The contingencies of medical restratification across inter-organisational care networks

Introduction

Sociologists have long-debated how health and care reforms have transformed the social organisation of medical work, especially where managerial and market interventions appear to challenge the autonomy and power of doctors (Alford 1975; Harrison and Ahmad 2000; Ferlie et al. 2013; Light 1991; McKinlay and Stoeckle 1988; Waring and Currie 2009). With growing numbers of doctors taking up managerial and leadership positions within the organisation of care services, these debates increasingly focus on the implications of professional 'restratification' (McDonald 2012) and medical-managerial 'hybridity' (Bresnen et al. 2018). On the one hand, elites and hybrids are interpreted as organising professional work on behalf of management (Noordegraaf 2007); and on the other, they are shown as protecting professional interests in more managed work environments (McDonald 2012). Contemporary research problematises this *control/resistance* dichotomy, calling for a more nuanced understanding of the social organisation of medical work (Numerato et al. 2010), especially the way organising sensibilities are diffused throughout the professional workforce (Noordegraaf 2015).

This paper contributes to these debates in two ways. First, we suggest that much of the existing research deals with elites and hybrids operating *within* healthcare organisations; yet contemporary healthcare reforms increasingly involve 'major system change' in the relationships *between* organisations (World Health Organisation 2017). This leads to the possibility of new forms of stratification and hybridity at the inter-organisational level. The wider literature on network organisations suggests, for example, that working between

organisations can offer new opportunities for the development of professional boundaries, but on the other it can leave other less privileged occupations facing increased insecurity or status loss (Grimshaw et al. 2019). Second, there is growing recognition that elites and hybrids can vary in practice, identity and influence according to where they are located at the intersection between their profession and the wider workplace (Waring 2014); yet, there is limited research looking at how the social position of professional actors conditions the acquisition of elite or hybrid roles. Whilst the motives for acquiring hybrid roles are known to be diverse (McGivern et al. 2015), it might also be expected that doctors with particular forms of expertise, experience or other esteem markers are better positioned to acquire these positions, especially where they arise at the inter-organisational level.

This paper reports on an ethnographic study that investigated how the introduction of an inter-organisational network for major trauma care in the English health system resulted in new forms of medical restratification. In developing our analysis, we focus on the processes through which doctors acquire elite and hybrid roles given their prevailing social position within *both* their professional *and* organisational hierarchies. Research suggests, for example, that hybrid roles are typically aligned to the functional and hierarchical structures of the 'host' organisation, but as healthcare work is reconfigured across organisational boundaries, questions remain as to how elite roles are structured according to inter-organisational imperatives and acquired on the basis of markers of professional expertise, experience or reputation that extend beyond the organisational level.

Medical stratification and hybridity in inter-organisational contexts

Most, if not all, professions are characterised by internal segmentation and hierarchy (Bucher and Strauss 1961). Such hierarchies can be seen, for instance, with appointed leaders who represent professional interests in political or social forums, whilst segmentation can be seen with sub-specialisation in specialist areas of practice. Significantly, such hierarchies have traditionally been shaped by the cultural norms of the given profession (Freidson 1985; Shortell 1974). It is arguably the case, however, that over the last three decades such hierarchies have been brought about or re-shaped due to broader changes in the organisation and management of expert work.

By the mid-1980s, corporate and bureaucratic changes in the organisation of expert work were interpreted by many as challenging professional autonomy and power and leading to forms of de-professionalisation (McKinlay and Stoeckle 1988). Through his restratification thesis, Freidson (1985) countered this idea by describing how enhanced bureaucratisation was leading to new forms of internal hierarchy or restratification within the profession. He noted, in particular, the expanded role for 'knowledge' and 'administrative' elites within the emerging bureaucratic structures to, respectively, determine the standards of professional practice and to supervise the conduct of 'rank-and-file' colleagues. Although these elites might appear to serve bureaucratic requirements, Freidson saw them as protecting the collective interests of their profession.

With growing numbers of professionals now performing management or leadership roles, debates on professional restratification more commonly focus on professional-managerial 'hybrids' (Noordegraad 2007). This concept is significant because it suggests that professionalism and managerialism, as distinct logics for organising expert work (Freidson

2000), are being blurred in the formation of new, albeit liminal, occupational jurisdictions and

identities (Bresnen et al. 2018; Croft et al 2015; McGivern et al 2015; Spyridonidis et al 2015).

Positioned at the interface of professional and managerial hierarchies, hybrids illustrate new

relations of power in the social organisation of medical work (Llewelyn 2001; Waring and

Currie 2009). On the one hand, they signify an organisational response to the difficulties of

managing medical work, whereby hybrids supervise work on behalf of management. As such,

management control is realised *through*, rather than *over*, the profession as a form of

'controlled professionalism' (Noordegraad 2015). On the other hand, hybrids can resist and

mediate managerial and professional interests to find novel solutions to the competing

demands (Burgess and Currie 2013; Llewelyn 2001; Numerato et al. 2012). The ubiquity of

doctors 'doing' management has since led to the concept of 'organised professionalism', or

the idea that contemporary medical work necessitates a range of organisational capabilities

that are diffused through the profession (Noordegraaf 2015). We highlight two under-

developed aspects of research on medical-managerial hybrids, and stratification more

generally, that are significant in the context of contemporary health reforms.

