



A HEALTHY MARKET?

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braced for change?

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Unlike many other areas of healthcare, dental patients are frequently 'well' when they attend for care and treatment. In contrast to general medicine or surgery, it could be said that dentistry is akin to servicing your car, as opposed to repairing it after a crash. This poses singular problems in terms of utilisation of services and prioritisation against other acute health needs.

In many ways, and in many countries, dental health appears to be isolated from general healthcare. And yet in other ways, in the early 21st century, it faces similar challenges to those in general healthcare: the rising costs of both labour and materials, increasing patient awareness and expectations and, significantly, the developing roles and relationships between public and private sectors in its provision.

As a generalisation, dental health has improved across Europe in the past 20 years. Although data is not always precisely comparable, figures quoted by Widström and Eaton in 2004¹ show an overall improvement in health amongst 12 year olds in Western European countries during this period, and they suggest the beginning of a similar trend amongst the more recent accession countries of the EU. UK data from government Adult Dental Health Surveys shows a significant improvement in adult dental health also, with the 'toothless' proportion of the adult population falling from 30% to just 13% between 1978 and 1998².

Tooth loss, however, is a less relevant part of the oral health story in developed nations as the population increasingly seek more advanced, more technical and above all more aesthetic outcomes from their dentistry. As in the US in the 1980s and 1990s, a rising proportion of children attend for orthodontic care (braces) and the market amongst adults for 'smile makeovers' and tooth whitening, as we shall see, is growing rapidly in Europe.

However, these two ends of the dental spectrum – tooth extraction and cosmetic dentistry – also characterise the dilemma in dental care provision. Even within the most advanced nations, pockets of serious dental disease remain. Some research suggests that the gap between the highest and lowest socio-economic groups, in terms of disease levels and regular dental visits is expanding³. Dental ill-health still causes significant morbidity and is estimated by one British employee benefit website⁴ as costing 15 million working days in the UK each year.

Toothache is seldom classified as a health emergency in most secondary care sectors: very few fatalities are recorded (although there are rare and media-attracting exceptions). But to anyone who has experienced acute toothache in the middle of the night, such a classification is plainly absurd – and to many individuals, it is a risk well worth minimising by regular attendance for preventive care or early intervention.

Additional significance attaches to the fact that dentistry's two chief target diseases – dental caries and periodontal (gum) disease – are for the most part, eminently preventable, both on an individual and a population-wide basis. A good diet which minimises refined sugar consumption, good oral hygiene and public water fluoridation are all proven methodologies. Public health measures such as education and the encouragement of effective home care using fluoride toothpastes have been shown to be cost-effective approaches to the improvement of the oral health of society.

Yet dentistry is different, and this difference is reflected not just in the diversity of approaches to its provision across Europe, but also, for example, in Canada, a nation which has prided itself in the past on its comprehensive state healthcare system: a recent survey of 200 agencies, government and professional organisations concluded that "dental health is isolated from general health"⁵.

¹ Widström E, Eaton KA (2004). Oral healthcare systems in the Extended European Union. *Oral Health prev Dent*; **2**: 155-194

² "Adult Dental Health Survey: Oral Health in the United Kingdom 1998" (1999) Dept of Health, England

³ A futures study of dental decay in five and fifteen year olds in England (2005). Office of Public Management, London

⁴ www.bupa.co.uk

⁵ Main P Leake J, Burman D (2006). Oral Health care in Canada – a view from the trenches. *J Can Dent Assoc* **72**(4):319.

In Australia, universal healthcare coverage excludes dentistry, with a minimal public dental service: “overall, dental care remains a pawn in state-commonwealth political squabbles”⁶.

In this unusual health market, this paper reviews the disparate markets and policies for oral healthcare within European nations, their impact on health outcomes and dental experiences for consumers, and most significantly, how the balance between public and private provision in the market can best serve national and individual interests going forward.

