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**A Tale of Two Cities – Hull and York**

Ben Jackson and Mark Purvis

*"It's the Workforce, Stupid"*

It's evident that the main factor sustaining any health care is the investment in the people that deliver care. Technology does not care for people, buildings do not care for people. People care for people. Inequities in workforce distribution contribute to inequities in access to health-care. Such inequities matter to all of us, contributing to worsening health outcomes in mental health, obesity rates and overall life expectancy (1). We know that roughly 70% of NHS investment goes on workforce (2). How this gets spent matters!

President Bill Clinton's 1992 US presidential campaign coined the phrase *"it's the economy, stupid"* to underline the core importance of the economy to almost all other political issues and challenges. In health and social care, if we are talking about: quality, outcomes, effectiveness, efficiency, patient satisfaction, safety, doing the right job, doing the job right, reducing iatrogenic harms, reducing costs, improving care, preserving dignity, being more kind; these discussions are all underpinned by "getting the workforce right." This is sometimes described as getting the right people in the right place with the right attributes at the right time to meet the needs of the population served. We cannot think of a meaningful health and social care topic that is not underpinned by workforce. The same holds true for health inequalities – *'It's the workforce, stupid'*

< INSERT FIGURE 1 >

**Figure 1: It's the Workforce, Stupid!**

**The Health and Social Care Cake**

Good health outcomes find their foundations in good social care and self-care.

If health were a cake; the big, fat base layers would be self-care and social care, with much of that social care made up by an unquantified volume of care, delivered by an informal workforce of unpaid carers and relatives. Every morning the population gets up and pays attention to its health and care needs: from meeting essential needs like being fed and watered, through meeting mundane needs such as getting dressed towards so called "higher needs" such as finding fulfilment (or internet access). Often individuals need help and the vast majority of that help is delivered by these layers of our care cake. Without these first layers, THERE IS NO CAKE!

< INSERT FIGURE 2 >

**Figure 2: The Healthcare Cake**

The next tier of the cake is primary care: where people come to make sense of their health journey, for more help and support accessing care. Secondary care is the icing on our cake and tertiary care would be the cherries.

Yet when baking the care cake, we often focus on the cherries and not the base of the cake. We often assume that as long as we have sufficient cherries, the base of the cake will look after itself. We were once told "there will always be some people who don't want to work in hospitals" as if the primary and social care workforce is somehow an inevitable by-product of producing a secondary and tertiary care workforce.

That is not our perspective. Our perspective as authors, is that of primary care clinicians; of course, this is a source of bias, our chapter is about primary care. Nevertheless, we believe that the cake needs to be baked from the base up.

**Why Primary Care?**

There are compelling reasons why the primary care workforce is a key indicator for health inequalities. Evidence has shown for populations as a whole, improved primary care leads to improved quality of life and a reduction in hospitalisation for chronic health conditions (3). The rationale is as general ill-health is more prevalent in socio-economically deprived communities, health care which focuses on populations rather than specific diseases and is accessible will more likely reduce overall health inequalities. An important additional factor here is as primary care is also less costly than secondary care, making decisions to provide a more equitable distribution of service across wider geographical areas is easier for commissioners and providers of health care.

**Workforce Capacity, Capability and Organisational Resilience**

Whether we look at the numbers of the workforce (capacity); the attributes of that workforce - their skills, knowledge, attitudes and other characteristics (capability) or the ability of the workforce to thrive in challenging and changing environments (organisational resilience) we find variation. This variation impacts most keenly on our areas with greatest healthcare needs, in particular related to co-morbidities, as demonstrated by Mercer et al (5). In the UK, we suggest that areas most affected are (a) rural remote, (b) urban deprived and (c) coastal communities.

It is in these areas where despite greater needs and more complex work, we have fewer staff (6,7); with healthcare workers who have experienced least preparation, sometimes gravitating to areas of greater risk and lower governance, where providers are more susceptible to workforce risks. The challenge in designing a system is to address all three of these workforce areas. It's not just about the numbers.

