MARKETS AND THE UNITED KINGDOM CLINICAL WORKFORCE: PROBLEMS OF SUPPLY SIDE MONOPOLY

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INTRODUCTION

The purpose of this paper is to address the remit succinctly and provocatively. Provocation is necessary as a means of questioning conservative lassitude in the development of more efficient markets, public and private, for health care and for the clinical workforce in the United Kingdom (UK).

The conservative lassitude is a product of medical dominance and supply side monopoly in the design and operation of UK markets for clinicians: of course such a policy may be efficient in that it induces income growth and does not disturb the distribution of rewards. Most clinicians do not appear to understand what a market is, let alone how it works. Nor should they! Their role is to treat patients. However, some are politically inclined and some, eg members of the British Medical Association (BMA) and Royal Colleges, are elected or appointed to 'corrupt' markets (ie. to destroy their purity (Oxford English Dictionary definition)).

A market is simply a network of buyers and sellers, who may be public or private, profit orientated or not. However, no market is 'free': the behaviour of all buyers and sellers is regulated by public and private agencies, which manipulate prices, quantity and quality to achieve their goals. Those who continue to advocate 'free markets' are clearly delusional. Coase, the Chicago economist and Nobel laureate, discussed this in the context of stock markets (Coase 1988).

> *It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are highly regulated (and this quite apart from any government regulation that there may be). It suggests, I think correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed.*

Markets always and everywhere are regulated, in response to sins of omission and commission of public and private agents. In health care these regulations are rarely evidence based and often reflect the views of 'experts', despite the fact that 'the agreement of experts has been the traditional source of all the errors through medical history' (Feinstein 1988).

This paper is divided into four substantive sections. Section one describes the nature of the UK health care system and the public and private purchasers and providers of clinical services. The second section appraises the effects of public and private finance, regulation and planning

on the availability of clinicians, the cost of care, the opportunities of professionals, entry into training and practice, specialty mix and the geographical distribution of physicians. The third section explores the success of the market in meeting policy goals and a final section discusses how policy is changing in relation to the failures of past systems. Throughout the paper the primary focus is on medical professionals in hospitals and primary care. The market for nursing staff is largely excluded from the paper, but has supply side characteristics similar to doctors.

THE UK HEALTH CARE MARKET

The UK National Health Service

Since 1948 the National Health Service (NHS) has dominated the UK health care market. Tables 1 and 2 show key statistics in UK health care. Table 3 gives some workforce data: the apparent nursing stock fall is due, in part, to reclassification due to alterations in training programmes. The NHS is largely tax financed and free at the point of use, offering a comprehensive package of care, which is rationed by clinicians and by waiting lists for elective procedures. In health care markets, public and private, patients demand health and their agents, clinicians, ration access to health care. Rationing is ubiquitous in all health care systems and occurs when 'someone is denied (or simply not offered) an intervention which everyone agrees would do them some good and which they would like to have' (Williams 1998).

The UK NHS was created in 1948 and since then has been 'redisorganised' regularly and comprehensively, in response to frequent claims of 'crisis'. The primary thrust of the 1948 Service was to achieve equity goals, in particular to improve access of the poor to primary and secondary care. To achieve this goal, and to reduce variations in the quality of care in the local government (poor law) and the voluntary sector, the hospitals were taken into public ownership. The system is publicly financed: 85 per cent of expenditure is funded from general taxation, 10 per cent from national insurance (payroll taxes) and 5 per cent from user charges, largely for pharmaceuticals (for which 87 per cent of prescriptions are exempt).

For 35 years there was an unwritten agreement between the medical profession and the government that the former would not question funding levels provided that the latter did not question medical practice. Thatcher broke this concordat. She arrived in government anxious to privatise the funding of the NHS, but proved open to argument, and recognised that private insurance was a potentially inflationary and politically unpopular option (McLachlan and Maynard 1982). Attention was switched to the supply side of the NHS, with constraints on hospital funding and demands for 'efficiency savings' in the 1980s.

