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Letter from America: UK and US state-funded dental provision

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Objectives: Current UK and US economic conditions have re-focussed attention on the need to deliver dental care with limited finance and resources. This raises hard questions determining which services will be offered and what they should achieve to satisfy public demands and needs. We consider impending dental health reforms in the US and UK within the context of contemporary experiences to identify issues and delivery goals for the two nations. ***Background*:** The paper provides a brief history and background of the development of social dental care models in the UK and US, highlighting some differences in state-funded delivery of dental care. ***Shifting Demand:*** From the 1950s, demand for dental treatment has increased and acquired a more complex composition growing from predominantly surgical and restorative treatment to encompass preventive care and cosmetic services. ***Prioritising care according to need:*** Despite improvements in general health and technology, inequalities in access and utilisation of dental care are still experienced, primarily by groups with low socio-economic status. ***Delivery: balancing resources, demand and need:*** In developing and delivering reform agendas, much can be learned from previous policy interventions. Pressures of cost, coverage, and capacity, besides demand versus need must be carefully considered and balanced to deliver quality service and value for users and taxpayers. ***Conclusions:*** Ethical and moral consideration should be given to making services *needs*-driven to address high treatment requirements rather than the high care demands of the *worried well*. This challenge brings the additional political pressure of convincing many of the voters (and subsequent complainers) that their demands may be less important than the needs of others.

Key words: *health care reform, dental care, comprehensive dental care, dental health services, health services accessibility, national health programs, United States, United Kingdom*

Introduction

For many years there have been concerns about the *inverse care law* (Tudor-Hart 1971) being alive and well in dentistry (Jones, 2001); those who need services most are least likely to access them. As oral health in higher socio-economic groups shows a trend towards improvement, the opposite has been occurring in disadvantaged groups (Petersen *et al*., 2005). Delivering health care has always been a perennially thorny issue of debate between policy makers, practitioners, and public to agree equitable systems within limited funding to deliver a quality service that gives value for money for taxpayers. The current economic downturn (partially coinciding with changes of governmental direction in both the UK and US) highlighted that financial pressure is a key factor to consider alongside political and social wishes to facilitate access to dental treatment for disadvantaged patients.

The acute re-focus on the necessity to deliver dental care within financial limitations raises hard questions around wants and wishes, ultimately determining what services should achieve as well as what will be offered to the public to satisfy demands and needs. In an attempt to shed some light on these questions we will consider commonalities and differences and what can be learned from the US and UK health systems. We will also consider the impending dental health reforms in both countries within the context of contemporary experiences to identify issues and delivery goals for the two nations. Although we are examining the proposals of the UK Coalition the prime focus is upon the NHS reforms in England.

The UK coalition government is committed to annual increases in health spending in real terms but financial growth is likely to be limited. The Quality, Innovation, Productivity and Prevention Challenge aims to identify cost efficiency savings without which the demands of the increasing and ageing population are likely to cause a funding deficit of between £15–20 billion (Brocklehurst *et al*., 2011; Department of Health, 2010a; H.M. Treasury, 2010). In the US, federal spending on Medicaid and Medicare, the government funded health insurance schemes, rose from 2.2% of gross domestic product (GDP) in 1985 to 5.6% in 2011. Medicaid and the Children's Health Insurance Program (CHIP) spending, jointly financed by Federal and State governments, accounted for 1.8% of GDP and 17% of total 2010 public health care expenditure. Faced with overall rising costs, States could limit services covered by, or eligibility to Medicaid, which would lead to slowing federal spending (Congressional Budget Office, 2012). Whilst State actions to control costs may focus for example on restricting provider rates, limiting benefits, and lowering drug spending these may also be augmented with overall savings made by payment and delivery system reforms and adopting community-based care models (Smith *et al.,* 2011).

In the UK, National Health Service (NHS) policy is to provide equity and equality in access to all services (De-

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partment of Health, 2009); in the US these are regarded as complex issues previously lacking a unified policy platform to unite and direct stakeholders (Schwartz, 2007). Impending reforms in both countries seek improvements in coverage, access, and in streamlining delivery of high quality services and preventive measures.

