Trust and performance management in the medical marketplace

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‘When there is uncertainty, information or knowledge becomes a commodity. Like other commodities, it has a cost of production and a cost of transmission, and so it is naturally not spread out over the entire population but concentrated among those who can profit most from it... But the demand for information is difficult to discuss in the rational terms usually employed. The value of information is frequently not known in any meaningful sense to the buyer; if, indeed, he knew enough to measure the value of information, he would know the information itself. But information, in the form of skilled care, is precisely what is being bought from most physicians.’—Arrow¹

The marketplace for medicine is characterized by uncertainty, and its functioning essentially represents exchanges of information, as described by the Nobel Laureate in Economics, Kenneth Arrow in 1963.

Markets are networks of buyers and sellers in which goods and services are exchanged. So, healthcare systems can be regarded as marketplaces where information is traded. Markets are ubiquitous, existing in public as well as private institutions. In many cases the exchange process is informal and based on trust between purchaser and provider. Such exchanges are inexpensive. The purchaser does not have to search for evidence of the relative costs and benefits of trading with competing providers, and providers do not have to advertise and compete with their rivals for customers. Many professional marketplaces have traditionally operated on the basis of trust, but such relationships are now undermined by concerns about their efficiency and the consequent need for external performance management. Why is this happening in the medical marketplace and how can information exchange and purchaser–provider trading be managed more efficiently?

RESPONSES TO UNCERTAINTY: TRUST AND THE AGENCY RELATIONSHIP

The market for healthcare is characterized by uncertainty and exchange of information. In his 1963 paper Arrow introduced various concepts that developed the sub-discipline of health economics in terms of dealing with uncertainty.¹ Wennberg has likewise argued that uncertainty is the most important factor influencing physician behaviour. Sources of uncertainty include the classification of the patient in terms of disease condition or initial health status, the effects of treatment for a given condition and the preferences of patients.²

Consumers of healthcare are commonly ill-placed to judge how much utility (satisfaction) is likely to be derived from a medical intervention. The specialist knowledge of a doctor is required to predict the likely effects and even then there is always some uncertainty. Because of this information asymmetry, the consumer and supplier initiate an agency relationship, with the doctor helping the patient to make choices. Asymmetric information is not necessarily a bad thing. Scitovsky notes that asymmetric information is the inevitable byproduct of specialization, and that it can produce substantial benefits.³ In the case of healthcare, if the agency relationship between doctor and patient was perfect, or ‘complete’, the doctor would entirely adopt the patient’s point of view, acting as if he or she were the patient—all choices would be made to maximize the patient’s wellbeing.⁴ This is the Hippocratic ideal. The Hippocratic Oath includes the statement: I will follow that system of regimen which, according to my ability and judgement, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous.⁵

However, the agency relationship between doctor and patient is not perfect. Doctors have interests of their own—‘income, leisure, professional satisfaction, which are partially congruent and partly in conflict with that of the patient’.⁴ Williams has pointed out that consultations between doctor and patient often do not follow the classic agency pattern:

‘If the doctor were a perfect agent their relationship would then be as follows:

The “doctor” is there to give the “patient” all the information the “patient” needs in order that the

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“patient” can make a decision and the “doctor” should then implement that decision once the “patient” has made it.

If you find that description... a bit odd, try reversing the respective roles of the doctor and the patient so that it now reads:

The “patient” is there to give the “doctor” all the information the “doctor” needs in order that the “doctor” can make a decision and the “patient” should then implement that decision once the “doctor” has made it.

Does that sound more like it actually is? The point is that doctors are not perfect agents and, because of that, they have quite a lot of discretion over what they take into account in exercising their so called “clinical” judgement, so that the distinction between “strictly clinical” and “extraneous” factors is a fuzzy one.⁶

An additional complication to the agency relationship between doctor and patient is that the patient may be unable to judge the performance of the doctor, before or even after an intervention. This limits the potential of performance-related pay in addressing the problem of incomplete agency, since it is difficult to pay doctors on the basis of improvements in patient health. As Weisbrod put it, a consumer of healthcare who experiences a gain in health status:

‘...does not know whether the improvement was because of, or in spite of, the care that was received. Or if no health care services are purchased and the individual’s problem becomes worse, he is generally not in a position to determine whether the results would have been different, and better, if he had purchased certain health care.’⁷