In due course, the medical profession responded with claims of 'terminal decline' (Smith 1988) and 'crisis in the NHS' (Hoffenberg et al 1987). The Conservative government's response to media stories about young children made to wait for cardiac surgery was to set up a review and create the NHS 'internal market'. The focus of this vaguely defined and poorly evaluated reform was to seek to create competition on the supply side of the health care market in the hope that greater efficiency in the use of NHS funds would result. Public

funding was retained and this was distributed by a needs weighted capitation formula to purchasers (health authorities) who were required to contract with competing public and private purchasers.

The problem with this model was that the purchasers were generally weak, being dominated largely by public health physicians who were fixated with carrying out population needs assessments rather than identifying and prioritising interventions on the basis of cost effectiveness to inform contracting. As a consequence, a reform designed to challenge supply side inefficiency was still subject to dominance by local monopolies and provider cartels (Maynard and Bloor 1996).

The next cycle of NHS reform again focused on supply side inefficiencies. By the time the Blair government claimed to abolish (but in fact developed further) the internal market on their election in 1997, a major policy issue was the existence of medical errors and quality of patient care, in particular related to problems in paediatric cardiac surgery (in Bristol), in quality of cervical screening (Kent), in gynaecology (two surgeons who damaged hundreds of women) and in general practice (where a serial killer GP may have murdered up to 200 of his patients). These events are a product of the inadequacy of systems to record and manage clinical errors, and are paralleled by US and Australian data (eg. Institute of Medicine 1999).

The UK private sector

The UK private sector is limited and largely the product of waiting times and perverse incentives in the market for 'cold' elective procedures. NHS consultants in a narrow range of specialties (in particular general surgery, urology, orthopaedics, ophthalmic surgery, anaesthesia and radiology) undertake private work. The extent of their involvement varies: full time NHS consultants are supposed to earn only 10 per cent of their salary from private work and others with part time or maximum part time contracts earn much more. A Monopolies Commission report in 1995, which investigated and confirmed cartel pricing by the leading insurer (BUPA) and the British Medical Association, reports average private salaries of £40,000 for those consultants who choose to undertake private work (Monopolies and Mergers Commission 1995). Now, orthopaedic surgeons may, depending on their geographical location and the extent of the private market (largest in the South East of England), earn six figures, very occasionally in excess of £1 million in addition to their NHS remuneration.

The private acute sector is small: 10,445 beds (compared with NHS acute bed stock of around 128,000 in 1997/98), or 2.2 per 1000 population (all beds 4.3 per 1000 population) and the majority of the bed stock is owned by for profit groups. There are also private sector psychiatric beds (3700) and NHS 'pay beds' for acute patients, which generate £300 million for their public operators (table 6).

Impact

Impact on patients

- Practically all citizens use the NHS primary care system, and GPs manage 95 per

cent of daily patient contacts.
- The majority of citizens use elective NHS hospital care; a minority use the private sector (10 per cent are covered by private insurance and others pay out of pocket for elective procedures).
- Most UK citizens use NHS emergency care (the role of the private sector is minimal).

Impact on payers
- The public sector is cash limited and tax financed. Cost containment is effective, when chosen by governments. Parsimonious funding during the period 1995-2000 is to be followed by promised real growth rates of 6.5 per cent for four years (2000-2004).
- The private health care insurance market has grown little in the last decade (subscribers were 3.25 million in 1990 and 3.36 million in 1997, and the total insured (subscribers and family members) was 6.63 million in 1990 and 6.46 million in 1997). The sector faces the same difficulties and exhibits similar performance as private insurers in other countries.

