environment - physical and social - was a key variable for understanding the changes to, and experience of, JQ. Before the redesign, all groups voiced fears over disruption to their physical work environment and social settings, recognising that most would thereafter work in hospital wards. Yet wards were quickly recognised as a better working environment: closer to patients and their families; integrated with stakeholders including external pharmacy and care services; offering closer working relationships with other healthcare professionals and more challenging but also more positive work roles overall. Ironically, staff who remained in hospital dispensaries were least satisfied, reporting a reduced 'social' environment (i.e. fewer co-workers, less interaction and more limited social networks). For employees redeployed to the PDC, the physical work environment was transformed from a hospital setting to a more 'factory'-based environment and these workers overwhelmingly reported feelings of isolation from a hospital setting:


> *"You weren't separated off as much as you are here* – there was a team of you doing it *…* although we were busy it was still quite tight knit and everybody did get on. You don't really get to speak to people so much and it's *not quite so much an interaction."*
> Technician D (PDC)


Some, however, noted the emergence of strong team bonds and relationships of mutual support at the PDC, although these largely reflected collective coping

strategies developed by employees to manage their experience, as has been witnessed in other work intensive settings (Carter et al., 2013).

In summary, those in dispensary and PDC settings – albeit a small minority of all employees involved in the redesign – experienced narrower skills, a more restricted social environment, reduced task variety and lower role autonomy. PDC staff also described a higher paced, intensified and physically arduous work experience. One reported consequence of this was a refocusing, indeed narrowing, of their skills and knowledge-base. Work activities and training were almost entirely focused on the efficient running of PDC processes. Staff voiced concerns over maintaining their broader knowledge of medicines and pharmacy services. The vast majority of staff in ward settings, however, reported consistently positive outcomes in the post-redesign period.

Employment quality

Employment quality refers to changes in aspects such as pay, working hours and job security. For all pharmacy employees, these remained unchanged. Existing collective agreements protected employees from detriment, and senior management respondents welcomed these as important facilitators of innovation and change and complementary to the organisational and professional values that were integral to the redesign initiative. Such senior management support for protecting healthcare workers' employment quality is in sharp contrast with research findings elsewhere in the public sector where lean working practices often undermine employment quality (Carter et al., 2013).

Nonetheless, our interviews identified emerging issues around the interaction of different dimensions of employment quality. Some support workers and technicians questioned the relationship between pay and job grade in light of post-redesign responsibilities, tasks and workloads, identifying 'role stretch' that for some increased responsibility and stress without increasing remuneration. In addition, with fewer dispensary-based staff, some support workers experienced increased demands for flexibility that could be problematic:

> "…Sometimes prescriptions come in last minute *and have to be done…patient* care is very important. But again, you're not getting paid for any time you stay late. You get to take your time (back) but you're still having to cover costs for additional childcare hours or afterschool care, so it costs you money to work, basically."
> Support worker 1 (Dispensary)

Thus, while pay, terms and conditions were protected, service and job redesign had produced new employment quality pressures. While most interviewees were content – indeed enthusiastic – about engaging in more challenging work tasks, concerns were raised that reward (basic pay or compensation for demonstrating flexibility in lean environments) had not kept pace with redesigned job roles. At the time of our research, both employees and managers acknowledged this disconnect as a source of tension in employment relations.

Career progression

Managers pointed to upskilling and improved career prospects as a benefit of work redesign, seeing the progression of a small number of technicians to more senior roles and higher pay scales as evidence that clearer career pathways had been facilitated by the project.

Pharmacy technicians largely acknowledged these improvements in formal progression and many reported access to additional, more formalised training which delivered benefits in terms of improved skills utilization, enhanced self-confidence and more effective inter-disciplinary working. But for a small minority, redeployment to either hospital dispensaries or especially the PDC offered more limited opportunities for rotation across job roles, narrowed their work scope and skill sets, and constrained opportunities for learning, with potentially damaging consequences for progression and development:

> *"I recently went for an interview for another post …* and was told that one of *the reasons that I didn't get it was because it would have neo*-patient care and *because I didn't have any experience in that*. B*ut that's not down to me, that's down to the role that they created."*
> Technician E (Dispensary)

> I think it'd be hard now even to go back to the sites and the hospitals and try *to fit in again … I think I could now go to a warehouse or whatever, a* wholesaler and work there now.
> Technician B (PDC)

Senior managers acknowledged these concerns regarding the impact of relocation or recruitment to the PDC:

> *"I think when they* (technicians and support workers) expect to be working for a Health Board in a hospital pharmacy service they expected to be in hospital, whether they thought that meant they would be working with doctors and nurses all day, but they said, I didn't actually expect to be working in a *factory."*
> Senior manager B

Further concerns were voiced by some PDC and dispensary technicians over narrowed opportunities for job rotation, previously common in pharmacy careers and seen as essential to developing appropriate skills and experience. A combination of rationalized work redesign and leaner staffing models shaped some employees' perceptions of reduced rotational opportunities and isolation from mainstream pharmacy work. Management acknowledged that deskilling had occurred for a small minority and at the time of the research were considering how changes in organisational practice could address this outcome:

> *"I've just had* a conversation with the two professional leads for technicians to say, look we are starting to de-skill our staff. How do we bring back some of the rotation so that staff can still keep the skills up to date and transfer with those skills and keep their registration up to date?
> Senior manager C

Finally, support workers in multiple locations complained that despite formal training opportunities, tighter staffing made it difficult to secure time off to train. This was particularly problematic given reported role stretch to include tasks previously undertaken by technicians. While support workers had priority in accessing full-time technician training, this meant leaving their existing job, with no guarantee of a promoted post upon completion, which was considered risky.