For this reason, professionalism and self-regulation have emerged as a response to incomplete agency.⁴ Professionalism has traditionally been closely associated with autonomy and self-regulation.⁸ Codes of medical ethics and conduct have developed to reassure the consumer that the doctor will act as the patient’s agent and in the consumer’s best interests.⁹

Alongside the imperfect agency relationship between doctor and patient, physicians, as they often control the actions of teams of staff and by their actions control substantial budgets, must act as agents of their employers—hospitals, or health service funders such as government. Doctors can therefore be viewed as ‘double agents.’¹⁰ It is essential that, in acting on behalf of the patient in front of them, doctors do not neglect other patients and potential patients by ignoring the opportunity costs of treatment and other decisions.¹¹ This additional duty has been accorded

scant attention in the medical profession’s codes of ethics, professionalism and self-regulation, and increasingly has to be regulated externally by healthcare funders.

TRUST AND DUTY AS DETERMINANTS OF EXCHANGE RELATIONSHIPS

Trust is defined in the *Oxford Dictionary* as ‘a firm belief in the honesty, veracity, justice and strength’ of an individual or an organization. The attraction of trust as the determinant of human exchange is that it is potentially more cost-effective than the alternative, which is explicit and detailed contracting between purchasers and providers and costly monitoring of performance.

The stereotypical economist is supposed to believe in the market and the ‘hidden hand’ of individual greed and self-interest as the engine that creates economic growth and social prosperity. This model, much advocated by right-wing politicians such as Ronald Reagan and Margaret Thatcher in the 1980s, was often attributed to Adam Smith, the 18th century moral philosopher and economist. In his book *An Inquiry into the Nature and Causes of the Wealth of Nations*⁶ he wrote what seems an unambiguous statement about the nature of individual self-interest as the engine of economic growth:

‘It is not from the benevolence of the butcher, the brewer and the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of their necessities but to their advantages.’¹²

Smith was prolific in his writing. In an earlier book entitled *The Theory of Moral Sentiments*, he contradicted his self-interest (or self-love) argument as follows:

‘Those general rules of conduct when they are fixed in our mind by habitual reflection, are of great use in correcting the misrepresentations of self love concerning what is fit and proper to be done in our particular situation... The regard of those general rules of conduct is what is properly called a sense of duty, a principle of greatest consequence in human life, and the only principle by which the bulk of mankind are capable of directing their actions.’¹³

Duty is the ‘legal and moral obligation’ of traders or those involved in exchange in markets. The duty of the physician is to trade information honestly in the Hippocratic tradition since this creates the trust between doctor and patient. Smith recognized that trust and duty were phenomena that dominated exchange in most markets.

Economists have viewed medicine as a 'reputation good'—a good for which consumers rely on the information provided by friends, neighbours and others to select from the various services available.¹⁴ This model has been applied particularly to primary care,¹⁵ where general practices provide services differentiated from each other as a consumer response to information asymmetry. Providers of healthcare also respond to asymmetry of information by professionalism and licensure, where systems of self-regulation are introduced as an indicator of reputation.⁴ Until recently, licensure and self-regulation has been the main restraint on the activity of the medical profession. However, self-regulation relies on the trust of patients and employers: in the words of Confucius, quoted in O'Neill, 'without trust we cannot stand':¹⁶

'Each of us and every profession and every institution needs trust. We need it because we have to be able to rely on others acting as they say that they will, and because we need others to accept that we will act as we say we will...'.¹⁶

Trust between doctor and patient may obviate the need for detailed performance review by the consumer or a 'guardian' of that consumer. However, this is not the only relationship requiring trust. Relationships between doctors and employers (in England, ironically, primary care and hospital 'trusts') and implied relationships between doctors and funders (those who pay insurance premia or tax) are also based on trust. As patients we trust our doctors to do their best for us as individuals. As taxpayers we must trust them to take a more societal view, to avoid waste of resources, and to prioritize care in ways that maximize the health outcomes from scarce healthcare budgets. This reflects the double-agent role that doctors fulfil.