Funding of oral healthcare in European countries

Dentistry developed as a separate healthcare profession comparatively late. In England and France the earliest codification of dental procedures took place in the late 18th century and the emergence of university schools of dentistry was not widespread until the 20th century. In the comparatively recent past, dentistry was an unregulated profession and in a number of western European countries, numbers of unqualified but “apprenticed” practitioners remain in practice.

The practice of dentistry has evolved in distinctive ways in different countries and it is difficult to characterise a ‘European’ approach. Geographical and societal factors as well as political history and approach to general healthcare have all had an influence.

Kravitz and Treasure (2004)⁷ note that, whilst overall healthcare spending varies greatly across the countries of the EU, it is impossible to accurately state what proportion of this is dental expenditure. Interpretation of ‘dental’ varies greatly and in many countries the majority of expenditure is in the private sector and difficult to quantify. Widström and Eaton have suggested that public funding of dental care in 2000 varied from less than €25 per capita in accession countries to more than €170 in five of the existing EU states.

Kravitz and Treasure also identified two main models of European public dental healthcare provision, each with two subtypes:

1. The **National Health Service type** is characterised by public provision financed through taxation together with some patient co-payments. It co-exists with a varying proportion, from country to country, of liberal (private practice) provision.

- ✦ The **categorical** subtype limits provision to certain target groups, such as children, the elderly and low-income families. Examples are to be found in Cyprus, Denmark, Iceland, Ireland, Malta, Norway and Spain.
- ✦ The **universal** subtype is, in principle, available to all, but access and choice of service may be limited. This is the pattern in Finland, Greece, Italy, Sweden and the UK.

2. The alternative **Social Insurance type** is funded through compulsory public health insurance, sometimes supplemented by private insurance. Co-payments are common and the balance is typically reimbursed on claiming from the fund. Again, private practice co-exists, but may be regulated to some degree.

- ✦ An **income ceiling** subtype exists in Germany and the Netherlands which excludes some adults from access to some or all care available within the scheme. Here there is mainly private provision of care.
- ✦ Where **no ceiling** is in place, other criteria, such as target groups (children, medically compromised, low income) determine full access, with remaining groups having limited access. The remaining states of the EU, including the majority of accession countries, fall into this category.

There is therefore a complex provision of dental health care across the EU States with funding deriving from four sources to varying degrees in each country: taxation, public/mandatory insurance funds, private insurance and individual patient contribution.

⁶ Schwarz E (2006). Access to oral health care – an Australian perspective. *Community Dent Oral Epidemiol.* **34**(3): 225-31

⁷ Kravitz AS, Treasure ET (2004). *EU Manual of Dental Practice*. The Liaison committee of the Dental Associations of the European Union. London.

As children generally have no income, it is not surprising to find that in most countries where a national health service or social security system is in place, they have the best access to publicly funded care. In other countries they may be covered by parental contributions to public or private insurance schemes.

It is notable that in a review of UK National Health Service dentistry, the York Health Economics Consortium (YHEC) argued in 2003⁸ that targeting of services towards the most disadvantaged groups was a more cost-effective way to direct public funding. Transferring the value of subsidies - currently offered to those able to afford routine care - into children's dentistry was considered a better use of funds.

Aside from the mechanisms for care which exist in different countries, cost and access to dental care are determined and influenced by a number of other factors.

In the public sector, cost is determined either through a set scale of fees for individual dental operations, or by a sliding scale of reimbursement, which may have either a monetary ceiling per operation or per course of treatment, or alternatively may be on a percentage basis. In the latter case, dentists may be able to charge up to a maximum fee or to have an unregulated fee-scale.

In the private sector, fees are largely unregulated (although the Czech Republic, Slovakia and the Netherlands are exceptions). Again – with the exception of the UK and Sweden, where some schemes operate on a per person or capitation principle (covered later in this paper) – fees are set either per operation or by surgery time plus materials. Private insurance reimbursement is typically subject to a ceiling, per operation or per annum and may again be on a percentage basis or to 'benefit limits' for individual items.

Costs across Europe for dentistry therefore vary widely between individual countries and are also linked to the economic development and status of each State. Costs will also vary within countries dependent upon local business costs, being typically higher in major cities.

