



Do ‘poor areas’ get the services they deserve? The role of dental services in structural inequalities in oral health

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Abstract: All over the world, we see that communities with the greatest dental need receive the poorest care – a truism first summarised by the Inverse Care Law in 1971. Despite efforts to attract dentists to under-served areas with incentives such as ‘deprivation payments’, the playing field is still uphill because of the fundamental inequalities which exist in society itself. Deep-seated cultural values which are accepting of a power difference between the ‘haves’ and ‘have nots’, and that emphasise individualism over collectivism, are hard to shift. The marketization of health care contributes, by reinforcing these values through the commodification of care, which stresses efficiency and the transactional aspects of service provision. In response, practitioners working in deprived areas develop ‘scripts’ of routines that deliver ‘satisfactory care’, which are in accord with the wishes of patients who place little value on oral health but which also maintain the viability of the practice as a business. A compliance framework contrasting types of organisational (dental practice) power (coercive, utilitarian, normative) with types of patient orientation (alienative, calculative, moral) identifies where certain combinations ‘work’ (e.g. normative power – moral orientation), but where others struggle. Thus institutional structures combine with patients’ and the wider community’s demands, to generate a model of dental care which leaves little scope for ongoing, preventive dental treatment. This means that in poor areas, all too often, not only is less care available, it is of lower quality too - just where it is needed most.

Key words: oral health, inequalities, dental services, markets

‘The availability of good medical care tends to vary inversely with the need for it in the population served’.

This oft-quoted truth has been repeated many times since its original publication in 1971 (Hart, 1971). In fact, this ‘law’ has been so often demonstrated in a whole range of health care contexts, that Julian Tudor Hart himself has commented that: ‘You name it, there’s now some inverse law for it, or soon will be. The world never runs out of injustice’ (Hart, 2000). In dentistry, Hart’s law is just as much apparent as in any other branch of health care – or even more so, given that in many parts of the world, dental services are organised according to a commercial model of care. Services are often influenced not just by what the patient needs, but by what people are willing and able to buy.

When plots of national English and Welsh data are drawn looking at the proportion of the population in each county area who live with chronic ill health, against the proportion of that same local population who are working as medical practitioners, we see the Inverse Care Law clearly demonstrated (Shaw and Dorling, 2004). An almost identical pattern is seen when the distribution of dental practitioners is plotted. What stands in stark contrast, however, is a similar plot showing a direct relationship between population health needs and the proportion of the population who provide significant amounts of unpaid care for friends, family, neighbours or their local community – the ‘Positive Care Law’ (Shaw and Dorling, 2004). This then raises a difficult question. Why, when altruism is seen everywhere, and in the greatest quantities where it is most needed; is ‘positive care’ so hard to achieve when we try to deliver medical - or dental care?

Maldistribution of the workforce is certainly part of the issue, both for doctors (Hann and Gravelle, 2004) and dentists (Buck, 1999; Kiadaliri *et al.*, 2013). However, although there have been efforts to increase workforce supply in England by introducing entry controls (limiting of practices in over-supplied areas) and using one-off payments to reward practising in under-served areas; this has generally failed to achieve a balance between supply and where services are needed most (Hart, 2004). Hart puts the blame for this on the market economy: ‘Government policies may use one little finger to encourage doctors to work where they are needed, but they use the other nine and all their toes to encourage a private economy devoted to making rich people richer, and an increasing unequal society. The little finger, of course, is losing’ (Hart, 2004). In other words, the roots of social inequalities in the provision of health care lie as deep as the inequalities which exist in society itself. When culture is orientated towards an individual rather than collective perspective, and is accepting of a power difference between the ‘haves’ and ‘have nots’, it can be no surprise that when doctors (or dentists) are able to choose where they work, they go to middle class areas.