In recent years, there appears to have been erosion of trust in both relationships between doctors and patients, and between doctors and their employers and funders. Whilst the erosion of patient trust in physicians has been discussed in the media, it is not shown in opinion polls. The public, according to the polls, continue to trust doctors more than most other professional groups. However, the lack of trust between clinicians and the funders of healthcare is obvious and it is funders, both in the public and private sectors, who are increasingly investing in consumer protection and performance management.

EROSION OF TRUST: THE UK GOVERNMENT AGENDA

Trust has eroded over recent years, and O'Neill refers to a 'crisis of trust':

'Mistrust and suspicion have spread across all areas of life, and supposedly with good reason. Citizens, it is said, no longer trust governments, or politicians, or ministers, or the police, or the courts, or the prison service. Consumers, it is said, no longer trust business, especially big business, or their products. None of us, it is said, trusts banks, or insurers, or pension providers. Patients, it is said, no longer trust doctors (think of Dr Shipman!), and in particular no longer trust hospitals or hospital consultants. "Loss of trust" is in short, a cliché of our times.'¹⁶

The response to this crisis of trust in the UK has been an 'accountability revolution—a regime of regulation, inspection, target-setting and audit that has penetrated the entire public sector and parts of the private sector too'.¹⁶ In terms of regulating doctors, this regime includes the introduction of job plans and appraisal for consultants, reflecting an erosion of trust between employers and hospital doctors, and also increased regulation of all doctors through the General Medical Council¹⁷ and through new institutions such as the National Institute for Clinical Excellence¹⁸ and the Commission for Health Improvement.¹⁸ O'Neill¹⁶ suggests that, far from increasing public trust in institutions and professionals, this new accountability has often had the opposite effect.

For 40 years the implicit NHS contract consisted of doctors being autonomous and free to practise with little or no review of their work by their peers or purchasers. The Government funded the service on trust, taxpayers paid for it on trust and patients used it on trust. No-one questioned whether the services delivered were effective, efficient or appropriate.¹⁹ Until the 1980s these trust-based relationships continued to rely on the profession and individual practitioners to monitor their own performance, in terms of doing the best for both patients and payers. This relationship was not unique to the UK and is evident still in most countries where western medicine predominates.

However, by the 1980s evidence of uncertainty about the effective, efficient and equitable use of funds was beginning to emerge and to be disseminated. McKeown concluded that the major factors inducing increases in the length of life of the UK population in the 19th and the first half of the 20th century had been greater affluence, better nutrition and improved public health rather than anything related to the actions of the medical profession.²⁰ Cochrane raised doubts about the evidence base of medical practice,²¹ questioning whether many interventions had been proven effective. Wennberg's identification of large medical practice variations in the USA attracted the attention of researchers elsewhere, who found similar differences.^{22,23} This evidence began to undermine trust relationships, mostly between the medical profession and the

government, which has a role to protect patients from ineffective care and taxpayers from inefficiency.

The Thatcher administration was suspicious at best of public sector performance, in terms of achieving either individual or societal goals: she trusted the 'free market' and financial incentives more than professionalism, self-regulation and the duty of individual practitioners. After an initial attempt to privatize the funding of healthcare in the 1980s, the Government, in particular the Prime Minister, became convinced that the problem with the NHS was not the way it was financed but the way in which healthcare was provided, in particular the inefficiency of the processes by which care was delivered to patients.²⁴ Thus the activity of doctors and other health professionals, which had been trusted by patients, policy makers and taxpayers for decades, quite suddenly became, because of an expanding evidence base and ideological views, the focus of policy attention and political suspicion.

After an initial attempt during the 1980s to deprive the hospital service in particular of funds, in the hope of inducing efficiency by parsimony,²⁵ media pressure for improvement of the NHS erupted during the 1987 election. At a time when patients and the electorate trusted doctors but lacked trust in government policy around the NHS, Mrs Thatcher opted for radical reform of the provision of healthcare. Her Government emulated policies in the Netherlands and New Zealand by developing the purchaser-provider split in an internal market to produce explicit 'value for money' in the delivery of healthcare.