Dentist earnings, too, vary across the EU, largely in line with economic development of States. In (non-EU) Switzerland earnings average €140,000; in Germany and the UK €85,000, falling to €18,000 in Greece and under €12,000 in the eastern accession countries.

This cost spectrum has increasingly given rise to the development of 'dental tourism' with the accession countries and particularly Hungary and the Czech Republic actively marketing lower cost cosmetic and surgical dentistry to the more affluent (hence more costly) western countries. Spain and Portugal are also increasingly popular destinations. There are several dozen websites many of which offer an initial consultation in the country of origin and significantly cheaper costs for advanced treatment.

A significant factor in cost and also access to dental healthcare is the number, availability and earnings of professional personnel. The European average population to dentist ratio in 2003 was 1:1156⁹ with Greece having the lowest (1:800) and Spain the highest (1:2700) percentages. These imbalances also lead to dentist migration and, in some cases, dentist unemployment.

European Directives 78(686) and 78(687) paved the way for harmonisation of dentist training and standards and for the free movement of dentists across the Union. Intended to come into effect in 1980, it has taken much longer to be adopted across the Union (from May 2004 in the accession States). However, migration has steadily increased and the regulatory bodies of most States allow – with some specific conditions such as language testing – free movement within the original 15 States.

Full harmonisation of dentist training and the implementation of the Bologna Declaration (1999) which was intended to formalise a five year cycle of training to Masters Degree level is still also some way off achievement.

It is worth noting also that national laws in relation to the ethical obligations of healthcare professionals also affect access to some degree. Some states limit the size (and hence the opportunities for economies of scale) of dental practices whilst in Ireland, Portugal, Greece, France and Italy no advertising of services by dentists is permitted.

⁸ Driffield T, West P (2003). *Oral Health and Dental Care – a New Agenda*. York Health Economics Consortium.

⁹ Kravitz; op. cit.

In general, the Nordic countries have a longer established tradition of providing substantial state-clinic care for children and more advanced public health functions. In these generally high-taxation economies, some trends in the 1990s towards greater private sector usage appear to have been unsuccessful¹⁰.

In central and western Europe, social security and national health service arrangements give more limited access to a wider range of citizens, alongside active private practice components, whilst in Mediterranean countries, broadly speaking, the private sector is predominant. In Eastern Europe, there is an active transition from the previous state-run healthcare systems and private practice is beginning to flourish.

And what of the consumer?

One aspect of dentistry – highly important to the patient - has not been addressed. Although prevention has a high potential for success, dental treatment – even for early signs of disease – is interventive and, moreover, conducted on a highly sensitive and delicate part of the body. In most societies, dentistry was – and often is still - perceived as potentially painful and discomforting.

Recent advances in technology, equipment, materials and pharmaceuticals have meant that the physical experience of 21st century dentistry can now be both comfortable and painless, whilst developments in customer care and the physical environment of the practice can render it calming and supportive.

Despite such advances, research suggests that patients desire a high level of trust in their regular dentist. In a large survey in the UK in 2002, the Office of Fair Trading reported that 33% of patients chose their dentist because their family had always gone there and 25% had gone on recommendation. Some 32% chose a dentist on the basis of location, but only 2% based their choice of dentist on price¹¹.

This survey was carried out as part of a major Government study into the private dental market in the UK. A further finding was that, whilst consumers appeared to change dentists only rarely, they looked for competence, quality of work and cleanliness as their chief aims in making a choice. This broadly supported earlier findings by Demos (1996) reported below.

One difficulty which the consumer faces with dental services is the ability to judge both competence and quality of work. Accordingly, consumers have to accept a proxy judgement of a dentist's competence and this necessitates a 'Regulator' to ensure that only qualified and competent dentists may practise.

Registration and licensing for the practise of dentistry again varies across Europe, with some countries having independent Regulators, and others requiring membership of a professional association plus a licence from a government ministry. Evidence of education, citizenship of the EU, health and, in about half the countries in the EU, vocational experience in a training environment is required.