First, much of the recent literature deals with medical-managerial hybrids operating at the

intra-organisational level, i.e. as department heads or senior leaders, but with comparatively

little research attending to restratification or hybridity at the *inter*-organisational level. Over

the last two decades, public service reforms have illustrated a more 'progressive' form of

public governance (Newman 2001) that is often alleged to engender collaboration and

resource sharing across professional and organisational boundaries (Ferlie et al. 2013). In the

health sector, policies have introduced inter-organisational networks ostensibly to improve

access to specialist services, to optimise the allocation of scare resources and to realise

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improved care outcomes (Ferlie et al. 2010; World Health Organisation 2017). Yet, evidence on the proliferation of such networks in cancer, cardiac, stroke and trauma care shows considerable diversity in their structures and processes (Addicott et al 2006; Ferlie et al., 2010; Guthrie et al., 2010). While networks are commonly positioned against traditional bureaucratic structures, research shows how both emergent and imposed networks can bring about new forms of hierarchy or 'soft bureaucracy' (Author; Sheaff, 2003). Relating these emergent forms of network hierarchy to the organisation of medical work, Hendrikx and Gestel (2017) show that patterns of professional-managerial hybridity have evolved and accumulated in the context of wider public governance reforms, with the expectation that hybrid doctors now develop capabilities for more client-centred collaborative working across organisational boundaries. To date, however, there has been limited research dealing with the forms of restratification at the inter-organisational level.

This lacuna is somewhat surprising given that early research on medical stratification described elites in research, teaching and policy-making as operating beyond the boundaries of a single employing organisation (Freidson 1985). In thinking about the forms of restratification and hybridity that emerge at the inter-organisational level, there is growing appreciate that elite and hybrid roles can vary according to where they are located at the interface between their profession and non-professional communities (author). Research shows, for example, that hybrids working at executive levels (Veronesi et al. 2015), those in middle-level positions (Burgess and Currie 2013), and those in front-line services (Author) perform different activities in the organisation of medical work. It is arguably the case that the reorganisation of medical work across inter-organisational networks will result in new

forms of stratification or hybridity that reflect changed relations of power across *both* professional *and* organisational communities.

Second, and in developing our approach, we suggest it is important to account for the social processes through which elite and hybrid roles are structured and acquired. By 'structured' we are concerned with the history and specification of these roles, i.e. where, how and why they emerge and what influence they have in the division of labour. Unlike more traditional forms of stratification that were defined according to internal status markers, contemporary stratification is embedded within evolving management reforms that increasingly seek to reorganise and rationalise professional work across organisational boundaries. By 'acquired' we are concerned with how and why doctors take on these positions and, again, what implications this can have for professional status or influence within the division of labour. Research suggests aspirant hybrids can be motivated by a combination of personal, professional and organisational goals, which can have implications for how role-holders are judged by professional and managerial co-workers (McGivern et al. 2015). We highlight the importance of understanding how an actor's *social position* conditions both their aspirations for and acquisition of elite and hybrid roles. We use this term to recognise that within any given field of social activity, actors will vary in their preferences and potential for social action according to their relative accumulation of and access to particular resources or sources of capital that are reflective of their position within the field, i.e. cultural, social, economic and symbolic capital (Bourdieu 1990). For professionals, differences in social position are often associated with hierarchies in their education, experience and expertise (cultural capital), esteem and reputation (symbolic capital), and networks and affiliations (social capital); as well as other positional influences such as gender and ethnicity (McDonald 2014). This paper

examines how restratification occurs at the inter-organisational level, by attending to the influence of social position and other contingencies in the structuring and acquisition of new elite and hybrid roles.

An ethnographic case study of inter-organisational health care networks

The reorganisation of major trauma care

The English National Health Services (NHS) has been at the forefront of public governance reforms. Over the last two decades, the principles of 'network governance' have transformed care services and, in turn, the social organisation of professional work (Author; Ferlie et al. 2010; Guthrie et al. 2010). This has involved various examples of 'major system change' in which specialist services for cancer, stroke and cardiac care, for example, have been reconfigured in the form of regional inter-organisational networks (Ferlie et al. 2013). Such reforms are premised on research showing that regional delivery networks can improve access to specialist care, optimise the allocation of scarce resources, and improve patient outcomes (Turner et al. 2016).

The study reported in this paper investigated the introduction of a regional inter-organisational network for major trauma care in the English NHS. Major trauma services provide care for people facing hyper-acute life-threatening injuries, such as road-traffic accidents or gunshot wounds. Throughout the history of the NHS, such care was provided in the emergency department of the local or 'district' hospital nearest to the incident. This traditional model has since been replaced with regional 'hub-and-spoke' networks in which specialist services are provided, almost exclusively, in one (or two) Major Trauma Centres

(MTCs), usually within the emergency department of a large specialist teaching hospital. These 'centres of excellence' attract additional funding for specialist staff, dedicated 'beds' and other resources, such as scanners, whilst other 'distinct' hospitals within each region function in the network as Trauma Units (TUs) by providing limited short-term major trauma care or other non-critical trauma services (despite previously providing major trauma care).