The US 2010 Patient Protection and Affordable Care Act (PPACA) will extend coverage of both the Medicaid and the CHIP insurance plan, as well as allowing insurance plans to include oral care for children (Children's Dental Health Project, CDHP, 2011). PPACA has encountered much resistance but was upheld by the Supreme Court this year by the slenderest of margins; but funding is still awaited to enable many of the wide-reaching, multiple strategies to be implemented (CDHP, 2012). The Senate Committee on Appropriations has recently approved a funding measure for Labor, Health and Human Services, Education, and Related Agencies that will help realise some of the provisions contained within PPACA. This bill will seek to improve oral health by funding State-level infrastructure and capacity, a public education campaign, development of strategy and care delivery models for preventing early childhood caries and towards improving training in dentistry and dental hygiene. To improve access to preventive care it is notable that the Committee favours revising Medicaid regulations so dental hygienists may provide basic care outside of a dental office (House Appropriations Committee, 2012).

Developments are anticipated for other PPACA provisions following the Supreme Court decision and no doubt as eagerly anticipated as the forthcoming 2012 US presidential election. A national commission may review workforce capacity, development, training, education and research. All States would participate in national oral health surveillance systems. The Medicaid and CHIP Payment and Access Commission may also review payments to dental professionals and report to Congress. Prevention initiatives include state-wide, school-based dental sealant programmes, and a national public education campaign promoting oral health (CDHP, 2010).

NHS dental services have experienced numerous policy interventions over the past 20 years bringing a series of changes for providers and users. The UK Coalition government announced its aim to introduce a new NHS dental contract for England based on a capitation system of remuneration, with incentives to preserve high quality standards (Department of Health, 2010b). The bill was introduced to Parliament in 2011 attracting much opposition, debate and a "listening exercise" was passed to become the Health and Social Care Act 2012. Following consultation new legislation allowed for pilots of schemes to proceed. Three contract models are being piloted in 70 dental practices across England. The resulting information will be used to further develop the final shape of the new NHS dental contract. A standardised oral health assessment and accredited clinical pathways plus a new Dental Quality and Outcomes Framework (Department of Health, 2011) will be used to measure the quality of work undertaken and the clinical outcomes achieved. The aim is that dentists will be rewarded for the quality of care provided rather than the number of courses of treatment provided. Other primary aims of the reforms are to increase access to NHS dentistry and focus on improving the oral health of schoolchildren. Commissioning dental services will become a central NHS Commissioning Board (NHSCB) responsibility rather than a local one. Proposals are currently being explored to establish dentistry within the new structures of the NHSCB and clinical leadership within Local Dental Professional Networks as an integral part of the NHSCB to use informed advice on local issues and needs (British Dental Association, 2012).

Background

The US has a private sector-dominated system of dental health care that is de-centralised and fragmented, operating largely on a "fee-for-service" basis (Jonas *et al*., 2007). It is mainly funded through insurance schemes administered by private companies paid by employer contributions, employee paycheck deductions, and cost-sharing via co-payments and deductibles. Medicaid, the largest state-funded scheme for children and adults, involves transfer of funds between federal and State governments (Iglehart, 2007); it is a means-tested social welfare programme based on needs, but poverty is not the sole qualifier. Recipients must also come within defined eligibility categories including age, pregnancy, disability, blindness, income, citizenship, and residency status. Medicaid is administered at state level with federal stipulations around categories that, if not met, can endanger State receipt of federal funding. Different funding levels to States and flexibility of eligibility produces many variations in delivery and provision. Administered under the same umbrella, CHIP makes provision for uninsured children in families whose income is low yet above the qualification threshold for Medicaid.

In the UK, the introduction of the NHS in 1948 brought structure to health provision replacing a disorganised mixture of care delivered by the private sector, charitable institutions, municipal facilities, and small general practices. Administered by the public sector, it is universal at the point of access and funded mainly by taxation and partly by national insurance contributions (Dawson, 2004). The NHS put access to dental services within the reach of ordinary people. Dentists were central to its success by improving levels of oral health and worked hard to reduce the suffering of millions of people. Dentists remained predominantly self employed independent contractors operating as individual businesses contracted to the NHS; for many years they were remunerated on a fee-for-service basis via a national contract.

Shifting Demand

In 1948 the historical burden of poor oral health led to a huge demand for free NHS dental services; to offset spiralling costs co-payment charges were introduced in 1952. Over time, demands changed and the profile of patients seen and the treatment provided reflected not only general improvements in social conditions but also the impact of NHS efforts and technological improvements. From 1968 treatment courses shifted from dentures to fillings rather than extractions. By 1988 young people had markedly reduced caries levels and many required no restorative treatment at all (Kelly *et al*., 2000).