Continuing professional development during a dentist's career is also generally considered necessary to ensure continuing good practice, and is also a requirement in almost all EU States (although some are still finalising this requirement).

If the consumer may take assurance about the 'competence' of a dentist, it is less easy to judge quality of work, except by the crudest of measures: does the filling fall out, does the toothache continue after treatment, is the crown an ill-matched colour?

As an occupation, dentistry blends high technology and precision engineering on a small scale, with the medical skills of diagnosis and therapy. It is, therefore, not surprising that the patient enters the dental consulting room or surgery with a low knowledge base.

Quality of work can be professionally assessed by a number of means. It is possible – as in the British National Health Service – to carry out post-treatment checks on patients by independent dental examiners. But this is costly and not routinely replicated in other European countries to any extent. In the United States, Peer Review is a requirement for dentists in most states and is invoked should a dispute arise about the quality of care provided. State licensure requirements may also require US dentists to submit samples of work carried out. Private insurers may also require pre-treatment approval or post-treatment quality checks.

¹⁰ Widstrom E, Ekman A, Aandahl LS et al (2005). Developments in oral health policy in the Nordic countries since 1990 *Oral Health prev Dent* 3(4): 225-35

¹¹ Ipsos-UK (2002) *Survey of consumers' experience of dental services*. For: Office of Fair Trading, London.

An alternative way of judging dentists' standards of care is to vet the structure and process of their practice, as opposed to the clinical outcomes. This may be done through accreditation, either by a professional body, such as a dental organisation, or through a certificated quality assurance review, such as ISO 9002. Again, although accreditation, for instance in the UK is carried out by the British Dental Association (Good Practice Scheme) and by one dental plan provider (Denplan Excel accreditation), such schemes are not currently widespread.

Consumer organisations tend to inveigh against the dental profession on the grounds of price or variance of diagnosis, rather than on quality of work *per se*. Dentists, having for the most part a monopolistic position, have not been unduly concerned by such arguments.

Dentistry remains an occupation which – except in a few countries – offers secure employment, but also demands high intellectual skills, a long training course and great dexterity. The cost of dental premises and equipment is high and – other than in public clinics serving children, which we have seen are found in only a few countries – the establishment and maintenance of a private practice also requires private capital.

Dentists feel that they provide a useful service ranging from the relief of pain and the correction of childhood malocclusion to highly sophisticated dental prostheses such as titanium implants and aesthetic porcelain or zirconia restorations. There is the general view that the market will prevail and whilst a few patients will undertake 'dental tourism', the inertia of trust that binds dentists and patients will largely remain intact.

To achieve a balanced market of supply and demand, migration of dentists away from relatively 'over-provided' countries is occurring more. In the UK alone, less than 35% of new dentist registrations in 2005 were 'home trained' dentists and over 50% had qualified in other countries of the EU or EEA¹². Some dentists are also migrating from countries such as Germany where the Social Insurance system, hitherto a relatively generous rewarder of dentists' fees, is now undergoing review as the costs of healthcare mount¹³.

A Dental Consumer Study: the OFT Report 2003

The UK Office of Fair Trading (OFT), in its 2003 report into the private dental market, proposed four broad remedies to assist consumers.

- Firstly, it proposed that access to basic information before committing to a particular dentist, such as indicative prices, the cost of initial consultation and whether treatments were available under publicly funded arrangements. Additionally an itemised bill should be provided on completion of work.
- Secondly, the statutory guidance on adherence to professional standards issued by the General Dental Council should be strengthened.
- Thirdly, the right to complain and to obtain redress was felt to be lacking. It proposed that all practices should have an 'in-house' complaints system and that an independent private procedure should be in place where 'in-house' measures failed (this was implemented in the UK in May 2006).

Finally, the OFT proposed that the restriction which had been in place in the UK since 1921 preventing dental technicians supplying the public directly with dentures and restricting the work of dental hygienists and dental limited companies should be lifted (this was implemented in the UK in July 2006).