Impact on providers
- There is a 'hog cycle' (gluts and shortages) in medical workforce planning, and currently the 'received wisdom' is that there is a 'shortage'. The government has increased Medical School intake by 20 per cent (to 6000 per annum) and plans an increase of a further 1000 by 2003.
- There is also an acute 'shortage' of nurses, with imports from Finland, the Philippines and South Africa. This shortage is being accentuated by an age 'bulge', with many nurses currently approaching retirement age. In the recent past, funded places for nurse training have remained unfilled, and students have quit before completion due to factors such as a training curriculum that emphasises academic training rather than practice with patients.
- The pay of doctors and nurses (and other health professionals) is the product of national collective bargaining, with independent Review Bodies taking evidence from the professions and the Department of Health. With nursing labour costs equal to around 35 per cent of expenditure of acute hospitals, parsimony often overwhelms market sense, and nurses have cycles of decreasing relative wages followed by swift 'catch-ups'. The latter is now in train again in the UK.
- The rate of growth of NHS pay for doctors generally exceeds the UK inflation rate. The myth is that they are all paid the same: in reality GPs' pay may vary due to partnership sharing arrangements, fee for service and bonus paid activities, patient list sizes and private income (eg. insurance medical checks), and consultants' pay may vary due to allocation of discretionary points and distinction awards (bonuses paid for 'excellence') and the extent of private practice.

The extent of competition

The market for nurses and doctors in the UK-NHS and the private sector is highly regulated. Market forces are slow but evident (eg. contributing to 'brain drains' on occasion). However, in the market for doctors both the NHS and the private sector tend to be price takers rather

than price makers: the supply side monopoly dominates the unexploited potential of the NHS's near-monopsony. New entrants to the private insurance market (eg. Norwich Union) lament the dominance of the alleged BUPA-BMA cartel or 'fee leadership', advocating increases in specialist staff in the NHS to drive down private sector fees for doctors.

REGULATION AND FINANCING MARKETS

Availability of clinicians to patients

Patients have free access to health care. The gatekeeper for non-emergency care is the general practitioner or primary care team. In the past it has been the GP who determined referral to hospital for diagnostic or inpatient care. Increasingly practice nurses are acquiring the power to prescribe (from a limited formulary) and refer patients to hospital. Emergency care is available rapidly on demand. Often this is criticised for lack of intensity (eg. chemotherapy and radiotherapy) and in some areas cost-effective interventions may be under-used (eg. the use of beta blockers and statins after myocardial infarction and ACE inhibitors in chronic heart failure is less than appropriate), and may exhibit social class profiles which disadvantage the poor.

Waiting rations elective care, and there are around one million patients on waiting lists. Such patients are prioritised, and many patients are treated within 3-4 months. Some waits are longer, even for cost-effective interventions (eg. up to 12 month waits occur for hip replacements and cataract removals). These long waits are a target for government policy (and funding), and may be a product of variable medical productivity linked to the generation of private practice income. Yates and others (Yates 1995, Bloor and Maynard 2000) have argued that if the average rate of activity of surgeons could be increased, much of the waiting lists could be dealt with promptly. However, this requires availability of theatres and support staff as well as willingness of surgeons to increase practice. In addition, such a policy change would undermine private practice income.

The cost of care

As seen in table 4 and 5, health expenditure in the UK compared with other OECD countries is modest. Table 4 shows the public-private expenditure mix in Australia, Canada, the UK, the United States (US), France, Germany and the OECD average. Despite Thatcher-Reagan rhetoric, this mix has been relatively stable over time. Furthermore it can be seen that in the parsimonious UK, the per capita expenditure index rose sharply in the 1990s, in large part a product of the costly 1991 reforms. Table 5 illustrates expenditure in the same countries relative to the UK. The UK was the lowest cost system in 1960 and 1996. Canada and Australia's 'excess' spending relative to the UK was similar in each year. However, the gaps between the UK and US, France and Germany increased, with the US spending twice as much per capita in 1996 compared with the UK.

As indicated previously, private health care expenditure exhibits relative stagnancy, with insurers vying for market share as premiums inflate in excess of the consumer price index.

The opportunities of professionals

Despite being a publicly financed system and with hospital practitioners being salaried state

employees, medical practitioners have remarkable independence and 'clinical freedom'. The lines of managerial accountability are often ill defined and usually poorly monitored. Both purchaser and provider non-clinical management still have relatively poor information about activity levels, the efficiency of new technologies and quality of care. Practitioners still retain considerable autonomy in adopting new drugs and new surgical interventions. The National Institute for Clinical Excellence has been responsible for evaluating the clinical and cost effectiveness of new technologies since April 1999. This is gradually creating a 'fourth hurdle' for new pharmaceuticals and informing priority setting by local purchasers and clinicians (Department of Health 1997, Maynard and Bloor 1997).