From the 1950s a similar decline in tooth loss modified demand and case-mix in the US. In addition to widespread fluoridation such shifts have been attributed to technological advancements and increased attention to preventive measures. Dental insurance became more common and, as in the UK, a similar pattern of expressed needs emerged with some preponderance for cosmetic dentistry (Eklund, 1999). Older adults with dentures typically make fewer demands on treatment resources. Middle-aged people are the main consumers of often costly dental maintenance whilst younger adults require less restorative/prosthetic treatment. Because many children and teenagers have fewer restorable carious lesions, their demands will shift towards more preventive requirements and fewer complex restorative treatments in the future (Lader *et al*., 2004). Despite these general improvements in population oral health in both the UK and US, there are profound disparities in oral health, with dental disease concentrated in some (usually disadvantaged) groups within the general population (US Department of Health Services, 2000).

Despite recent oral health improvements, demands upon dental services have not decreased markedly. Over the past decade demands have shifted concentration away from medical necessity; from alleviation of pain, discomfort, and control of disease; to aesthetically enhancing appearance through cosmetic dentistry and orthodontics (House of Commons Health Committee, 2008a,b). For various reasons a significant part of the population does not use dental services unless oral health problems arise. Conversely, many people access and utilise dental services on a regular and asymptomatic basis; these *"worried well"* patients tend to be concerned with appearance and have low levels of need but consume a significant proportion of healthcare resource. This trend highlights the pressures of demand on services as opposed to meeting needs (Steele *et al*., 2009).

The 2009 Adult Dental Health Survey (Health and Social Care Information Centre, 2011) shows continued improvement in adult dental health since 1998. The majority of survey participants attended regularly predominantly for check-ups and scale and polish services, whilst around one third attended for urgent treatment because of problems with their teeth. A clear gradient was evident; the oral health of disadvantaged groups in society was worse than that of more affluent groups, with consequent negative impacts on quality of life. The need for extractions and treatment for abscesses were the only treatments that had a percentage increase over the period (1% and 2%, respectively), and were more prevalent in lower socioeconomic groups.

The overall improvement in dental health stands in sharp contrast to increasing NHS expenditure on dental services. Gross expenditure on primary care dentistry in England was £1,293 million in 1998. This includes patient charges of £388m and realised an expenditure of £27 per person (NHS Health and Social Care Information Centre, 2008). Expenditure steadily rose in real terms to reach £2,730m in 2009/10, £600m of which were patient charges, and gross expenditure per person was £52.75. This trend occurred in spite of the decline of the economy commencing in 2008 (Laing & Buisson, 2011).

Prioritising care according to need

There are established links between poor oral health, poverty, and recognised barriers preventing access; such determinants include geographic, age, and ethnic minority factors (Watt and Sheiham, 1999). Inequalities in treatment need, likelihood of experiencing dental pain, and utilisation of dental services are evident according to social class, gender, and age (Pau *et al*., 2007). Data from the 1989 US National Health Interview Survey showed that individuals in low socioeconomic status groups were more likely to experience tooth pain and not having had a dental visit in the previous year. Individuals in low status groups who reported experiencing tooth pain tended to endure it without dental care (Vargas *et al*., 2000).

There is a need to preserve access to urgent treatment for those who do not participate in continuing care (Steele *et al*., 2009). Emergency service incidents are a drain on resources in terms of manpower and finances costing around 15 times more than if treated as outpatient cases (Schwartz, 2009). In the US this situation affects already scarce Medicaid funds, diverting them from other cases (Okunseri *et al*., 2008; 2012). The period 1997-2006 also saw a disturbing increase in UK hospital admissions of children from relatively deprived areas mainly for extractions due to caries (Moles and Ashley, 2009). This has a bearing on costs in the UK, when the government intends to achieve efficiency and costs savings in all departments and services (Department of Health 2010a; H.M. Treasury, 2010).