One issue which is common to most of the countries in Europe is the 'piecemeal' system by which dentists are paid – per filling, per x-ray or per crown for example. In the UK, such a system had been in place from 1948 to 2006 within the publicly funded National Health Service, and has only - since April 2006 - undergone significant change in England and Wales.

There has been debate since 1960 about the relevance and equity of this method of payment. Since the consumer has an acknowledged imbalance of information at diagnosis, his/her only recourse should they feel that they are being 'over-treated' to the dentist's advantage, is to seek second or third opinions. This course of action is relatively unlikely given the consumer unwillingness to change dentists.

¹² *Annual Report 2005*. General Dental Council, London.

¹³ Widstrom E, Eaton K (2004) *ibid*.

The report referred to the research by Demos in 1996¹⁴ which compared fee-per-item with capitation-based care (where the dentist receives a set monthly amount to maintain a patient's dental health). Demos found that whilst there was a countering opportunity for dentists to 'under-treat' in a capitation system, this was less conclusive than over-treatment in a fee driven regime. This suggestion is supported by work from the Scottish Dental Estimates Board¹⁵ which showed that under a fee-per-item system, dentists provided 15-20 percent more treatment in terms of value to patients who were exempt from contributing to their treatment costs.

The YHEC report mentioned earlier also considered this 'fee-per item versus capitation' debate and believed that a capitation model offered better health-related and economic incentives for both providers and consumers: giving dentist more time to concentrate on preventive care and linking the cost for the patient to the achievement of better oral health through a banded payment approach. A similar approach was earlier reported as successful in a long-term comparative study (capitation versus fee-per item) in Sweden¹⁶.

The OFT found that there may be many reasons why private dentistry is more expensive than publicly provided care. One, of course, is that governments and statutory insurance funds have the power to lay down a tariff of fees (and sometimes procedures and materials) and dentists can in turn judge to what extent they wish to commit to this form of work.

In the private sector, there may be higher investment in premises and equipment. More expensive (more durable and aesthetic) materials may be employed. And the dentist and team may invest in their own development in a recognised specialty or treatment modality.

The OFT also found – and this has been reinforced by the views of the National Institute for Health and Clinical Excellence (NICE) in London, that the scientific evidence-base for some procedures, including routine scaling and polishing, and six-monthly attendance for dental examination, was insufficient. Most publicly-funded systems and many private insurance schemes place a time-bar on certain treatments. Whilst this may prevent over-utilisation (and over-treatment), reliance on too cautious a time period may also act to the detriment of patients who are particularly susceptible to dental disease, either because of their dental history or due to some accompanying medical disorder.

The most significant reason given by dentists themselves when changing from a publicly funded to a private model of care is to spend more time with patients and to work at a more relaxed pace for both parties¹⁷. This should act, to a certain extent in the interest of the consumer, since the opportunity is afforded for full medical history and diagnostic checks and also ensures that work is not carried out at unseemly speed, which can be physically and psychologically stressing for both parties. No organisation has suggested that patients should be given information about the length of appointment time allocated by a dentist or practice to particular procedures, which would give useful additional information to prospective clients.

Third Party Insurance

In concluding this brief review of how the dental market, and in particular the private dental market works in the consumer's interest, mention should be made of third party insurance schemes. These are frequently available as a top-up or an alternative in some cases to publicly funded dental care. In the US, the dental insurance market is mature and offers a number of formats, from employer-funded to flexible and voluntary policies. The average US dentist, it has been reported, deals with 14 different insurance schemes and over 50% of the working population has coverage.

Preferred Provider Organisations exist largely to promote access and maintain lists of dentists who are willing to bill the company for a discounted fee structure. HMOs or Health Maintenance Organisations often work on a capitation

¹⁴ Perri 6, Jupp B, Bentley T (1996). *Open Wide: futures for dentistry*. Demos, London.

¹⁵ Chalkley M and Tilley C (2002). *Treatment intensity and provider remuneration: dentists in the British National Health Service*. Dundee discussion papers in Economics, University of Dundee.