The marketization of health care is both an expression of these cultural values and a mechanism by which the Inverse Care Law is re-enforced. Titmuss (1970) evokes an analogy contrasting the donation of human blood in the UK with the selling of blood in the United States to illustrate this: ‘When a person gives their blood to another person, the act is altruistic, unselfish and unconditional; but when a donor sells their blood,

the relationship becomes mechanical, impersonal and responsive to pressures of demand and supply'. Hart (2004) himself concludes that 'the closer we get to the world of business, the more our distribution of resources is based on greed and not need'. Unfortunately, with the growing influence of quasi-market ideology, health systems in many countries have become more and more based on market principles (Harris et al., 2014). The moral consequences of this is that health 'care' becomes commodified, and this curtails open-ended, unscripted, compassionate interactions, leaving little room for 'the non-player, the person who can't buy in – the poor, the uninsured, the uninsurable' (Pelligrino, 1999).

Before departing from the broader perspective to focus on the particularly commercial and market-driven world of providing dental services, it is worth noting one further thing – that even where financial incentives have successfully attracted doctors to under-served areas, the reality of practice in these areas is less like a levelled 'playing field', and more like a 'swimming pool' - where everyone (all practitioners) who can be seen, have their heads above water. However, those in affluent areas are 'standing with their feet on the bottom, whereas those in deprived areas are treading water in the deep end' (Watt, 2000). Julian Tudor Hart, who himself worked as a family doctor in a poor, coal mining community in the Afan Valley in Wales in the 1960s and 70s, knew what 'treading water in the deep end' felt like (Moorhead, 2004). He recalls, not only the experience of working in an environment where population need was overwhelming, but the consequences of that experience – that the *quality* of care suffers, and 'some conditions are bad enough to change a good doctor into a bad doctor in a very short time' (Hart, 1971).

'In the circumstances prevailing, the most essential qualification...is ability to make a snap diagnostician – an ability to reach an accurate diagnosis on a minimum of evidence...the worst elements of general practice are to be found in those places where there is the greatest and most urgent need for good medical service.' (Hart, 1971)

Hence the Inverse Care Law describes an uncomfortable truth: that it is not just the *amount* of care available, but the *quality* of care provided which is inversely related to patients' need. Moreover, when commercial interests are added, practitioners come up with 'workable' solutions, to the further detriment of good quality care.

'The general practitioner in working class areas discovered the well-tried business principle of small profits where the population was large and growing rapidly; it paid to treat many people for a small fee. A waiting-room crammed with patients, each representing 2s. 6d [£0.13] for a consultation... not only gave a satisfactory income, but also reduced the inclination to practise clinical medicine with skilful care, to attend clinical meetings or to seek refreshment from the scientific literature.' (Hart, 1971)

Institutional theory explains this 'pollution' of professional standards in terms of embedded agency, where practitioners are agents who both shape their environment, and are shaped by it (Garud et al., 2007; Harris and Holt, 2013). Dental practices can be likened to an organisational field –

where there is a common meaning system with participants interacting more 'frequently and fatefully' with each other, than with actors outside the field (Scott, 2001). There are institutional 'rules' or patterns of behaviour, only some of which are written down and prescribed, for example by the profession or regulators. Day-to-day interactions with a variety of other people and bodies (patients, other clinicians, managers, suppliers, commissioners) inform the development of 'scripts'; which are 'observable, recurrent activities and patterns of interaction characteristic of a particular setting' (Barley and Tolbert, 1997). These daily routines define how the business operates (who the patients (customers) are, and what is delivered), (Harris et al., 2015a). In deprived areas, the prevailing service model and dental 'product' then all too often evolves into high patient turnover practices, geared towards meeting immediate needs - 'extractive', rather than preventive dentistry. An ecological study of Brazilian primary health care units (PHCs) provides us with just one example. In areas with a high degree of social vulnerability, the local population receives less, not more preventive dental care, relative to restorative and surgical procedures (Esteves et al., 2013). The Inverse Care Law is demonstrated yet again.