Following the recent furore over medical errors and negligence, the government is endeavouring to promote 'clinical governance' with better systems of risk identification and management. As in other parts of the world, expertise is limited: it is not obvious how to improve systems to reduce medical errors.

One element of the clinical governance system is the introduction of the Commission for Health Improvement (CHI, otherwise known as CHIMP – whose role is to sort out doctors who monkey about!). From this year, CHI has begun to visit Trusts in the primary and secondary care systems, and is responsible for ensuring that clinical governance systems are adequate.

As a result of scandals about the performance of individual doctors, the General Medical Council, responsible for registering all doctors fit to practise, is slowly being reformed. It seems likely that each doctor will have a 'portfolio' in which activities and specialism will be recorded. It is unlikely, as yet and unfortunately, that these data will include information about patient outcomes other than crude mortality, however the contents of portfolios will inform the processes of reaccreditation every five years and in time may include quality of life measures.

The Royal Colleges have proliferated, to 17 in number. There are four surgical Royal Colleges, 'governing' surgical practice in the British Isles. The first Royal Colleges were created by King Henry VIII in the 16th Century to regulate 'quackery'. The policy goal was consumer protection. The Colleges now 'govern' postgraduate education and the award of specialist status, which is necessary to practise as a consultant in the NHS and to work in the private sector. The Colleges are generously subsidised by tax breaks (from charitable status), which, inter alia, finance fine buildings and exultant wine cellars! Despite the medical 'scandals' in recent years, the Colleges have not withdrawn specialist status from deficient practitioners and appear to be less than effective 'paper tigers'. It has been suggested that the Colleges be merged either into one comprehensive body or into three larges Colleges: 'doers' (surgeons), 'thinkers' (physicians) and 'technos' (eg radiologists)!

Practically all doctors working in the private sector are also NHS employees. Only one private sector insurer (BUPA) has introduced a well-validated patient quality of life measure (SF-36) into information systems and the routine assessment of the success of surgical procedures. The challenge for public and private regulators is to design and use integrated

information systems to log and manage activity, casemix and outcomes. This is likely to emerge due to regulatory pressure (eg. from the General Medical Council) and the keen interest of NHS and private insurance purchasers of health care, who require integrated rather than fragmented data systems to ensure consumer protection.

Training programme and entry to practice

The NHS is the dominant purchaser of training for doctors and nurses. Nurses mostly practise with non-degree qualifications. The usual entry route is three years of training for a diploma qualification in general acute, paediatric or mental health nursing. This format is relatively new (since the early 1990s) and involves three years of instruction and practical experience, with emphasis on the former. During the 1990s wages increased relatively slowly, creating low prospective rates of return to new entrants, and there were unfilled training places. This was associated with a 'professionalised' curriculum, which had high dropout rates, in excess of 25-30 per cent. The current nursing shortage is therefore unsurprising.

Medical Schools dominate the structure of undergraduate medical training, and the courses tend to have all too little exposure to evidence based medicine, epidemiology, biostatistics and health economics. This gap in the knowledge base of doctors continues into the postgraduate arena, which continues to be criticised (Audit Commission ref). Training often tends to be informal (sometimes referred to as 'sitting with Nellie' after the learning process in the cotton industry of the last century), rather than rigorous, analytical and evidence based. Most doctors are encouraged to do 'research' to supplement their CVs, much of this work corrupts the evidence base due to poor design and small sample sizes as research training is inadequate.

Specialist practice entry determines access to private practice income. The majority of GPs and specialists earn little from the private sector, but those in the elective surgical areas can earn considerable amounts from private practice.

Specialty mix

The market influences specialty mix for those practitioners who have the inclination and skills to enter surgical, diagnostic (radiology) and support areas (anaesthesia). Choices elsewhere appear to be related to interest, in part a product of the charismatic teachers and other non-financial factors, such as skill and interest.

All NHS salaries for practitioners are the same regardless of specialty. However, the distribution of distinction awards is skewed towards the surgical and support specialties, reflecting in part attempts to reduce the attraction of the private sector.

