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Price Controls or Control through Prices? Regulating the Cost and Consumption of Prescription Pharmaceuticals in the UK, 1948–67

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I

One of the distinguishing characteristics of the world's pharmaceutical industry in the second half of the twentieth century is the extent of regulation which governments impose upon it: 'Regulations vary from country to country, but all governments intervene extensively to ensure that national standards are met',[1] particularly where the quality and safety of the product is concerned. In the world's largest pharmaceutical market, the USA, the role played by the Food and Drug Administration (FDA) in ensuring the safety and quality of the drugs it allows to be marketed is well known, as similarly is the work of the Medicines Control Agency (MCA) in the UK. Over the last 50 years the major international corporations, which dominate the industry, have become increasingly global in the scope of their manufacturing and marketing operations. Responding to this, the regulatory systems have, especially in Europe, taken some steps towards harmonising national and creating trans-national standards of quality and safety.[2]

Many countries also regulate pharmaceutical prices as part of the effort to contain their increasing health care costs. Price regulation, however, has remained distinctively national in character and structure, using a variety of mechanisms ranging from direct to indirect control.[3] Within Europe, for example, Germany and the Netherlands attempt to control drug prices indirectly, by operating 'negative lists which exclude certain classes of drugs from national reimbursement schemes'.[4] Germany also relies on 'vigilant enforcement of competition law … to prevent firms abusing their dominant positions within therapeutic submarkets'.[5] By contrast, in Italy, Belgium and Greece there are direct price controls on drugs; in France and in Japan price controls combined with approved product lists have been used.[6]

It is widely recognised that the consumption of prescription medicine is a complex transaction, involving a number of parties, for few of whom, certainly in the period covered by this article, price was either a significant or even a known factor. There is the doctor who prescribes the medicine and who also, in some countries such as Japan, supplies the medicine.[7] In the UK, as well as in other countries such as France, prescription drugs are mainly supplied by retail pharmacists or by hospital pharmacies. Wholesalers supply doctors and pharmacists with the drugs manufactured by the industry. The cost of the prescription drug, in whole or part, may be met by the patient directly or reimbursed by an insurer. The latter may be a private insurer or, where the state is the

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insurer, the government. In the UK, where there is a non-insured state health scheme, the cost of most prescribed drugs is met directly by the government and has been since 1948. It is only partly offset by prescription charges, first introduced in 1951 and charged at various levels since then.[8]

Since the start of the National Health Service (NHS), the cost of prescription medicine has been, and indeed continues to be, an issue. In its first year of operation, following its inauguration in 1948, the total cost of running the NHS was considerably higher than had been anticipated and proved to be something of a shock to ministers and civil servants. Over the next few years the costs of running the service continued to rise. One readily identifiable component of the total charges for providing medical services was the 'drugs bill', the cost of pharmaceutical products prescribed by doctors, both in hospitals and in general practice. In June 1948, the last pre-NHS month, 6.8 million prescriptions were dispensed by chemists; by September that year the monthly figure had doubled to 13.6 million.[9] This proved to be the harbinger of a changing pattern in the prescription and consumption of medicine. That this 'explosion of demand for medication' was not merely a temporary phenomenon was soon evidenced in what came to be called the 'inexorable rise in the drug bill' throughout the period covered by this essay – and beyond.[10]

Between 1948 and 1967 three committees investigated the cost of drugs, Guillebaud, reporting in 1956,[11] Hinchcliffe in 1959[12] and Sainsbury in 1967,[13] all producing large amounts of paper in doing so. The rising drugs bill has been largely attributed, at the time and since, to two factors; the first of these was the universal access to medicines created by the NHS, as compared with the pre-war period when only a small proportion of the population was insured and, of the rest, those who could not afford to pay for treatment resorted to traditional remedies or patent medicines.[14] The second reason was the rapid rate of discovery and introduction of new drugs, many of which offered a more effective treatment than the pre-war palliatives and most of which were much more highly priced, in the post-war period.[15]

However, while recognising the force of these factors, government attention focused on the second reason, the prices charged for the drugs. Successive governments since 1949, until and including the present, have been involved, with varying degrees of intensity, in detailed explorations of the cost of drugs and in negotiations with the industry's representative body, the Association of the British Pharmaceutical Industry (ABPI), to find a way of containing the overall cost of prescription pharmaceuticals by reducing the prices of individual drugs. The first formal price regulation scheme, as opposed to some piecemeal *ad hoc* reductions agreed with individual companies, was introduced in 1957, and known as the Voluntary Price Regulation Scheme (VPRS). Since 1978, the scheme – adapted and changed in some respects but based on the same principle – has been known as the Pharmaceutical Price Regulation Scheme (PPRS).