An institutional perspective portrays practitioners' behaviour as simultaneously both shaping what services are provided, and also *being shaped* by what patients want to receive. In the same way as human ecology understands human beings in terms of their interactions with each other and their environment (for example, just as there are waterborne and airborne diseases, there are 'culture borne' diseases), so we see community and patients' values regarding dental care influencing both what is wanted, but also what is provided by dental services. So do poor areas then end up with the dental services they *deserve*? In other words, if a practice serves a population in an impoverished area, which place little value on the preservation of the natural dentition, does this shape the type of dental service which is provided? Qualitative data from a study of dental contracting suggests that it does (Harris et al., 2015b). In low socio-economic practices, clinical interactions are brief, functional, and limited, but this meets with patients' views of dentistry as a necessary evil:

I: Do you know anything about Mr (Biller)'s reputation in the area? (a deprived area)

R: Well they call him Killer (Biller) don't they?

I: I didn't know that! Do they? Killer (Biller)! That's brilliant. Why?

R: I think because he just gets on with job you know, He's very quick. He's not very personable. You're in and out. Job done but I mean all dentists is painful isn't it?

When we consider how social exchanges between clinicians and patients tend to be played out, this also supports the supposition that the way dentists interact with patients is influenced by the *patients'* approach to communication in that environment (as well as the communication skills of the clinician and any preconceptions that they hold of that 'type' of patient of course). Studies show that clinical communication is a two-way affair - clinicians are influenced by the patients' communicative style – such as question-asking,

affective expressiveness and opinion-giving in determining how much information they give (Verlinde *et al.*, 2012). Therefore, because patients from poorer backgrounds tend to be less affectively expressive, they end up receiving less information and also less affective behaviour or ‘warmth’ from clinicians (Street, 2005). Studies also show that patients from poorer backgrounds prefer a more directive consultation style (they are less used to, or feel less able to interact during the appointment), and this also curtails the depth and openness of the discourse (Verlinde *et al.*, 2012).

Etzioni (1961) terms this type of approach as an ‘alienative’ (hostile) patient orientation, contrasting this to a moral (much more expressive) patient orientation. A calculative orientation is somewhere between the two, where the patient decides the extent to which they are expressive, depending on the situation. Etzioni (1961) also draws up a typology of organisational approaches which might be adopted in order to achieve patients’ compliance, and then sets three types of organisational power against patient orientation type, to generate a nine-fold typology of compliance relationships (Table 1). Alternative organisational approaches to achieving compliance include: a) exercise of coercive power (for example in prison regimes); b) utilitarian power (or the use of incentives such as money or other rewards which members desire and the organisation controls); and c) normative power (or using symbols such as prestige or affections to secure loyalty). Etzioni (1961) argues that the more compatible the patient orientation is with the organisation’s approach to exercising power, the more effective the organisation is in achieving its organisational goals. In other words, much as in the same way that institutional theorists propose that institutional structures are shaped by the functions they set out to achieve, this compliance framework suggests that certain combinations e.g. normative power/moral orientation; utilitarian power/ calculative orientation and coercive power/ alienative orientation ‘work’ to create effective organisations.

Davis (1976) takes up Etzioni’s framework and applies this to the dental context. He identifies that a ‘strain to consistency’ exists so that where a particular style of patient orientation exists in a community, certain types of dental practice emerge – for example in a high social class area, where patients have a predominantly moral orientation, dental services using a normative approach to power are successful. By contrast then, a more coercive approach to power (such as in a school dental clinic, or a *Mr Biller* type practice) emerges as successful in a working class area on account of the predominantly alienative patient orientation in the population. Practices employing less coercive forms

of delivering dental care for the same population would be less successful. Davis, however, does concede that whilst a ‘strain to consistency’ exists, this does not preclude the function of other organisational forms – his argument is that they will just struggle more to be successful. Hence although coercive control might befit a population generally hostile to practitioners’ authority, for ethical reasons this type of organisational form might be out of the question, other than say for children or prison inmates - leaving utilitarian approaches as the next best (albeit relatively less effective) option. The reason solo dental practices are singled out as being more likely to thrive among alienative populations than calculative or moral ones (Table 1), is because in solo practice, the solo practitioner’s authority is relatively more fragile and open to challenge, and challenges are more likely when interacting with patients holding with a calculative/ moral orientation. Unfortunately, studies show that clinical practise is more outdated in solo practices and the quality of care is weaker (Gordan *et al.*, 2010; Szymkowiak *et al.*, 1995). The Inverse Care Law is re-enforced.