Such networks represent a prominent site for the changing professional jurisdictions and hierarchies across multiple hospitals. Specifically, the creation of regional trauma networks sees some doctors acquiring 'super-specialist' roles within the MTC, whilst those located in smaller 'district' hospitals have reduced exposure to major trauma cases with a corresponding reduction in work, skills and status. Our study investigated how the reconfiguration of major trauma services was both conditioned by and transformed patterns of medical stratification, including new or changed elite roles and new relations of power. In developing our analysis, we were attentive to the social position of actors and other contingencies that shaped network restratification.

The study

The paper draws on the findings of an ethnographic study of the introduction of a major trauma network in one region of the English NHS. The network covered a population of around three million people across 12,000 square kilometres, including three cities each with urban conurbations of around 500,000 people, as well as several other smaller towns, across a diverse socio-geographical region. Within the region there were two large 'teaching'

hospitals providing a range of specialist services, and a further six smaller 'district' hospitals and one ambulance service.

The study was carried out over two years between 2013 and 2016. Non-participant observations were undertaken by two researchers. Observations were carried out for 12 months in the newly created MTC, with parallel observations across the region's other emergency departments and ambulance service. At this level, observations were concerned with understanding the changes (and emerging hierarchies) in medical practices. Over an 18-month period, we carried out further observations with management groups of each hospital, as well as with new or emerging management groups and governance committees for the network. At this level, observations were concerned with understanding how decision-making processes shaped network coordination and management, especially the role of medical elites in decision-making. The study also shadowed five prominent doctors with formal network leadership roles, which ranged from attending routine case meetings through to national conferences. In total we carried out over 200 hours of observations, all of which were recorded in hand-written field journals. When carrying fieldwork, we discussed and clarified our observations with participants through 'in situ' ethnographic interviewing.

In addition, 82 people participated in semi-structured interviews, including: national leads for trauma care (2), network administrators (3), network-wide case managers (9), designated clinical leaders from the MTC (2), designated clinical leaders from TUs (8), medical doctors from the MTC (11), nurses and clinical practitioners from the MTC (13), doctors from TUs (12), nurses and clinical practitioners from TU's (9), doctors from rehabilitation units (2), and ambulance service paramedics and managers (11). Sampling of participants initially aimed to

gather representative views from professional and managerial groups across the network. As fieldwork progressed, a more purposive approach was taken to investigate identified issues or situations related to network management. The interview guided followed a broad set of topics, but these questions were adapted and modified when speaking with different individuals to probe and clarify particular issues or events observed during fieldwork. In broad terms, the interviews explored the organisation and management of the network, the perceptions of doctors about changing status, and the changing relationships between professionals across the care pathway. All but five interviews were recorded and transcribed verbatim for data analysis.

Interpretative data analysis involved iterative stages of open coding, constant comparison, and thematic analysis (Corbin and Strauss 1990). Preliminary coding involved close reading of both observation field notes and interview transcripts, so that data on observed events could be described and categorised in conjunction with the reflections of participants gathered through interview. Through this preliminary stage, two researchers developed a timeline of significant situations and events, the identification of key actors and associated patterns of interaction. This was reviewed by the wider study team to clarify interpretations. Subsequent coding focused on understanding how the introduction of the network was both shaped by, and impacted upon, patterns of medical stratification, especially in terms of structure and acquisition of leadership positions. Coding further examined the perceptions and reactions of doctors across the region to changes in professional role and new forms of stratification, as related to their sense of professional status and identity. Further interpretative analysis sought to understanding how the social position of doctors conditioned the strategies used to acquire, or challenge, network restratification.

Findings

Antecedent patterns of stratification

Changes in medical stratification rarely occur from the position of all doctors being relatively equal, rather pre-existing forms of stratification condition change. For our study, antecedent forms of stratification related to the involvement of six of the region's prominent doctors in both national and regional policy-making, including membership of national advisory committees and, later, regional management groups. Four of these doctors had substantive posts in one of the region's large teaching hospitals and two in the other; but of relevance here, all described their involvement in policy-making as based on reputational qualifications that were recognised *beyond* their employing hospital. Specifically, three doctors attributed their involvement to leadership of significant research programmes, whilst two described themselves as leaders within their professional communities through influencing education standards and advancing the sub-specialist field of major trauma care. These doctors therefore illustrated the types of knowledge and political elites shown in the wider literature (Waring 2014), with occupancy of multiple inter-connected and mutually reinforcing 'status positions' that in combination placed them within the 'elite of elite'. As we later discuss, these doctors represented '*multiplex elites*'.