Publicly funded clinical care should seek to avoid further polarising access to dental care by providing treatment services in areas that may be described as "*dental ghettos",* where poverty and patients with high treatment needs are concentrated. In England, in the early part of the last decade Dental Access Centres (DACs) were opened in areas with limited availability of NHS general dental services to provide unregistered patients and irregular attendees with emergency treatment and access to routine and ongoing care. The majority of DAC users had poor oral health and high treatment needs; whilst the emergency purpose was fulfilled, DACs were not viewed by users as providers of routine care and did not appear to be an optimal setting for establishing a continuing care relationship with high needs patients (Milsom *et al*., 2009). In areas bordering on semi-affluent socio-economic status, DAC users included those with high care demands and low needs. This suggests some of the semi-affluent clients also used the service as a source of convenient care in areas where there is competition to access limited availability of general dental services (Harris and Burnside, 2007). From 2013 in England, commissioning of NHS dental services will move from being undertaken by local Primary Care Trusts to become the responsibility of a central NHS Commissioning Board. This should provide an opportunity for some degree of national oversight to ensure equity in distribution of limited resources.

Delivery: balancing resources, demand and need

Despite improvements in oral health and increases in funding, inequalities in access and utilisation of services remain in the UK and USA; a desire to address these problems is identified in the health reforms of both governments (CDHP, 2010; Department of Health, 2010b). Before the 2010 election of the UK coalition Government, access to dental services and rising costs were identified as areas of concern by the House of Commons Health Select Committee (2008a). Both the US's PPACA and the UK Coalition proposals seek to address the broad range of issues dominating delivery of social dental health care with focussing principally on coverage and access. Fundamental to any state-funded program is a necessity to assess need and demand to ensure resources and taxpayers' money are targeted to where they accrue the most benefit. As part of the US's PPACA, data items collected by a national oral health surveillance system will be expanded (when funding becomes available): while all States will be required to participate, this will take some time to produce meaningful information for central analysis. In the UK, a central statutory NHS Commissioning Board will commission and manage NHS dental services. Centralisation may have some advantages in reducing overall costs and appeasing public and political concerns over meeting need and satisfying demand, but the danger in dispensing with local commissioning is losing the ability to match services to local needs. The commissioning process should be informed by a Joint Strategic Needs Assessment undertaken by Local Government and local arms of the NHSCB however the details of this process are yet to be finalised. Moving to a remuneration system based on capitation payments and a light-touch approach to performance management, may provide an incentive for dentists to reduce clinical activity without necessarily producing any gains in dental health (Goodwin *et al*., 2003; Holloway *et al.*, 1990). It may also make patients with high treatment needs unattractive to dentists; perhaps risking widening inequalities in access to and utilisation of services and ultimately increasing the oral health divide between rich and poor. Therefore the impact of additional incentives within a capitation-based contract, whether that is weighting capitation payments according to need or the quality of care provided need to be carefully assessed.

The US State Exchange system will allow both stand-alone dental plans and comprehensive insurance plans to include oral care for children. Federal grants (supporting school-based health centres to provide oral health services and financing increases to Medicaid and CHIP) aim to increase access for those in poverty. The English proposals also aim to improve access and oral health, especially in schoolchildren; there is also a continued political commitment to universal access as declared in the NHS constitution (Department of Health, 2009). The preventive elements of these proposals are laudable as they also contribute to encouraging continuity of relationships between dentists and patients, as well as enhancing access opportunities for those willing and able to embrace them.

Aligned with assessing need and demand is the capacity to deliver care, another fundamental aspect of state-funded systems. As part of the US PPACA, a National Health Care Workforce Commission has been envisioned to review oral health care workforce capacity, development, and training. Federal grants and financial assistance will fund residency programmes and training of dental students, practicing dentists, dental hygienists, and alternative dental health care providers. Funds for stipends, loan repayments, and institutional grants will be made available to encourage Dental Schools' and individuals' commitments to public health and caring for underserved and at-risk communities. The UK government proposed to progressively reduce Department of Health involvement in education and training (Department of Health, 2010b). Efforts to develop capacity should be matched with measures to encourage personnel to remain in state-funded services: otherwise there is a risk of a conveyor belt effect of advantages in capacity gained by recruitment being negated by difficulties retaining experienced staff (Goodwin *et al*., 2003; Holloway *et al.,* 1990). Dental practice is a business and many graduating dentists face financial pressures to secure employment, pay off loans, and work towards future plans in dental practice. In the UK, devolving responsibility to healthcare professions could result in training determined by business demands overshadowing training in response to the health needs of the population.