Nurses are paid similar salaries regardless of specialty, but gradings may be higher in highly skilled specialties (eg. paediatric intensive care) and those who work in the private sector are paid higher salaries, which may facilitate generation of supply and enhance employer choice of able nurses.

Geographical distribution

GPs receive a similar basic income, although capitation etc means that income does differ. Some over-doctored areas (eg. south west of England) are closed to new entrants. GPs working in deprived areas have their capitation fees supplemented by deprivation payments. However these policies have been inadequate in correcting large variations in the geographical distribution of GPs. The South West of England remains well endowed whilst city centres and the North of England have few practitioners.

Hospital specialists in elective surgical specialties may seek NHS posts where private practice may be plentiful (eg. in the south east of England, where in the North Thames region 50 per cent of hip replacements are carried out in the private sector). Other specialists and those who are not interested in private practice may be motivated by non-financial returns such as pleasant environments and good schools for their children. There are no central attempts to 'direct' specialists geographically.

It is essential to remember that Hospital and Community Health Services NHS funds are distributed by a needs weighted capitation formula. Thus the geographical capacity of purchasers to employ new doctors is determined by budgets and indirectly by need for health care. Finance is a necessary condition for appointment, but non-financial issues often determine who (if anyone) applies for a post.

PERFORMANCE

The dominant agent in the market for clinicians in the UK is the NHS. Salary structures for primary care doctors (GPs), specialist consultants in hospitals, nurses and professions allied to medicine are complex. The government wishes to create an 'NHS pay spine' and reduce this complexity but progress is slow, and potentially inflationary as support for change often has to be bought! Attempts to decentralise remuneration to reflect market forces during the Thatcher years failed, as Trusts chose not to use their powers to amend centrally negotiated pay and conditions of service.

The capacity of purchasers to fund clinical posts is determined by a budget formula that equalises financial capacity to provide health care for all elements of the NHS budget except (as yet) GPs' income.

Workforce planning is generally poor and creates cycles of 'surplus' and 'shortage', which place upward pressure on pay, and often sharp, short term changes in training capacity. Workforce planning remains essentially ad hoc and subject to political whim, eg. the 20% increase in medical school intake was a result of workforce planning which ignored both variations in productivity and the scope for skill mix alterations. This 'Soviet' approach has been criticised for decades but remains inflexible, in part because it is dominated by narrow medical interests (Maynard and Walker 1997). The most recent increase (1000 places) in the intake to medical schools was a product of political choice and has no analytical basis: the Secretary of State demanded to have a 'round number' to include in the National Plan (Department of Health 2000) and accepted the suggested number 1000 without modelling of demand or supply issues. The workforce planning for nurses is similarly primitive and

reminiscent of Soviet decision making long since deceased elsewhere.

The service and resource consequences of such decision making affect the training and employment markets with long lags. If an estimate of £1 million is taken of the annual cost of decision-making by an individual doctor, recent decision-making on medical school intake has increased costs by £2 billion sometime 'downstream'. Current Ministers will, of course, have disappeared into obscurity by the time such consequences impinge on the UK NHS!

The system of remuneration of GPs and hospital consultants has been basically unaltered since 1948. An exception was the GP contract, which was reformed in 1990. Previously GPs had been paid by capitation payments, some fees for service and for training and seniority. To increase activity rates, fee per service were extended, for instance, into health promotion (most with little or no evidence base eg. yearly screening of the over 75 year olds), minor surgery (where GPs now find removal of "lumps and bumps" financially attractive, but with no reduction in their referrals to, and the activity of hospitals for similar conditions!).

By augmenting fees for services with bonuses for high levels of coverage of relevant subgroups of the GP list, achievement of high levels of childhood vaccination and immunisation and cervical cytology rates have been achieved. These reforms demonstrated that careful targeting with financial incentives for cost-effective interventions (eg. vaccination) could be highly effective.