¹⁶ Zickert I, Jonson A, Klock B, Krasse B (2000). Disease Activity and need for dental care in a capitation plan based on risk assessment. *Br Dent J* **189**(9): 480-6

¹⁷ Research by BDRC research 2005 for Denplan Ltd

basis, but are widely seen by dentists as working to reduce fees and clinical freedom. Dental coverage is seldom offered on an individual basis because the probability of utilisation (anti or adverse selection) is high.

Where third parties such as insurers (or state funded schemes) set tariffs on a UCR (Usual, Customary and Reasonable) fee basis, this may work to the advantage of the insurer (and the employer) in restraining costs; however, the insured will frequently need to make a co-payment to reimburse the dentist's fee.

Private dental insurance for groups is less widespread in most countries in the EU, with proportionately more fees being payable directly by the consumer or by public funding in whole or in part. However, the US model is one which may increasingly be seen.

Recent research conducted for AXA-PPP healthcare in the UK¹⁸ showed that dental insurance was one of the most highly requested, but least-provided employee benefits - 40% of those interviewed desired this benefit, but fewer than 4% reported it being offered.

The future structure of the dental market: public/private provision

As seen in the preceding sections, countries within the EU vary widely in their approach to the funding of dental care. Some countries (e.g. the UK and Germany) with historically extensive state provision have looked to re-model their systems, whilst others are in a state of transition from public to private care (e.g. the Eastern accession countries). The Nordic and Mediterranean countries appear presently to be more stable, albeit largely at opposite ends of the public/private spectrum.

What does this situation hold for the future of dental care? It seems unarguable that at one end of the scale – basic healthcare, relief of pain and public health – it is reasonable for the state to bear a significant proportion of the costs, and particularly in the case of those sectors of society who lack advocacy and generally have the greatest health needs: children, the medically compromised and low income sectors.

At the opposite end of the spectrum: specialist care, cosmetic and elective dentistry, it seems equally reasonable to encourage private provision, as the cost benefit ratio is less persuasive on a societal level.

The middle ground offers most scope for discussion. Here it is tempting to view dentistry as a relatively low priority in the healthcare market. As pharmaceuticals and life-saving procedures in healthcare generally become more complex, more expensive and more expected by the population, dentistry appears to have relatively less to offer. In the 'Oregon Health Plan' which sought to control public health spending by explicit rationing in the 1990s, more dental services were initially made available to the poorer sectors of the community, but dentistry in general did not fare well¹⁹.

As reported by both YHEC and in Sweden, more consideration should be given to the introduction of 'fees for health' (capitation payments) rather than 'fees for treatment' in routine dental care.

As healthcare inflation continues to exceed GNP growth in most countries, pressure on State health budgets intensifies. This leads inexorably to the rationing or prioritisation of items of care, and to a steeply rising cost of private insurance premiums where these are used as an alternative.

For dentistry, this has a double effect. Public funding for dental services comes under pressure or threat, and so long as dental funding is directed towards 'more services for most people', its effectiveness is reduced. In the private sector, whilst high-end or niche dentistry will always be affordable for the few, the costs of financing routine good quality dental care, to which the majority of people aspire, rise, leading to postponement or cessation of regular, preventively-oriented attendance.

The private dental market has existed in Europe alongside State provision for many years, albeit in varied formats. Generally this market works well, although there are clear indications that better consumer information and the maintenance of good (and, between States, more consistent) regulation is required.

¹⁸ AXA Public Policy Research Report (2006) CommunicateResearch, London

¹⁹ Block LE, Freed JR (1996). A new paradigm for increasing access to dental care: the Oregon Health Plan. *J Am Coll Dent* 63(1):30-36

Better agreement on what constitutes 'good dental health' is needed and health outcome measures need to be agreed upon and measured, in order to give consumers a better basis for comparing the effectiveness of their care.

Most importantly, allocation of State funding for dental care should be aligned with the long-term benefits to the population as a whole and a more complementary approach between public and private sectors should be adopted.