> *"I was co-lead for [medical speciality] for NHS England, in my other jobs I am national*
>
> *clinical lead for [speciality] where I sit on the national group. I am also chair of the UK*
>
> *[speciality] group. And I co-authored the training handbook for [speciality. And I teach*

in the UK and overseas]" (Senior doctor, Teaching Hospital 1, redacted to maintain
anonymity)

*"I was involved in defining the professional pathway for emergency medicine, and
have been involved in a number of large multiple-site trials"* (Senior doctor, Teaching
Hospital 2)

*"They're based at the MTC but he's also employed by NHS England as a special advisor
and sits on the national reference group"* (Manager, Teaching Hospital 2)

In different ways, these 'elite of elites' described themselves as influencing national and
regional policy. At the national level, this included informing the overarching 'specification' of
major trauma care to be implemented across the nation, making recommendations about
clinical standards, and influencing guidelines on regional governance structures. Later in the
implementation process, these doctors became instrumental in the translation of national
policies into plans for regional service reconfiguration. This included sitting on regional 'high-
level' management group and providing specialist advise to regional commissioners. Again,
such influence was premised on their professional reputation and also their involvement in
national policy-making. As we show, some of these doctors would acquire formal leadership
positions across the network, but even those without formal roles would continue to
influence the norms and routines of the network. We observed in planning meetings, for
example, how these senior doctors would make recommendations for clinical processes that
were rarely questioned by managers or more junior doctors:

> Observation of Governance Board Meeting. Discussion on communication protocol
>
> *Paul (Chair) invites input from committee about how the protocol can be introduced. Jim (MTC rep.) gives detailed technical overview of the fit with existing work processes in the MTC. Ross and Wendy offer similar views from the TUs…. The group decide to set up a working group to review the likely changes. [Then] Alistair [national advisor] challenges the need to delay decision-making. He says the guidance is unambiguous and the changes are straightforward, suggesting the group is not needed? The idea of the working group seems to be forgotten conversation turn to how clinical leads will action the protocol in their hospitals.*

Restratification through organisational/professional inter-dependence

The specification for trauma networks set out two formal medical leadership positions, namely the 'Network Medical Director' and the 'MTC Medical Director'; i.e. the lead doctor for the entire network and the lead for the specialist centre. These represented the most obvious forms of formal '*network restratification*'. The doctors who came to occupy these roles were widely regarded by peers as having the necessary qualifications and standing, but we also found the acquisition of these roles was contingent upon broader decisions about key *organisational roles* within the network, specifically which organisation would act as the network administrative centre and which would be the MTC. In other words, the allocation of these elite roles was nested within decisions about organisational roles, where it was expected the given medical leader would be employed with the corresponding organisation.

In other words, professional restratification was closely bound up with parallel forms of inter-organisational stratification.

Looking closer at the inter-dependent relationship between professional and organisational stratification, we found that three NHS organisations submitted applications to the regional 'high-level' management group to take lead organisational roles in the network. The two teaching hospitals submitted competing proposals to act *simultaneously* as the network host *and* the MTC; whilst another care provider proposed to act *only* as the network host. The deliberations around these competing proposals revealed important relational dependencies (and tensions) between, first, doctors and their employing organisation, and second, doctors employed in different organisations. Elaborating these dynamics, each proposal highlighted the track record and complimentary skills of managers and doctors to coordinate specialist networks. Each articulated, for instance, competencies in financial and performance management, as well as their specialist medical services linked to trauma care, such as anaesthetics and critical care, emergency medicine, neurology, and orthopaedic surgery.

> '*I can see a good case for either our Trust or [name] leading the trauma services. We have managed similar networks and of course we have very well-regarded specialist*' (Trauma Lead, Teaching Hospital 2)

Perhaps unsurprisingly, doctors rarely (or at least overtly) questioned the qualities of peers employed in 'competing' hospitals. This does not mean that they did not hold critical views about their peers, rather it seemed important not to articulate these publicly or in ways that might damage their professional relationships, especially since many doctors collaborated

across organisational boundaries in research or teaching. In other words, their professional bonds transcended organisational affiliations. However, these doctors *did* openly question the comparable standards of their respective hospitals in terms of management track record, performance against national targets and range of services. As such, comparable management qualities were more of an overt factor in judging proposals than the qualities of the medical staff. In fact, some doctors questioned the qualities of their own hospital when explaining why they would not be selected to carry out leadership roles in the network.

> "*We knew we would never be a Trauma Centre, but we wanted to make sure we would be a Trauma Unit. We didn't want to be a cottage hospital like [hospital], we're too big for that. The population round here is too big. But we don't have the level of services the Centre needs*" (Emergency care doctor, District Hospital 1)

Although the two teaching hospitals were widely regarded as comparable to act as both the network host *and* MTC, medical representatives from the region's 'district' hospitals raised concerns about either of teaching hospital acquiring *both* network roles because this would concentrate '*too much power in one place*'. Instead, they endorsed the proposal from the non-teaching hospital to act as the network's administrative centre on the basis of its perceived neutrality. As a collective group, the doctors from the region's district hospitals therefore seemed able to counter the dominance of those in the teaching hospitals by influencing the high-level management group who, in turn, selected the non-teaching hospital to act as network host.

"*The advantage of it being hosted in somewhere that isn't the Major Trauma Centre … does give the management structure, if you like, more of a perception of independence*" (TU Trauma Consultant, District Hospital 3)

The position of Network Medical Director was, in turn, allocated to a senior medical leader from this non-teaching hospital provider. Notwithstanding the dependence between organisational selection and leadership appointment, this doctor was widely regarded by peers as an outstanding specialist and figurehead. He had contributed to national policy-making, held leadership positions within various teaching hospitals and universities, and was considered a world leading expert the field. As such, they had multiple sources of credibility to justify their leadership position, over and above their employment status.