< INSERT FIGURE 3 >

**Figure 3: Capacity, Capability and Organisational Resilience are Interrelated and Overlapping.**

Imagine a primary care provider facing a challenge in all three areas (8). Perhaps an organisation with an increasing list size in a deprived area which is unable to recruit or retain staff. This organisation develops a reliance on locum and agency staff. A knock-on effect is the diminution in the continuity of care provided. The high cost of these agency staff makes the practice less financially viable. A vicious spiral is created for existing staff with a predictable effect on retention throughout the whole practice team.

These vicious spirals can be contagious. Even a practice recruiting and retaining high quality and appropriate staff in sufficient numbers to meet the needs of the population it serves and perceives itself as resilient with a robust workforce succession plan, can quickly be caught up in this spiral if a nearby practice closes, displacing patients to them. Therefore, it's not just about supporting individual providers at risk but about supporting the whole provider

landscape. Once the dominoes start falling, it takes a lot more effort to recover the system than it would to prevent the first dominoes from falling.

**The Rich get Richer?**

Our perception as clinicians in Yorkshire and the Humber for the past two to three decades, is that we have worked through two very different periods regarding investment in the primary care workforce. Following the 10-year period after the Labour election in 1997 there was a focus on building capacity and primary care workforce growth. After the crash in 2008, austerity measures led to a period of primary care workforce constraint.

The first period, from 1999 to 2008, was an era of investment in public services. Over this period NHS spending increased by around 4% per year with an emphasis on primary care. New contractual arrangements - Personal Medical Services (established in 2002) and Quality and Outcomes frameworks (established in 2004) also provided overall extra investment in General Practice.

The second period following the financial crash of 2008 and the resulting austerity measures restricted public spending from 2009 to 2018. The graph below shows the significant differences in investment during these periods.

< INSERT FIGURE 4 >

**Figure 4: Real Annual Average Changes in UK NHS Spending, Kings Fund**

Nationally, the GP workforce grew in the decade up to 2009 with average UK numbers of patients per full-time equivalent (FTE) GP falling - between 1999 and 2009 - from 1791 to 1684. From 2009 to 2018, however, the number of patients per FTE GP rose from 1684 to 2032.

< INSERT TABLE 1 >

**Table 1: Average Numbers of Registered Patients per FTE GP**

**Why only GP Numbers?**

Quite apart from the difficulties of studying capability and organisational resilience, even studies limited to capacity (numbers of healthcare workers) of the primary care workforce are made more difficult by variations in skill mix between different provider organisations. Looking at single markers, such as the number of full-time equivalent GPs or Family Physicians per 1,000 patients can give an insight into the whole primary care workforce, but there is a high noise to signal ratio.

As a result, the complexity of the NHS as an organisation and the significant changes in the structures involved in co-ordinating services could make any investigation excessively complicated and we are not suggesting that we are providing a robust study that excludes the various possible confounding factors. In order to minimise such issues, we have kept our

proxy measure of investment in GP teams serving primary care to that understood to be relatively robust: The number of patients per FTE fully registered GPs in the population described (9–11).

We have deliberately excluded GP trainees, GP retainers and locums as the way that these have been counted is likely to have varied and the substantive GP numbers better reflect the state of resilience and capability of the service provided to the community.

**Existing Evidence**

Mercer et al. describe poorer access to care, with less time to manage the increased burden of ill health and multimorbidity in poor communities (12). Goddard et al. describe such inequalities increasing following changes to the regulations for new GPs in 2002 with new GPs settling in areas with clean air and easy access to public amenities (13). Conversely Asaria et al. described how in a single geographical area there was a reduction in inequality from 2004/5 to 2014/15 in GP workforce (14).

Regarding investment and funding into primary care itself, more recent studies show us that the current funding arrangements in Scotland perpetuate the 'Inverse Care Law' rather than remediate it and in England, population health needs are poor predictors for variation in investment (15–17). None of these studies contrast what happens to health inequalities in periods of workforce growth compared to periods of workforce constraint.

**A Tale of Two Cities**

How have different communities fared between periods of workforce growth and workforce restraint? We took a Bayesian approach. We interrogated data from NHS Digital in two contrasting areas that we knew had experienced extremes of workforce supply. We excluded areas where we knew that counting methodology was suspect. We were familiar with the two areas selected through our work in postgraduate training in the region. One centred on Hull and the other on The Vale of York. Data was only available on NHS Digital from 2005 onwards so we were limited to examining 2005-2009 during the 'good times'. We recognised the smaller the area examined, the more marked the differences can be. For example, if you look at East Hull compared to Central York the differences in workforce supply are greater but we were constrained by NHS Digital data to look at larger areas due to the merger of PCTs into CCGs. There are pockets of relative affluence in Hull and relative deprivation in the Vale of York but through knowledge of the areas themselves we feel these are minimal.