The GPs' contract is poorly defined and obliges practitioners to provide "those services normally provided by general practitioners". This John Wayne contract, "a GP's got to do, what a GP's got to do"!, means that rigorous and conscientious practitioners, of which there appear to be many, provide comprehensive and accessible care. Some practitioners do not do this. The extent of the variation in care and access is poorly charted as there is no routine, comprehensive data collection: general practice is something of a "black hole", although the BMA asserts, without evidence of course!, that it is a cost-effective service.

The contract obliges practitioners to provide care 365 days a year ie. they are responsible for 'cover' at night and over weekends. This obligation was not seen as onerous until the 1990 contract reforms because much out of hours care was provided by cooperatives and deputising services. The new contract caused a new generation of GPs to question the "John Wayne" contract. With an increasing number of GPs being female with child-rearing responsibilities and an increased desire for leisure, the new generation began to press for a salaried service. The Primary Care Medical Scheme now offers a salaried option and in the National Plan (2000), the Government has set out its desire to extend this option. Such payment systems require careful performance management to monitor activity levels and activity mix and so that "on the job" leisure is avoided!

The methods of payment of hospital specialists remain largely as established in 1948: an identical salary structure for all specialisms, with 'bonus' payments called distinction awards. The latter, paid at varying levels (A+ [which doubles the salary for the select few], A, B and

C) were reformed with C awards becoming more generally available at the discretion of local Trusts. The rest of these awards are distributed by national and regional committees, dominated by medical practitioners.

These remuneration systems are difficult to reform because the BMA is an effective trade union, representing a supply side monopoly. Despite Government having monopolising power, it does not exert its market position being "captured" by supply side agents. The dispute over the GP contract in 1990 was fierce, but Thatcher's Secretary of State for Health was determined. Any change redistributes power and financial reward: the current Government has been negotiating with the BMA over hospital doctor pay for 2 years and has achieved little to date. The current reward system protects the remuneration of doctors and their discretion to work in a manner that meets their, rather than wider social preferences.

NEW POLICY INITIATIVES

The Government's decision to increase substantially NHS funding created a situation where the demand for workforce, particularly doctors and nurses, has increased by supply capacity is limited in the short term and will grow cumulatively over the next 5-15 years as increases in medical and nursing school capacity creates more practitioners.

In the short term, the principle policy option is to increase productivity (Bloor and Maynard JHSRP 2001). This can be done in a number of ways. Firstly they are variations in activity, especially in surgical specialisms, and if the mean can be shifted considerably more procedures could be delivered to affect waiting times. The development of consultant performance management seems likely.

Another policy is related to slavery, demonstrated elsewhere to be efficient if immoral! A less immoral slavery option than that formerly practised in the south of the US, is to oblige publicly financed doctors to work solely in the NHS. The Government proposes to do this for new consultants from next year, obliging new consultants to practise exclusively in the NHS for 7 years. Existing consultants may find this a fine policy in the short term as it protects their private practice! A potential supplement to this policy would be to require those practising in the private sector to repay the costs of their training.

Such policies would press those in elective specialisms in particular to work in the NHS more. However, their activity rates might slump if they consume leisure on the job and in place of private practice. Consequently the consultant contract has to be reformed to supplement salary with fee for services (to increase volume) and bonuses (to achieve waiting targets). Such devices would have to be managed carefully to enhance the quality of care in a NHS system, which has no systematic measurement and management of activity and medical errors.

With the development of salaried systems of paying GPs, performance measurement and management is also at a premium. The primary care budget is now cash limited and the developing Primary Care Trusts, which manage GPs and primary care, as well as

contracting for secondary and tertiary hospital care, start with a "blank sheet" in terms of devising systems of clinical governance.

The National Institute of Clinical Excellence (NICE) has made some tentative proposals about hospital referral guidelines. These are crude but emphasise the issue of the size of variation in hospital referrals between GPs and the need for criteria and management. However in this and in pharmaceutical prescribing the information systems remain crude (ie. slowly emerging from Dickensian technologies) and the management techniques are absent. Such deficiencies are unlikely to be diminished until management and incentives are better developed.