'No-one has the experience he has. He's a national leader in this undoubtedly' (Surgeon, District Hospital 2)

'*We are lucky with [name], I mean [he] has got the credibility, a sound clinical director…..if you want one of the best clinicians in the country, if not the world, you know, who brings a wealth of knowledge with him… he is known around the world… you've got the perfect person*' (Clinical Lead, District Hospital 4)

"*He literately wrote the book on this…. We are extremely lucky to have him in our region*" (Trauma consultant, MTC).

The allocation of the MTC, and in turn MTC Medical Director role, involved similar processes of inter-organisational competition. The competing proposals from the two teaching hospitals were assessed by the high-level management group, in part, on their management track-record and capabilities, but more significantly on the basis of their 'super-specialist' services needed to support major trauma care, especially paediatric and neurological services. In seemed that a relatively small, but prestigious group of doctors tipped the balance in the favour of one hospital, because only they employed these experts, thereby further cementing the 'elite status' of this hospital (and its doctors) in the region.

> "*The thing stopping them from being the Major Trauma centre is the lack of certain specialities. We have a larger range of specialist services and that is the deal breaker*" (MTC Director)

> '*We are quite rightly recognised as national specialists in complex paediatric care, and we routinely take the difficult cases other regional hospitals cannot care for*' (Service Manager, MTC, fieldnote)

As with the Network Director role, the MTC Medical Director role was allocated to a prominent doctor within the selected teaching hospital. This doctor was widely regarded by peers across the region as a leading professional figurehead, with extensive experience of leading major trauma services in the UK and other countries, and also leading the successful proposal for the MTC. There was a suggestion, however, that this appointment required the tacit endorsement of a small number of highly prestigious doctors within this hospital. Although these influential doctors lacked formal leadership roles, they were regarded by the

wider medical workforce as opinion leaders because of their past experience of leading specialist services at both local and national levels. It was difficult to observe their 'soft' influence, but when implementing the business plan, the aspirant medical director was often deferential to the expertise of these prestigious doctors or went out of his way to seek their input and show respect to their leadership. Similarly, in case review or governance meetings, most doctors would look to these more senior doctors to endorse recommendations or proposals made by the wider leadership team.

> *"Everyone knows me, and everyone knows [name], but they are less familiar with [MTC Director]. They needed to some persuading of his qualities. And he is a fantastic doctor."* (Network Medical Director)

Just as the acquisition of these leadership positions was contingent upon these doctors' organisational affiliations, we show below that the fulfilment of their leadership roles in the network was, in other ways, contingent upon the relationship with 'subordinate leaders' and 'rank-and-file' doctors across the region.

Contingency and concession in network restratification

With their respective appointments as Network Medical Director and MTC Medical Director, these doctors became the primary medical elites in the reconfiguration of trauma care. In complementary ways, they contributed to two broad sets of activities that illustrated their enhanced position; whilst also revealing further role contingency that resulted in additional

forms of restratification.

The first activity related to their role in the continuing reconfiguration of trauma care across the region, including the re-distribution of medical work. The Network Medical Director led a 'clinical review group' that carried out systematic assessments of the region's hospitals to determined what types and levels of trauma care each could provide based on their existing profile of medical services. This process cemented the exclusive role of the MTC in providing major trauma care and resulted in most other hospitals being re-designated as a 'TU' and therefore having a limited role in providing trauma care. In addition, both the Network Director and MTC Director led the formulation of the network care pathway, which represented the procedural framework for trauma care from patient triage, the parameters of care in the TUs, the transfer of care to the MTC, and repatriation protocols to from MTC to local hospital. They also worked with external funders and regulatory bodies for reporting the performance standards of the network, which were used to review both the collective standards of the network and the standards of constituent hospitals. As such, they had significant influence in the re-allocation of medical work across the region.

Observation of Post-Review Discussion

Alan (Network Medical Director) and Wendy (Network Administrator) discuss the findings from the hospital review. Alan seems very concerned that the hospital will challenge the findings (it was assessed as lower tier service, meaning it can only provide limited care). Wendy points to the supporting evidence from the panel and available national data. Alan seems really bothered. He says he will need to speak with

the [hospital] Medical Director and the Lead for Emergency Medicine before this

'going public'.

The second area of activity, as suggested in the above extract, involved enacting normative and symbolic influence to manage the relationships between medical teams across the network. In one respect, this involved re-affirming the benefits of the network in terms of improved patient outcomes, but in more subtle ways, it involved articulating the normative ideal of the 'network' as advancing the collective interests of the region ahead of the narrow interests of individual hospitals. Relatedly, the two lead doctors, in conjunction with the other prominent doctors and administrators, fostered a new ideal of '*system professionalism*' that promoted a vision of medical sub-specialisation that was better aligned to the health needs of the region. This was observed, for example, at the public launch event for the trauma network where the medical leaders continually talked about '*seeing the big picture*' and '*improving outcomes for local people*'. These activities created a shared vision for major trauma care that encouraged the willing participation of doctors who might experience a detrimental change in their individual work.