This essay explores the origins of the attempts to control the prices and the consumption of pharmaceuticals in the UK, examining the process by which the VPRS emerged as the instrument of control, in the government papers of the time, principally, although not exclusively, those of the Ministry of Health. The closing date of 1967 was chosen since the papers of the Sainsbury Committee were the last record of a full investigation into the industry to be in the public domain. Over the 20-year period, the issue of control of the delivery of healthcare has been characterised as a battle, largely concerned with money, between providers and policy-makers.[16] The article seeks to

identify the positions adopted by the main protagonists playing a part in determining a regulatory scheme as remarkable for its format – unique in Europe – as for its longevity. Section II explores the rising drugs bill in the UK in the context of the 'therapeutic revolution',[17] while section III looks at the VPRS negotiations in the 1950s. Section IV discusses the changing context and climate of the 1960s and section V suggests that consumer demand for medicine, apparently largely ignored in the regulatory negotiations, raises issue of dependency which merit further discussion and exploration. Conclusions are drawn in section VI.

II

Until the late 1930s, doctors had very few specific medicines – magic bullets – to cure diseases. Research by organic chemists had led to the discovery of analgesics such as aspirin in the late nineteenth century, followed by the arsenical drugs, effective against the venereal disease, syphilis, in the years before the First World War. There were some significant advances in anaesthetics in the inter-war years, while the discovery of vitamins and hormones, particularly insulin, led to the development of new therapies.[18] The start of the therapeutic revolution, the period lasting until around 1960, during which, as Le Fanu described it, new medicines 'came cascading out of the research laboratories just as if medicinal chemists had hit the jackpot (as they had)',[19] is most usually put in or around 1938. In that year May & Baker introduced to the market its new sulphonamide drug, sulphapyridine, discovered and developed the previous year; M & B 693 offered for the first time a cure for bacterial pneumonia.[20] It was followed by the development and introduction of other sulphonamide drugs.

During the war itself, the most significant anti-infective drug discovered as yet, penicillin, was developed in an Anglo-American collaborative programme. It would be difficult to exaggerate the importance of penicillin in its impact on healthcare and patient expectations. In the early 1950s penicillin was the single most important prescription pharmaceutical in Europe and the USA; in the latter alone its sales at that time accounted for ten per cent of the industry's total turnover.[21] Penicillin was not, for a variety of reasons, patented and that meant that pharmaceutical companies across the world could and did embark on manufacturing it. Consequently, the prices of penicillin products fell very rapidly in the immediate post-war years, reaching virtually a commodity level by the early 1950s, much to the dismay of some of the industry's players.[22]

The discovery and introduction of the next wave of anti-infective drugs, the antibiotics, offers a sharp contrast to the story of penicillin. The first broad-spectrum antibiotic was streptomycin, which was found to be effective against tuberculosis. It was patented by Merck in 1948 and was made available on licence to other manufacturers in the USA and in Europe through the Rutgers Research Foundation.[23] There followed in the early 1950s a spate of discoveries of antibiotics by US firms, including aureomycin, chlormeycetin, terramycin and tetracycline, each of which was patented by the company discovering and introducing it – Lederle, Parke Davis and Pfizer (the last two) respectively. These corporations decided, however, not to license other companies to manufacture and sell the antibiotics, thus ensuring that they would obtain and retain monopolistic profits during the lifetime of the patent.

Other pharmaceutical innovations of the 1950s and the 1960s, such as the steroids (cortisone drugs), cardiovascular drugs such as the beta-blockers and new psychoactive drugs for treating problems of the central nervous system, were patented, reinforcing what now became the dominant paradigm of the pharmaceutical industry and one which has proved so enduring through the second half of the twentieth century. It reads thus: for the industry's corporations, research and development led to innovation and the introduction of new products: patenting the discoveries enabled the innovating company to enjoy monopolistic profits (for a time), which in turn financed more research and development, leading, it was anticipated, to more new products. Competition in the industry, therefore, depended on innovation rather than on price.[24]