Although on the whole doctors were still widely trusted to do their best for individual patients, the Government no longer trusted the profession to fulfil its societal obligations by delivering timely and efficient care, prioritizing appropriately between patients. This lack of trust resulted in government demands for performance management and greater transparency and accountability. Medical audit and job plans for consultants were introduced, and a revised general practitioner contract, with graduated fees for service, offered incentives to deliver observable and transparent types and levels of desired care, some of which lacked an evidence base.²⁶ The policies adopted were crude and unpredictable in effect. The then President of the Royal College of Physicians, Sir Raymond Hoffenberg, described the Thatcher reforms as 'instead of ready, take aim and fire, the Government chose to make ready, fire and then take aim' (Hoffenberg R, personal communication). Unsurprisingly the reforms had only modest effects.²⁷⁻²⁹

Accumulating evidence has continued to erode the trust relationship between medical practitioners and their funders, and increasingly this is spreading to a lack of trust between doctors and patients. Medical errors—familiar to historical figures such as the Hungarian Semmelweis who was concerned with hand hygiene as early as 1861³⁰ and

Florence Nightingale who wished to measure outcomes in terms of whether patients were dead, relieved or unrelieved after treatment³¹—have been rediscovered. There is apparently in the NHS a one in ten chance of an adverse incident for hospital admissions.³² International evidence about medical errors ranges from USA estimates of 3–5% of hospital admissions³³ to 16% in Australia.³⁴ As Kohn *et al.* show, even at the modest US rates medical errors kill more Americans each year than breast cancer, road traffic accidents or HIV–AIDS. Medication errors alone kill twice as many US citizens per year as died in the World Trade Center. These figures are increasingly making governments and other healthcare funders consider whether trusting healthcare professionals is enough.

Individual instances of bad practice in the UK where numerous patients died or were maimed (e.g. paediatric cardiac surgery in Bristol, the cases of the two deficient gynaecological surgeons in Kent and North Yorkshire and the serial killings by the general practitioner Shipman) have demonstrated not only the failure to act on evidence but also the lack of transparency in much clinical activity, and have undermined the trust of patients and the general public in the medical profession. This has been exacerbated by media reports, which obviously focus on sensational cases rather than the everyday good practice that exists throughout most of the healthcare system. The failure to measure and audit outcomes systematically, in terms both of mortality and of health-related quality of life, remains remarkable,^{35,36} and hampers attempts to confirm or refute concerns over quality in healthcare.

TRUST AND THE 'MODERNIZATION' AGENDA

After two years of parsimony, the Blair Government increased NHS funding dramatically. The resultant inflation in expectations and finance set challenging management goals since capacity to deliver the 'modernization agenda' is highly constrained. The Government's approach is top-down, with the centre setting ambitious and numerous targets about access times and quality enhancement. At the same time, the Government is restructuring the service in a market-oriented manner (there is contracting between purchaser agents such as primary care trusts and providers such as hospital trusts, with 'strategic health authorities' seeking to develop a role as local referees). In addition, there are major policy changes in medical training and employment, including a 30% increase in medical school intake, reforms of junior doctor training and the implementation of the Working Time Directive.³⁷

The market-oriented approach of the current government develops policies introduced in the Thatcher era. Foundation trusts are to be based on the mutual non-profit-making model that has been abandoned as inefficient by

many insurers and hospital groups in the USA (e.g. Blue Cross and Blue Shield). There is no evidence that foundation trusts will perform any better than the original NHS trusts did.³⁸ They can be interpreted as a means by which government is once again seeking to make professionals more accountable locally, reducing the reliance on trust and duty of individuals.

Foundation trusts will be created in 2004, and increasingly will work within a framework of contracts trading for explicit volumes of activity at specified prices. Such trading will be underpinned by an NHS system of pricing, analogous to diagnostic-related-group pricing in the rest of Europe and the USA but paradoxically referred to in England as the 'flow of funds' model.³⁹ Thus, managers will require and use data from trading and from routine administrative data (e.g. hospital episode statistics) about type and level of hospital doctor activity. Healthcare purchasers and providers will not rely solely on trust as a means of delivering adequate healthcare at community level, and of prioritizing to cover the needs of the local population.

This will be complemented by increasing attention to patient outcomes. Since 1987 there has been a Confidential Enquiry into Peri-operative Deaths (CEPOD).⁴⁰ The initial focus of this work was on surgical deaths and the work of surgeons and anaesthetists. With the National Institute for Clinical Excellence (NICE) having taken over CEPOD from the Royal Colleges, this work is now being extended to physicians. Furthermore, the Royal Colleges have begun to emphasize the need for individual practitioners to validate their hospital episode statistics (HES) activity and mortality data⁴¹ so that practice comparisons can be made.