> "[*Network Director*] and [*MTC Director*] have been excellent in pulling the network together, helping us think like a system rather than as in our silos. Well, maybe [Network Director] more than [MTC Director]. He can detach himself from the Trust more than [MTC Director], when push comes to shove, he tends to return back to the needs of the trauma centre" (Trauma Doctor, District Hospital 3)

> *"My skills are in relationship maintenance so that's where the Network comes in, because it has to be seen as a system so that means that it has to be not an MTC takeover, so that's where the relationship management comes in to keep everyone else on board"* (Network Medical Director)

However, one of the most significant findings was that these network leadership positions had limited no formal authority in prevailing NHS governance arrangements. As one doctor explained: '*responsibility for the patient remains with the hospital doctors, not the network*'. Further still, hospital managers argued that the network itself had no statutory authority and that there was no longer a single regional body responsibility for care services (Turner et al. 2016). This meant that those responsible for leading the network – managers and doctors alike – lacked formal authority outside of their primary employing organisations. This reinforced the importance of network leaders being able to draw on other sources of professional status and credibility to justify their decisions.

We observed, for example, how the network leaders needed to continually reaffirm support from doctors located across the region's hospitals; who often perceived the network as a threat to their professional status. Although these other doctors rarely questioned the rationale of the network, they shared frustrations about the impact on their work and status. Many described their local services as being 'downgraded', which signalled that they themselves were not sufficiently qualified to provide major trauma care. As one doctor stated: '*I have gone from hero to zero*'. This was especially frustrating for medical teams located in the larger 'district' hospitals who believed their specialist services were equal to, if not better, than those in the MTC.

"The last thing we want in engaging with the Trauma Network, is to allow [named hospital] to become disadvantaged and have a lot of our stuff that we've historically done well, taken off us and treated somewhere else." (Trauma Doctor, District Hospital 2)

"the spinal unit here is very good and they…feel threatened by the idea of their work going to the Centre … because they feel that it will affect their ability to function as a unit in the future" (TU Clinical Director, District Hospital 1)

"In the same way the guys at the Major Trauma Centre deal with something day-in, day-out, we will have one in ten years where they've never seen it before, they've never done it before, but we all have a level of professional skill that we can adapt to those unique situations." (TU Clinical Director, District Hospital 5)

Although these doctors now had limited direct involvement in major trauma care, their services were still needed in the network model, especially for triaging and stabilising patients prior to transfer to the MTC and for providing rehabilitation after discharge from the MTC. It therefore became important to secure the on-going involvement of doctors working across the region's hospital to ensure the functioning of the network model. We found the medical leaders used three prominent strategies to achieve this, which illustrated their use of professional esteem markers in the absence of formal authority.

First, the medical leaders created additional opportunities for senior doctors within the region's 'district' hospitals to participate in network leadership. This included new leadership roles for key aspects of network governance, such as education and training, research, and information governance; as well as network-level leadership of different clinical specialities, such as rehabilitation, paediatrics and critical care. From our observations of the discussions amongst the senior doctors and administrators within the network, it often seemed that the allocation of these roles was, in part, compensation for these doctors reduced role in major trauma care due to their employing hospitals now having a limited role.

"They were worried about losing their interesting cases, their jobs becoming more boring, the fact that it was a bit emaciating to suddenly find their centre not being good enough to take major trauma cases."(Surgical lead, MTC)

"how do you keep a large teaching hospital like [name], on board, as players, when they see themselves as equal partners with the MTC, when they were unsuccessful in their initial bid to be a MTC ....And then you've got [hospital] as well where you've got some very interesting surgical personalities who to still do major trauma surgery even though they won't be a Major Trauma Centre and they won't get paid for it. There's a lot of expectation management that goes along with the relationship management as well.... So, we give different bits of the Network different roles. So, [hospital A] for instance, they are designing a trauma transfer course, [hospital B] are taking the lead on pre-hospital, [hospital C] are doing service improvement...so that so they get the sort of clinical kudos from that...because (hospital D) is potentially a big loser because they've

got quite small district hospital, [medical lead] will be asked to lead on service improvement. (Network Director)

Second, and in concert with above, a Network Clinical Committee was created that gave a platform for emergency and trauma care doctors from across the region to inform and deliberate network-wide policies. This represented a type of professional council, made up of clinical directors and leaders based across the region's district hospital. These doctors had no formal leadership positions within network governance and their involvement was primarily as a representative of their 'home' organisation. As one doctor reflected:

"There was no other group which allowed clinical involvement to happen across the Network. Most of the other sort of wider ranging meetings are actually done at Executive level and there's no clinician involved in then which is a bit of a problem. So [the advisory group] became an important place for the Trauma Units to get involved." (TU Clinical Director, District Hospital 3)

"When it was launched, I became part of the Clinical committee. So I was part of the group which obviously talked about how we could work it in the [region]…. I feel like that part of a [regional] team because I am part of the clinical group. So I feel we are working as a team, as a region" (TU Consultant, District Hospital 2)

Third, the network leaders recognised that some specialist doctors would lose exposure to major trauma cases and risk being de-skilled. A scheme was therefore introduced that enabled a small number of more experienced specialist surgeons and doctors ('practice

elites') from the 'district' hospitals to work sessions in the MTC and maintain their skills, which seemed to pacify resistance from these specialists.