In this case, the employer framed the work redesign project as delivering opportunities to improve JQ to benefit patient care and employees. For most pharmacy respondents, this was achieved. But a minority contested the narrative of improved JQ. Employer action on work redesign appears to have produced polarized outcomes: most technicians and support workers reported their experiences positively and saw their work as having moved 'closer to the patient', with related benefits in terms of intrinsic JQ, skills development and career progression; a smaller group (located in the PDC and in hospital dispensaries) experienced changes that contributed to work intensification, standardization and poorer learning and development opportunities. These polarized outcomes were not, however, sought or anticipated by senior managers, and were not part of a core-periphery employment strategy, not least because possession of pharmacy knowledge remained crucial. Rather, these reflected unintended consequences of the employers' strategy for what was an extensive and far-reaching service and work redesign that cannot be separated from wider resource pressures that constrained staffing levels in all settings. Senior management acknowledged these more negative outcomes as increasingly problematic as staff skill sets diverged over time. They remain, however,

committed to evaluating, exploring and addressing how access to learning and development and new career pathways can be constructed in new circumstances.

We have also demonstrated that employment quality – and the broader employment relationship – matters. In an era of public sector austerity, there was no job loss and no impact on pay. Employees appreciated this but recognised that the wage-effort bargain had shifted as work redesign drove role expansion and inter-disciplinary learning that increased work demands (in terms of pace, responsibility and flexibility) without enhanced remuneration. New challenges and skills improved JQ, while more demanding work without pay improvements detracted from perceptions of JQ.

**Discussion and conclusions**

This article's starting point was the under-researched area of employer agency in shaping JQ (Batt et al., 2005). Our evidence demonstrates that even while facing real constraints, employers have scope for making genuinely different choices about JQ. It is important, therefore, to focus on how employer objectives, choices and decisions framed work redesign. In this case, the employer's approach to work redesign derived from a shared commitment to transforming patient care and service quality and a vision of achieving this through employee upskilling and better JQ. The employer's objectives and choices, and subsequent job change for employees, were also framed by the former's commitment to a major investment in technology as a route to redesigning services and the work of those delivering them. Organisational and professional values, and the impact of the prevailing workplace employment regime, featured heavily in managerial respondents' accounts of the redesign

strategy. The commitment to patient care was central to the narrative of all respondents. The senior management team, mostly clinical pharmacists, saw the redesign as a professionalization project aimed at better utilizing pharmacy skills at all levels. Partnership relations provided an important contextual factor which constrained but did not define managerial strategy, gave voice to employees at a strategic level and protected key elements of employment quality.

The findings point to mixed success in the achievement of PharmServ's strategy. For most employees, the plan worked – new robotics technologies and complementary work redesign delivered jobs that were closer to the patient, upskilled, and offered task variety and inter-disciplinary learning. But a small group of employees had more negative experiences with fewer opportunities for rotation across roles (previously a key source of informal learning), a perceived fragmentation of team-working and more limited career paths.

Our research connects with many key themes from the literature on JQ interventions. Management's rationale and objectives reflected the potential benefits of 'high road' HR practices of upskilling and job enrichment. Yet, some of the more negative experiences – work intensification, lean staffing and unwanted 'flexibilization' – also connect our findings with a critical NPM literature. It is important, however, to try to disentangle causes and effects. Work intensification was not envisaged as a consequence of redesign, even for the minority who reported experiencing it, and could have been mitigated with additional staff. Yet, as we have noted elsewhere, the exclusion of the option of recruiting additional staff as a route to improving public

services can also be seen as reflecting the values and assumptions of NPM (Lindsay et al, 2014), and was a source of tension between management and employees.

Crucially, our findings also connect with the literature on different – indeed potentially polarized – experiences of the impact of new technologies. This literature identifies automation as a potential facilitator of upskilling and improved JQ as work is redesigned to free employees to focus on higher valued-added tasks. Yet, the same literature often warns of the potential for standardization and intensification as work for some becomes subject to unwelcome automation (Kalleberg, 2012). Such polarized experiences of automation were reflected in our research and were played out in different ways for different groups of staff and across job dimensions. This highlights that gains in one JQ dimension may co-exist with deterioration in other dimensions, raising challenges for the measurement and study of JQ interventions.

This article adds to the emerging literature on how employers can and do shape work redesign and JQ and emphasises the importance of a fuller understanding of employers' rationales, decisions and strategies. The multidimensional nature of JQ provides a wide canvas on which employers can design practice. The project discussed above was a success within the parameters set by management – both the employer and employees collaborated to execute a fundamental redesign of work and service delivery, facilitated by the introduction of new technologies. Despite the pains of transition, it was also a success for many employees. But altering discrete elements of JQ may have knock-on effects. Our evidence has provided a critical evaluation of management's decisions, objectives and actions in this case, demonstrating that delivering on improved JQ – and evaluating its impact overall –

remains immensely challenging. With strong management commitment, however,

enhancing JQ can be both a driver and an outcome of employer strategies.

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