The business side of dentistry and the need to ensure profitability cannot be ignored. Simply increasing reimbursement is not the sole answer to inequalities in consumption of healthcare resources as, for example, many Medicaid enrolled children do not access regular care; and there is a reluctance of dentists to accept Medicaid patients because of low reimbursement rates, missed appointments, and time-consuming paperwork (Schwartz, 2007). The English proposals are reminiscent of the Steele Report recommendations for blended contracts (Steele *et al*., 2009) but careful thought is needed to avoid perverse incentives. It has been demonstrated in the UK that capitation encourages dentists to register more patients but incentivises under-treatment (Service Delivery and Organisation Programme, 2010). In contrast, fee-for-service and activity targets can incentivise dentists to undertake less time consuming work such as extractions at the expense of complex and lengthy treatments such as endodontics, crowns, and bridges which require more time and material (Tickle *et al.*, 2011).

Prevention measures have apparent favour in both countries. In the US such support may increase if and when a large scale public education campaign to promote oral health focusing on at-risk populations is rolled out, together with grants to investigate the effectiveness of disease management programmes. All US communities will theoretically establish school-based dental sealant programmes; extraordinary funding will assist in improving their infrastructure to assess oral health care needs, delivery systems, and data gathering. In the UK, the Coalition government aims are intended to achieve good dental health and focus on the oral health of English schoolchildren. The devolved administrations of Scotland and Wales already have national prevention programme policies (Scottish Executive, 2005; Welsh Assembly Government, 2002). On one hand, this approach ought to be carefully thought through as the provision of

preventive dental services may not be a more cost effective use of taxpayer's money than services focused on treatment (Russell, 2009). On the other hand, focusing on purely restorative treatment for disadvantaged groups instead of supporting preventive approaches may put an unacceptably high strain on public funds (Watt and Sheiham, 1999).

Though not explicitly referring to the practice of dentistry, the UK Coalition government proposals make reference to commissioning services from *"any qualified provider"*. This implies using market forces to extend patient choice and value for money for the commissioner and by extension the tax payer. If mechanisms are not put in place to ensure that robustly assessed local needs are integral to service planning decisions, greater competition could encourage providers to practice in areas where demand is high and the returns more lucrative. Demand-driven systems require careful monitoring as markets rarely incorporate provisions to prevent profit incentives diverting delivery of dental services away from where they are most needed towards areas where there is most money to be made (Burström, 2009).

Conclusion

Demand as willingness and ability to pay for a commodity such as cosmetic dentistry is readily distinguished from a need for services to preserve and improve health. Unmet needs in the context of welfare and dentistry are associated with negative outcomes and bringing harm to individuals. This harm can be seen as a social disability, and impairing the ability of the disadvantaged individual to function in society (Doyal and Gough, 1991). These differing perspectives on quality outcomes bring state-funded dental services to a crossroads, facing a fundamental question: what should be expected of them in the future, within a need-based system (House of Commons, 2008a). There remain significant demands and needs to provide state-funded dental care in both UK and US, leading to growing pressure on limited public funds. If scant resources are consumed by demand rather than allocated according to need there is a danger that those groups who could benefit most from dental health care will suffer (Burström, 2009).

Steele *et al*. (2009) recognised that the difficulty of change is not in articulating a vision but in its implementation. Within context there are similarities with the US PPACA in that practicalities must be considered; for example, the current downturn in global economies. Whilst the economic downturn is apparent and acute, it is generally the case that issues over scarcity of resources in relation to public spending on services have always been thorny and debated. The national financial pot is finite: administration of public spending is generally perceived in terms of decisions of rationing along utilitarian lines. It will be interesting in years hence, with hindsight, to consider how the reforms have been received, and to evaluate what progress has been made as regards their implementation. A UK political commitment has been made to the founding principles of the NHS; it will remain to be seen if the offer to the public is driven by clearly defined values to address need rather than demand. Across the Atlantic, simply increasing Medicaid funding is not a panacea: there are also capability and workforce issues in the US. Diverting resources to increase utilisation needs to be accompanied by training to prepare the dental workforce to meet the oral health needs of groups with access problems, such as the elderly and children (Dolan *et al.*, 2005). Alternative modalities of dental professionals are rightfully gaining salience in the various scenarios hypothesised for the future.

In a time of scarce public resources and uneven decline of dental disease, ethical and moral considerations should be given to making services *needs*-driven to address high treatment requirements rather than high care demands. This may mean shifting consumption of care away from the *worried well* – likely to bring the additional political pressure of convincing most of the voters (and subsequent complainers) that their demands are less important than the needs of others.

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