> "*We have now made it possible for doctors and surgeons from the other hospitals to rotate into the MTC so they gain the experience and exposure. It's not just important for them, it important for the network to function so they take those skills back to their Trust.*" (MTC Medical Director)

> "*They've offered for us to go down there and do some observation because we all feel like we're getting rather deskilled [laughs] and it will be relatively straightforward to release a Consultant or a Registrar from ED here to go down there and shadow for a couple of days.*" (TU doctor District Hospital 1)

Through these engagement strategies, a new hierarchy of doctors developed at the inter-organisational level, with the new two prominent medical leaders having overarching influence, whilst under them a number of subordinate 'network elite' positions were created to oversee discrete portfolios of activity, and under these was a broad committee of represents of clinical leaders from the region's hospitals.

Discussion

Our research was framed by the view that much of the recent literature on medical restratification has focused on intra-organisational 'hybrids' to the neglect of restratification at the inter-organisational level. We also suggested there was a need to understand the

intra-professional dynamics of restratification, especially how the social position of doctors

conditions the acquisition of elite or hybrid roles.

Our study shows how the networked model of major trauma care, as with other examples of

major system change (Turner et al. 2016), is transforming the distribution of medical work.

Major trauma care is now provided almost exclusively by specialists based within regional

'centres of excellence', whilst doctors in less prestigious 'district' hospitals have restricted

involvement in trauma care. The network model therefore re-draws intra-professional

boundaries, with some doctors being elevated to the status of super-specialist '*practice*

elites' exclusively providing major trauma care, whilst delegating more 'generalist' or less

specialist trauma care to 'rank-and-file' doctors in less prestigious hospitals (see Nancarrow

and Borthwick 2005; Pickard 2009). As we discuss, the re-drawing of these professional

hierarchies was conditioned by the social position of doctors according to multiple

reputational and status markers, but just as important was the inter-connected standing of

their employing organisations.

More significantly, the network model create additional forms of network restratification

through creating new leadership roles in the organisation and governance of the network.

Although networks are often promoted for promising collaboration, resource sharing and

inclusivity, previous research shows how they can usher in new forms of authority, regulation

and control as well as open up hierarchies between organisations and amongst professionals

(Ferlie et al., 2012). In particular, inter-organisational networks necessitate new governance

and management functions concerned with coordinating the roles, relationships and

responsibilities of constituent members (McGuire 2002). In the highly professionalised

context of healthcare, the fulfilment of these functions seems to necessitate the creation of parallel or aligned professional hierarchies at the inter-organisational level to coordinate specialist practices within and between constituent organisations. Within our study, these new professional hierarchies took the form of two prominent '*network elites*' as well as a range of aligned, but subordinate leadership roles and committees operating at the inter-organisational level.

It was interesting to observe, however, that our network elites appeared to lack the formal authority typical of intra-organisational hybrids. For example, responsibility for standards and quality of care still rested with the individual organisations not the network. In part, the absence of formal authority reflects earlier changes in the governance of the English NHS that saw the abolition of strategic bodies with statutory powers for regional services (Turner et al. 2016). As such, the governance of medical work across the network relied upon forms of influence and power that function beyond formal authority (Middleton 2007). Significantly, and echoing the acquisition of these roles, elite influence was grounded in the status and reputation of professional figureheads to persuade peers of the merits of new ways of working, involving appeals to evidence, community benefit and a new vision of '*system professionalism*'. This was significant because it shows the continued (or rather the increased) importance of soft and subtle forms of influence in coordinating professional work at the inter-organisational in the absence of formal authority (Sheaff et al 2003). Arguably this form of influence is not easily available to non-professional actors, i.e. managers, and the argument might therefore be made that inter-organisational networks explicit rely upon professional restratification as basis of network governance in the absence of management authority (Ferlie et al. 2013).

Questions might also be asked about what types of medical-managerial hybridity are emerging at the inter-organisational level. Supporting the work of Hendrikx and Gestel (2017), our 'network elites' were relatively distinct from the more widely studied medical-managerial hybrids operating at the intra-organisational level, especially as much that their work were concerned with incorporating actors from different organisations into the network, facilitating coordination, fostering collaboration and dealing with conflict (McGuire 2003). As suggested above, the fulfilment of such tasks by non-professionals could be problematic in a highly professionalised context, and therefore the involvement of professional leaders seems essential. There was little indication, however, that our 'network elites' were becoming more 'managerial' or 'hybridised' in their practice or identity. Rather it seemed they made use of the more customary esteem markers of medical professionalism, rather than managerialism, to affect change and legitimise their roles with the medical workforce.