So in deprived areas, normative approaches which emphasise the relational rather than transactional aspects of providing dental care are inclined to struggle. However, before concluding, it is important to acknowledge that dental practices delivering high quality preventive care for disadvantaged communities do exist, and that their work can be transformative for patients and the community. It is worthwhile recalling here a final lesson from Hart’s experience of providing medical practice care in the Welsh Valleys. In his book ‘A new kind of doctor’ (Hart, 1988) he details the case of Hopkin Morgan, who was 36-years-old (a coal miner), when Hart began practising in 1961. He was six feet (183 cms) tall, weighed 103kg, and drank more than 5 gallons (23 litres) of beer a week. Clinically he had high cholesterol, very high blood pressure and kidney damage. Hart describes ‘serious problems with non-compliance with (anti-hypertensive) medication, at first because he didn’t understand the importance of good control and because I didn’t understand his antipathy to taking many different tablets’. Hart reflects on his care for Hopkin 26 years later:

‘It was an unglamorous slog through a total of 310 consultations. For me it was about 41 hours work with the patient, initially face to face, gradually shifting to side by side. Professionally the most satisfying and exciting things have been the events that have not happened: no strokes, no coronary heart attacks, no kidney failure...’ (Hart, 1988)

Table 1. Kinds of practice and practice style by compliance relationship (Adapted from Davis, 1976)

<i>Types of organisational power</i>	<i>Types of patient orientation</i>		
	<i>Alienative (hostile)</i>	<i>Calculative (decisive)</i>	<i>Moral (expressive)</i>
Coercive (sanctions and threat rather than persuasion)	Salaried dental clinic (for children)		
Utilitarian (control through bartering)	Solo practice: working class area – extractive dentistry	Episodic utilisation behaviour - corrective dentistry	
Normative (prestige, affection)			Higher social class - preventive dentistry

Thus Hart makes the case that care in these communities is particularly labour intensive - the very antithesis of drives towards greater efficiency, which is the main basis for the use of markets in health care. In dentistry we find many fine examples of practitioners, who like Hart, resist the dehumanising influence of market-based systems, and instead exhibit an extent of prosocial behaviour similar to that which underpins Shaw and Dorling's Positive Care Law. Here described in qualitative data from a UK study of dental practice contracting (Harris et al., 2015b), experience of a 'deep-end' dentist establishing a preventive dentistry-based practice in a deprived area:

'You know it's taken a lot of hard work, it's taken a lot of effort, it's taken a lot of blood and guts but you know we have got there. We have got to work harder, we have got to extend the sessions, we have got to extend the hours.'

This is the type of struggle predicted by Davis (1976) when practitioners attempt to deliver care in communities with alienative attitudes. Hart (1971) identifies that courage is required of young men and women 'setting up shop' in under-privileged areas, but also that this is relatively unrecognised in the way that the profession acknowledges achievement. Since prestige is generally acquired through achieving technical excellence and successful businesses, this leaves young graduates asking the question 'Which is the top and which is the bottom of the ladder?' (Hart, 1971). And of course wider social attitudes regarding inequalities and even the incentives and governance arrangements in the health system itself, make practising in better-off areas more appealing. It can therefore be no surprise that practitioners with the highest morale tend not to gravitate to the places where morale is most needed, and when we see the Inverse Care Law repeated in a whole range of health care settings, including dentistry.

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