< INSERT FIGURE 5 >

**Figure 5. Illustration of Deprivation in Hull and York.**

**The Poor get Poorer …**

Comparing Hull to York we found in Hull, the number of registered patients per FTE GPs per 1,000 registered patients rose slightly in 'the good times' (2005-2009), whilst in York the number of registered patients per FTE GPs fell slightly in the same period.

In ‘the bad times’ (2009 to 2018), as the number of patients per FTE GPs rose, both North Yorkshire and Hull experienced a rise in patients per FTE GP. However, whilst the average patients per FTE GP rose 16% in North Yorkshire, it rose 33% in Hull. There may be selection bias here, but if true across the UK we would conclude that in the good times “the rich get richer” and in the bad times “the poor get poorer”. The data we examined does not shed light on the causes for the rich getting richer and the poor getting poorer. We do not know whether York was better at recruitment or retention or both.

< INSERT TABLE 2 >

**Table 2. Change in Number of Patients per FTE GP in York and Hull 2005-2009 and 2009-2018.**

**Solutions – Deep, Persistent, Relentless**

To counter such a profound divergence in resources, in order to not just mitigate, but to correct such inequalities requires a deep, persistent and relentless focus on commissioning and funding services in a way which supports some areas of the primary care system more than others. Such an approach is espoused by the Deep End General Practice movement, originating in Scotland but now spreading around the world (18).

Michael Marmot described the concept of proportionate universalism, in which there is recognition the challenges of providing a universal system of care are greater in some areas,

requiring extra focus and effort as needs increase (19). For instance, in order to reverse the divergence in the number of Patients per FTE, more than 50% of our newly qualified GPs would need to go to work in our more deprived areas.

But as the saying goes, there is a "well-known solution to every human problem — neat, plausible, and wrong" (20).

**No Magic Bullets**

There are no simple solutions or magic bullets to address the maldistribution of workforce capacity, capability and resilience. However, the literature describes three broad and overlapping strategies to improve the maldistribution of workforce (21)

< INSERT FIGURE 6 >

**Figure 6 – Illustrating the Connection Between the Different Approaches to Workforce Strategies.**

- Posting people to areas of deprivation might be described as *coercive*
- Promising additional resources – a golden hello or additional CPD opportunities might be *allocative/rational*.
- Setting minimum and maximum workforce thresholds might be a *normative* approach

We must utilise ALL three strategies, adopting them and adapting them to local circumstances. Different strategies need to be used at different times and for different contexts. During times of relative growth, when the workforce is optimistic, incentive programmes may have more scope to nudge the natural system of allocation and encourage people to opt to work in more deprived areas. Almost all clinically trained staff want to make a difference to the world; where best to make that difference than where the needs are greatest. At other times, when workforce constraints are at their greatest, the system as a whole needs to provide greater direction, through strategic decisions on investment which recognise the dangers to the whole team of not supporting the players who are under greatest pressure.

Aligning lots of different actions across all three strategic areas is more likely to work than relying on a single intervention. How would this be achieved? Research suggests the resilience of GPs who work in such areas is maintained by the team and infrastructure they work with, not simply through some inner strength (22). Encouraging GPs to work in deprived areas is therefore much more than the 'golden handshakes' and financial incentives they receive, it's about co-creating the support and resources to allow whole primary care teams to flourish within these communities.

**Deep Solutions**

We believe it is not enough to tackle variations in workforce resilience, capability and capacity, we must go deep to tackle the underlying causes of these variations. This might be the approach adopted by champions such as those in Bromley-by-Bow, London, who seek to build community capacity across the layers of our cake (23).

Another example might be to improve diversity and inclusion in our workforce. It is an admirable ambition to draw a workforce from the population it serves. This workforce could have a greater and more nuanced understanding of the context of healthcare for their community and could offer different insights into solutions that might succeed: including prevention and re-enablement solutions. But in order to draw a workforce from a population where educational attainment at school may be lower, you would need to improve education provision, recognise any equivalence of experience against academic attainment and perhaps select for academic potential rather than on past academic performance. This would require a radical rethink of selection to health and social care careers.