The emergence of these 'network elites' re-ignites longstanding debates about whether elites serve the interests of policy-makers and managers or protect the collective interests of their profession (Coburn et al. 2007). In the context of our study, the picture is unclear. Arguably, policy-makers see both clinical and economic benefits of system reform (or rationalisation) and it might be argued that medical leaders are being enrolled by policy-makers to legitimise change (Jones et al. 2019). At the same time, reform clearly benefited a sub-specialist group of doctors, and it might be the case that restratification is, less an expression of managerial and professional conflict, and more an example of intra-professional competition (Bucher and Strauss 1961, Pickard 2009).

Our study was particularly interested to understand how elite and hybrid positions are acquired in the context of doctors' social position. It was clear that pre-existing forms of hierarchy at the intra-professional level conditioned the potential for a relatively small group of doctors to seek out and secure new elites roles within the network. Drawing on Bourdieu (1990), we interpret these hierarchies, and the opportunities they afford, as stemming from differences in accumulated cultural, social and symbolic capital. By characterising this group of doctors as '*multiplex elites*' we highlight the multiple sources of privilege or capital simultaneously derived from, and enacted across, the domains of clinical practice, research and education, and professional leadership. Previous research shows how activity across these domains can relate to particular forms of stratification in the form of 'practice', 'knowledge' or 'political' elites (Freidson 1985; McDonald 2012; Waring 2014); where each domain produces and reinforces particular forms of status, influence or capital. It could be argued, for example, that enhanced forms of cultural capital were derived from doctors' participation in research and education which enabled them to participate in policy-making and to influence the standards of professionalism in the network. Examples of social capital were further observed through these doctors' access to and membership of a relatively exclusive network of regional and national decision-makers and professional leaders. Also significant, were the forms of reputational or symbolic capital derived from doctors' accumulated experience and activities across these other domains, which afforded credibility often in the absence of formal authority. More importantly, and unlike other elites, these 'multiplex elites' accumulate complementary sources of capital and distinction across these multiple domains, i.e. where capital in one area can be used or converted to gain influence in another (Bourdieu 1990).

While previous studies have noted the phenomena of multiplex elites (e.g. Freidson 1985) our study therefore unpicks the different sources of capital or influence derived from operating across multiple domains and how these together condition the potential to acquire elite positions in new inter-organisational networks.

Our study identifies two significant, and relatively under-researched, contingencies that further condition the social position of actors and the changing patterns of medical restratification. The first deals with the idea that doctors' acquisition of network leadership roles was dependent, not only on their relative standing within their profession, but also upon the standing of their employing organisation relative to other organisations in the region. The selection of the Network Medical Director was determined, in part, by the perceived neutrality of their employing organisation, whilst MTC Director role was allocated from within the organisation selected to act as the MTC. Similarly, the appointment of other doctors into network governance roles reflected, in part, the need to maintain the engagement of less prestigious hospitals in the network. In other words, professional markers of distinction, as reflected in their cultural, social or symbolic capital, were coupled with and dependent upon parallel organisational markers of distinction as reflected in their management track record and range of specialist services. As such, our study further demonstrates the importance of seeing professions and their organisational contexts as closely intertwined and mutually constituted (Noordegraaf 2015). That is, the status of a given hospital is conditioned by the profile of its medical workforce and, simultaneously, the reputation of its doctors is conditioned, in part, by the status of their employing hospital. Specialists located in relative 'average' hospitals might have high technical standing, but they

are constrained in acquiring elite roles because their 'home' organisation lacks sufficient quality. This reflects a broader feature of neoliberal marketisation where specialists become resources for enhancing organisational performance; which serves to enhance the status of 'elite professions' working in 'elite organisations'. Similar processes can be seen in other professional fields, such as law and academia, or competitive sports. What seems interesting, however, is the extent to which elite professionals are not only complicit in this process, but appear to have internalised this competitive rationality at the level of their professional subjectivity in order to enhance their status within the expert division of labour.

The second contingency relates to continuing need for senior elites to secure the consent and support of subordinate elites and rank-and-file colleagues. Inter-organisational networks rely on the willing participation of doctors located in different organisation. Rather than seeing conflict between 'medicine' and 'management', we found degrees of conflict between hospital doctors and network elites at the inter-organisational level. Our study found that network stratification evolved over time as a response to these intra-professional contingencies tensions, where subordinate elite roles were created by senior elites as a type of concession that, on the one hand, recognised the qualities of these doctors, and on the other hand, represented a concession for losing specialist work because of the perceived deficiencies of their employing organisation (Fraser et al. 2017). These contingencies have implications for the governance of regional networks. Whilst a relatively small group of super-specialists, derived from one or two prominent hospitals, may appear to dominate governance processes, the study shows that the combined interests of other less influential rank-and-file doctors located across less prominent hospitals can in certain circumstance counter this dominance and win concession to secure more, albeit less significant, influence

in network governance. As such, the emerging restratification of doctors within inter-organisational networks resulted from a complex interplay of factors, where network leadership roles were acquired by 'multiplex elites' based, in part, on professional qualities and markers of esteem, but also upon the consent of 'lower' status doctor and the inter-dependencies within their employing organisations. Subsequent forms of restratification emerged as a response by new network elites to ensure the consent and support of other doctors, resulting in delegated forms of stratification within discrete domains of network governance, such as research or education, which typically reflecting these doctors' comparatively narrow sources of capital or standing in these domains.

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