These data, about comparative activity and outcomes, are essential ingredients for the performance management

of clinicians. Performance-related pay for both general practitioners and hospital consultants is now seen as necessary by the Government as a means of shifting the average level of activity upwards to meet access targets. An analysis of routine activity data (HES) reveals considerable variation in consultant activity in surgical specialties.^{42,43}

Thus in Figures 1 and 2 it can be seen that some consultants in general surgery in this anonymous English hospital have very low activity rates and some others have high rates. With adjustment for casemix these variations lessen but do not disappear. There are various possible explanations for this variation. First, the HES data may be inaccurate. These data cover all inpatient admissions to NHS hospitals in England. They have been collected since 1987 but not used routinely for management. Most trusts make little attempt to validate the data and clinicians generally scorn them as inaccurate. Efforts are now being made both to validate the data and to use them for management—for example, in December 2002 each trust in England received the performance data of their surgeons by specialty, with the national distribution for comparison.

Even when the HES data are validated, variation is likely. This variation may be the product of NHS constraints and private sector activity, as well as the natural propensity of humans to vary. A surgeon may have a lower activity rate because he has access to too few theatre sessions, because of bed shortages and because of staffing shortages. Each of these elements requires careful quantification and management as emphasized by Yates for some decades.^{44,45}

The constraints may take many forms. A consultant may work for a Royal College and regional specialist committees as adviser and examiner. Also consultants may have lower NHS activity rates because of their private practice.

Figure 1 Ranked activity per consultant surgeon: general surgery, finished consultant episodes (FCE) per year, 1999–2000 data (Source, Department of Health). ■ = All trusts; | = this trust

Figure 2 Ranked activity per consultant surgeon: general surgery, case-mix-adjusted activity per year, 1999–2000 data (Source, Department of Health). [Case-mix-adjustment by assigning episodes to healthcare resource groups, then multiplying each by its national average reference cost and summing by consultant.] ■ = All trusts; — = this trust

Whether consultants are full-time or maximum part-time, they may practise to varying degrees in the private sector. Whether this reduces their NHS activity is an empirical issue.

Issues such as these remain contentious. With data to investigate such questions neglected by researchers and managers, it is clear that powerful defendants of the trust relationship (who deem such measurement unnecessary) continue to dominate this marketplace. Many practitioners still do not regard accurate measurement of process, activity and outcome as necessary for ethical and efficient practice, and purchasers and patients find it difficult to challenge let alone change such attitudes. However, improved quantitative analysis of practice is in the interests of both clinicians and patients.

PERFORMANCE MANAGEMENT: UNDERMINING OR ENHANCING TRUST?

How can a clinician demonstrate ethical and efficient practices without good data that describe his or her activities and outcomes? This can only be done by assertion rather than evidence. With the erosion of trust amongst the purchasers of healthcare worldwide, assertions of this sort are potentially damaging for practitioners and their patients. Every practitioner should have data which describe:

- What services they provide, in terms of quantity, case mix and quality
- How much activity they provide, relative to their peers in the specialty, adjusted by case mix
- How they provide care, in terms of using explicit criteria related to the evidence base when abandoning and adopting new technologies

- To whom they deliver care in a socialized system such as the NHS (these data should relate to differences in the socioeconomic class of patient treated relative to population need).

Answers to these questions, in the interests of transparency and accountability, are necessary conditions for the maintenance of the trust relationship. At present whilst general practitioners may keep practice records, their data are generally not linked regionally or nationally and consequently comparative analysis is difficult. The new general practitioner contract with fee-for-service payments to practices could remedy some of these data deficits, especially for the ten clinical areas that affect practice income.⁴⁶ However, this will require considerable investment in data collection and performance management systems as a supplement to trust relationships.⁴⁷

The recent debate about the consultant contract epitomizes the current lack of trust between purchasers and clinicians. The former want greater accountability and the latter continue to expect professional autonomy in their decisions. Consultants have no wish to be 'managed' or to have their income determined in part by performance criteria. The impasse in the contract implementation could have been avoided if the profession had been demonstrably transparent and accountable in its activities. That it is not is a product both of the failure of the profession to demand and use accurate data collection systems to monitor its own practice and ensure the maintenance of trust, and the reluctance of the NHS to invest in data systems whereby practitioners could be defended against unwarranted criticism and value for money could be demonstrated.