CONCLUSIONS

The UK NHS provides free at the point of consumption health care funded by public finance. Traditionally the Service has been funded parsimoniously but this has produced micro-economic characteristics similar to other more expensive systems of care. These characteristics are variations in medical practice, unproven interventions, poor measurement and management of medical errors and quality, and uneven access to proven (cost-effective) interventions to people of differing social classes. These problems are a product of public and private purchasers failing to manage efficiently independent and unaccountable produce groups, in particular doctors and the pharmaceutical industry.

Because of the central control of workforce numbers and remuneration, the effects of the marketplace are dulled and delayed. Furthermore medical capture of these mechanisms makes change difficult to achieve. Thus Thatcher's attempts to decentralise labour markets failed. The Blair government has slowly arrived at the conclusion that reform is essential to enhance productivity (both by increasing average activity rates and by altering the public-private mix of activity). Such reforms will require careful evaluation and may involve radical changes in the nature and level of doctor remuneration, with vigorous performance management.

Thus the history of NHS clinical workforce planning may be at a crossroads. Large increases in numbers have been sanctioned and there is some determination that the future labour force will work more productively in terms of activity levels and quality of care. Time and proper evaluation will tell whether such political intent will deliver greater efficiency and equity within cost controls.

Table 1: A compendium of NHS statistics: hospital care, United Kingdom

UK Health care expenditure 2000	
NHS expenditure (£million)	54,280
Private health care expenditure (£million)	3,716
Other health care expenditure (e.g. over the counter) (£m)	5,066
Total health care expenditure (£million)	63,062
Total health care expenditure per capita (£)	1,058
Total health care expenditure as percentage of GDP	6.9
NHS expenditure as percentage of GDP	5.9
Private health care expenditure as percentage of GDP	1.0
NHS expenditure by sector (percentage)	
Hospital	53.1
Community	10.3
Pharmaceuticals	12.9
General medical	7.9
General dental	3.6
General ophthalmic	0.7
Other services	11.6
Staff employed in hospitals	
Hospital specialists (consultants, SHMOs) (England 1997)	18,618
Staff grade practitioners (England 1997)	2,821
Associate specialists (England 1997)	1,140
Registrars (England 1997)	10,830
Senior house officers (England 1997)	14,434
House officers (England 1997)	3,360
Total (England 1997)	52,651
Hospital doctors per 100,000 population (UK)	112
Hospital doctors per 100,000 (England & Wales)	110
Hospital doctors per 100,000 (Scotland)	127
Hospital doctors per 100,000 (Northern Ireland)	129
Nurses per 100,000 population (UK)	741
Nurses per 100,000 population (England & Wales)	715
Nurses per 100,000 population (Scotland)	883
Nurses per 100,000 population (Northern Ireland)	1,145
Available beds in hospitals 1997-98	
Available beds per 1000 population (UK)	4.3
Available beds per 1000 population (England & Wales)	4.0
Available beds per 1000 population (Scotland)	7.2
Available beds per 1000 population (Northern Ireland)	5.6
Available beds per 1000 (excl mental health, geriatrics)	2.2
Bed occupancy (percentage, UK)	81
Bed occupancy (percentage, England)	81
Bed occupancy (percentage, Wales)	79
Bed occupancy (percentage, Scotland)	85
Bed occupancy (percentage, Northern Ireland)	81
Length of stay (days) 1996-97	
Average length of stay (UK)	6.2
Average length of stay (England & Wales)	6.0
Average length of stay (Scotland)	8.2
Average length of stay (Northern Ireland)	6.5

Source: Office of Health Economics 1999

Table 2: A compendium of health statistics: primary care, United Kingdom, 1987 and 1997

	1987	1997
Number of general practitioners (UK)	34,498	36,260
Number of GPs per 100,000 population (UK)	60	61
Number of GPs per 100,000 population (England)		60
Number of GPs per 100,000 population (Wales)		64
Number of GPs per 100,000 population (Scotland)		77
Number of GPs per 100,000 population (Northern Ireland)		61
Average list size (UK)	1856	1761
Average list size (England & Wales)		1810
Average list size (Scotland)		1412
Average list size (Northern Ireland)		1628
Single practitioner practices (percentage of total practices)		10%
More than 6 GPs in a practice (percentage of total practices)		28%
Number of patients receiving a prescription per consultation		70%
Generic prescribing rates (percentage of prescriptions)		60%
User charge exemptions (percentage of prescriptions)		87%