We need to look at where these doctors (along with other clinical staff) come from. Widening access to medicine to allow members of all communities to train and work as doctors is important. In a retrospective study of applications from 2009-12 to UK medical schools, only 7.6% of accepted medical school places went to applicants residing in the two most deprived postcodes nationally (24). Though the mobility of the workforce has increased dramatically, it is apparent that doctors trained from - and in - particular areas (e.g. rural and remote) are more likely to return to work in these areas (25,26).

And let's be clear. It's not just about doctors. The data described earlier was used as a proxy measure for the wider team: health care assistants, nurses and advanced practitioners, receptionists, administrators and care navigators. The issue is about inequalities in access to good quality primary care, not simply to GPs. With the impending breakdown of services to some communities, the answer will also depend upon teams transforming into resilient

multidisciplinary teams, working collaboratively with the communities they serve to work out ways of providing services that suit them as efficiently as possible. There will be many challenges, for example preserving continuity. Such a transformation increases the number of staff in face to face roles, building a team on the foundations of the most junior members of staff whilst providing a clear ethos, culture and understanding of the principles of generalist care within the team We have previously described this transformation in the form of a Dalek (27).

< INSERT FIGURE 7 >

**Figure 7. The 'Dalek' transformation in primary care workforce**

You may need to differentially invest in career-long continuing professional development and support for the workforce serving a more deprived population, recognising the higher opportunity costs of supporting people working in challenging environments.

If a barrier to attracting and retaining a high-quality workforce to an area is a lack of spouse/partner employment opportunities, you might need to improve local employment opportunities outside healthcare.

A good transport infrastructure, cleaner air and access to good local amenities also play a role in recruitment and retention of workforce.

**Persistent Solutions**

The effort to sustain a capable, resilient workforce in sufficient numbers to meet a population's needs is not a one-off effort. It is not a see-saw of either (a) improved recruitment or (b) better retention but a climbing frame of both (a) and (b). Individuals and provider organisations are not insulated from the system in which they work.

This aim must persist over time, across geographies and through organisational and sector boundaries (our cake again!). The purpose is to reduce inequalities by addressing the health and social care workforce despite changes in political administrations and the organisation of the way that health and social care is delivered. How often have we seen the charade of good work having to be retrofitted into the policy of the day:, a Darzi review, a QIPP initiative, a Vanguard, a Sustainability & Transformation Plan, an Integrated Care System or a 'Test Bed' site (28–32).

Earlier we referenced the abolition of the medical practices committee as a factor contributing to workforce maldistribution. The underlying purpose of this committee - to manage the distribution of general practice services - was handed to the Family Health Services Authority (FHSA). The purpose was lost along with the skills and infrastructure. Successive re-organisations have diluted to homeopathic levels!

Change drivers may come and go, purpose must persist.

**Relentless Solutions**

It is not enough to go deeper and persist with our workforce efforts. A reduction of health inequalities must become our *meaning and mission*, it must be the very air that health and

social care lives and breathes - no irony intended (as clean air is both a determinant of health and marker of workforce distribution) (13). It must become meaning, mission and culture. Everything we do should be aligned to this. Everything should be tested against this.

We need to move from a state that is sometimes pathological - asking “Why waste our time on workforce solutions to health inequalities” or reactive - solving workforce crises as and when they arise, towards a more proactive and generative stance. This will require new ways of measuring cultural change with respect to how programmes address inequalities.

What does this all mean? Imagine if these widening inequalities were allowed to accumulate over a further ten years. Access to any primary care services will become a virtual impossibility for a growing proportion of people in our most deprived communities. Given the evidence for the effectiveness of primary care in supporting the health system – we can predict that our National Health Service would cease to exist for many.

We are aware that this chapter is light on solutions, certainly from the perspective of those working in our hardest pressed communities who need help now! We do not apologise for advocating co-production rather than prescription. However, we hope that our chapter will provoke the realisation that, if you have a strategy to address health inequalities and this strategy does not encompass workforce, you have no strategy!

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