While the Thatcher Government failed to implement job plans for consultants, the current Government is

determined to succeed. Consultant appraisal is in place and will be increasingly informed (as will job plans) by HES activity data and outcome measurement. Revalidation of clinicians by the General Medical Council requires activity and outcome data and this will be developed by the collection of private sector HES information which, in conjunction with NHS HES, will give a fuller picture of practitioners' activity and outcomes. The policy-makers' drive to ensure value for money is creating expensive and complex systems of performance management. They will be difficult to implement.

As Williamson has emphasized, the main lesson to be derived from the published work on contracting is that 'all complex contracts are unavoidably incomplete'.⁴⁸ Inevitably contracts have gaps, errors and omissions in them and consequently the transactions costs of enforcement make them expensive. Contracts, by their nature, induce strategic behaviours which may be inconsistent with the goals of their architects; for instance, Robert Evans, the Canadian economist, has argued that the only way to pay doctors is to change their contract every three years. Such changes are necessary, he argues, because doctors are skilled operators in the labour market and will 'game' or exploit the inevitable loopholes in a contract within that period (Evans R, personal communication).

As a consequence, the challenge for policy-makers is to develop improved contracting and performance management while minimizing the transaction costs of these exchanges. The obvious way to do this is to enhance trust and self-regulation of contracts.

THE WAY FORWARD

Spectacular but superficial reforms are no substitute for incremental evidence-based reforms of relationships between clinicians and their patients and funders. Karl Popper is regarded by some as a right-wing philosopher but, as James has argued,⁴⁹ he consistently made a case for economic intervention by the State. Furthermore his criticisms of 'solutioneering', defined as the jumping to conclusions without defining the policy problem, and 'holism', the belief that problems had to be resolved as a whole, are particularly pertinent to discussion of trust and duty in medical practice against a background of continuous 'redisorganization' or reform of the NHS. Hampton argued that clinical freedom, defined as the freedom to do what you will, irrespective of costs and outcomes, is 'at best a cloak for ignorance and at worst an excuse for quackery'.⁵⁰ However, the established deficiencies in healthcare provision throughout the world, protected by irresponsible insistence on clinical freedoms, will not be resolved by solutioneering and holism.

The policy problems associated with trust and the efficient delivery of healthcare to patients are complex and require careful collaboration between purchasers and providers if contracting costs are to be minimized and healthcare provision improved. The development of practitioner and professional responses to the erosion of trust is an urgent matter.

Change in professional regulation will not be without cost. At present, the Royal Colleges and the General Medical Council are politically powerful but all too ineffectual in terms of capacity to regulate doctors and obviate the necessity for external regulation of the profession. The Royal Colleges enjoy tax breaks and taxpayer-funded grants but do not have the will or capacity to protect patients as their architects desired. Radical reform of these institutions, with mergers into at most three Colleges for the UK—one for surgeons, one for physicians and one for diagnosticians (e.g. radiologists)—is needed. These bodies would require funding on a scale sufficient to allow effective analysis of individual performance. Thereby, the data could be used to uphold the trust placed in doctors by patients and funders.

The formal and informal regulation of markets, networks of buyers and sellers, particularly if based on competition and Smith's self-love, may further undermine trust and duty. Regulatory development needs careful evidence-based nurture, since the present collaboration (which it will erode) may be more efficient than incomplete contracts that generate perverse and costly behaviours. The supply of collaborative activity in the medical marketplace is endangered by professional short-sightedness and purchaser frustration at the inappropriate use of clinical freedom. The time has come for clear definition of roles and responsibilities, rather than battles about narrow issues related to the short-term political agenda, e.g. remuneration. The best way for the medical profession to maintain public trust and regain that of the funders would be to embrace transparency and collaborate with purchasers and hospital managers in developing processes that confirm good practice and give early warning of deficient performance. If the profession continues to resist such processes in this uncertain and risky market, it can expect increasingly intrusive and draconian monitoring of a kind that in the long run will be to the detriment of all—doctors, patients, taxpayers and healthcare funders.

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