Source: Office of Health Economics 1999

Table 3: NHS hospital staff employment, United Kingdom, 1987 and 1997

	1987	1997	Rate of change
Medical and dental staff	48,040	68,830	43%
(per 100,000 population)	(84)	(117)	(38%)
Nursing and midwifery	515,530	373,062	-28%
(per 100,000 population)	(906)	(632)	(-30%)
Professional and technical	97,047	111,151	15%
(per 100,000 population)	(171)	(188)	(10%)
Administrative and clerical	142,662	187,580	31%
(per 100,000 population)	(251)	(318)	(27%)
Domestic and ancillary	192,259	98,825	-49%
(per 100,000 population)	(338)	(168)	-50%
Total	995,538	837,448	-16%
(per 100,000 population)	(1750)	(1419)	(-19%)

Source: Office of Health Economics 1999

Table 4: OECD health care expenditure characteristics: public and private expenditure, 1960, 1990 and 1997

	1960		1990		1997	
	% of GDP public (private)	Total Per capita (1990=100)	% of GDP public (private)	Total Per capita (1990=100)	% of GDP public (private)	Total Per capita (1990=100)
OECD	2.3 (1.4)	2	5.4 (1.8)	100	5.8 (2.0)	130
Australia	2.4 (2.6)	3	5.6 (2.7)	100	5.7 (2.6)	129
Canada	2.3 (3.1)	2	6.9 (2.4)	100	6.4 (2.9)	98
USA	1.3 (3.9)	2	5.1 (7.5)	100	6.5 (7.5)	183
UK	3.3 (0.6)	3	5.1 (1.0)	100	5.8 (1.0)	156
France	2.4 (1.8)	1	6.6 (2.3)	100	7.7 (2.1)	144
Germany	3.2 (1.6)	2	6.7 (2.1)	100	8.1 (2.4)	180

Source: Office of Health Economics 1999

Table 5: Relative health expenditure, 1960 and 1996

	1960		1996	
	% of GDP	Index (UK=100)	% of GDP	Index (UK=100)
Australia	4.9	127	8.5	123
Canada	5.5	140	9.6	138
UK	3.9	100	6.9	100
USA	5.2	134	14.0	203
Germany	4.2	123	10.5	152
France	4.8	108	9.7	140

Source: Office of Health Economics 1999

Table 6: Private hospitals in the UK, 2000

Acute hospitals
Organisation: 208 hospitals, 10,445 beds, average size of hospital 50 beds
Ownership: 52.9% of hospitals and 51.5% of beds are owned by UK for profit groups
27.4% of hospitals and 25.6% of beds are owned by charity groups (not for profit)

Psychiatric hospitals
Organisation: 87 hospitals, 3702 beds, average size of hospital 42.5 beds
Ownership: 85% of hospitals and 75% of beds are owned by for profit groups

NHS pay beds and private wings (1998/9)

Total number of NHS Trust hospitals	494
Private patient revenue	£300 million
Top ten Trusts as % of total	31.4%
Number of Trusts with private revenue greater than £2 million	37
Private revenue as % of NHS revenue	1.1%

Source: Fitzhugh Directory 2000

Table 7: Private health care insurance market, 1999

Total subscriptions 1999 (1996)		£2057.3 million (£1927.3 million)
Market share – BUPA (non profit)		49.6%
Market share – PPP (for profit)		33.1%
Annual rate of growth of subscriptions:		
1995	6.3%	
1996	11.0%	
1997	–5.2%	
1998	3.8%	
1999	8.5%	
Annual rate of growth of claims payable:		
1995	6.2%	
1996	8.1%	
1997	–10.6%	
1998	11%	
1999	7.3%	
Coverage:	subscribers:	3.6 million
	covered:	6.4 million
UK population		58 million

Source: Fitzhugh Directory 2000, Office of Health Economics 1999.

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