Through the NHS, access to the new drugs as they were introduced to the market was universal in the UK. In the first year of the NHS, the demand for medicine, reflected in the 121 million prescriptions issued (the total bill was £16 million), apparently took Ministry of Health officials by surprise and led the Minister himself, Aneurin Bevan, to say publicly that he shuddered to think of the 'cascade' of medicine that members of the British public were pouring down their throats.[25] It soon became evident that this was not solely an initial surge in demand, as people who had not previously been able to afford medical advice took advantage of the new system. The number of prescriptions continued to rise, from 204 million in 1949/50 to 227 million in 1950/51, while total expenditure on pharmaceuticals increased from £32 million to £35 million in those years. In 1951/52 the total cost of the drugs bill rose to £45 million, although the number of prescriptions issued was a more stable 220 million.[26] In fact, the total number of prescriptions peaked in 1955/56 at 228.5 million, dropping back to 203.2 million in 1958/59, although the total cost of the drugs bill reached £70 million in the mid-1950s and continued to rise steadily to £100 million in 1961.[27] While the number of prescriptions per form also fell from 1.7 in the mid-1950s to 1.5 by the end of the decade, the average cost per prescription continued to rise through the decade. In 1953/54 the average cost per prescription was 49d (£0.20), but by 1956/57 it was nearly 63d (£0.26) and in 1958/59 it reached 78d (£0.33).[28] It was these figures which, for the government, sustained the view developed in the 1950s, and encapsulated by a Ministry of Health official in December 1960 thus: 'partly because of lack of ''consumer resistance'', partly because a number of important products are protected by patents from competition, it has never been thought safe to rely on normal market factors to regulate prices of proprietary drugs supplied under the NHS through family doctors'.[29]

III

During the Second World War, as in other countries and alongside most of British industry, pharmaceutical manufacture and distribution in the UK had been controlled by the Ministry of Supply, to ensure that supplies were adequate and that their direction to the armed forces took priority. A National War Formulary, listing essential drugs, was drawn up in 1941 by the Ministry of Health.[30] When the war ended, however, the pharmaceutical industry's association, the Wholesale Drug Trades Association, which became in 1948 the Association of the British Pharmaceutical Industry (ABPI) moved quickly to ensure the abolition of wartime controls.[31] Playing on the need for exports, which drove national economic policy in those years, the Association secured the

concession that no lists of approved products for prescribing would be embodied in the provisions of the National Health Service Act, which became law in 1946. The ABPI continued to oppose the idea of an approved list, whenever it resurfaced, its merger with the Pharmaceutical Export Group in 1950 increasing the strength of its lobbying powers.

As the cost of the NHS, including the drugs bill, started to emerge, so did the alarm of ministers and departments. At the Treasury, there was a bullish enthusiasm for the introduction of prescription charges. As early as October 1949 a memorandum noted that a charge of one shilling (£0.05) per prescription would raise £10 million but, it went on to say, the most important effect of imposing such charges was not the revenue which would accrue, but rather 'the reduction in demand for service which they would create. There is no doubt that many people are demanding drugs and appliances which they would go without or buy at the chemist if the National Health Service were not free'.[32]

At the Ministry of Health a search began to find ways to control expenditure, relying heavily on the work being done by the Joint Committee on Prescribing, appointed in July 1949 to develop a classification of drugs by their therapeutic value.[33] The Committee's full classification was not completed until 1953, but the Ministry was able to use some of its findings well before that in its attempts to check what it described as wasteful prescribing, that is the prescribing of products (many of them dating back to pre-war times) considered to be of little or no therapeutic value.[34]

The Ministry distinguished further between wasteful, irregular and excessive prescribing. Checks on irregularities (for example, doctors prescribing for people who were not their patients) were delegated to the Executive Councils (140 of them at regional level), which administered at local level the services provided by GPs, dentists, opticians and pharmacists.[35] Investigations into excessive prescribing were the responsibility of a Prescribing Investigation Unit, set up in March 1950 at the Ministry of Health. GPs whose prescribing costs were found to be 'substantially' above their area's average triggered an investigation by the Unit, leading, where there seemed to be a case to answer, to visits and/or letters to the GP by the Regional Medical Officer. Some cases were referred to Local Medical Committees.[36]

The classification developed by the Joint Committee (which in 1954 handed on the work of adding new products as they became available to a smaller committee, the Cohen Committee), was used by the Ministry as the basis, in 1954, to open negotiations on prices of some products with individual firms. This resulted in some price reductions, the Ministry recorded, but not enough and the negotiating process with individual companies was time-consuming. Later that year negotiations began with the ABPI 'in the hope of securing agreement on a formula which could be applied to the whole field, so avoiding the need for negotiation with each firm individually'.[37] It was, according to the Treasury, the criticisms, which 'make up in venom what they lack in verbosity', of the Public Accounts Committee (PAC), which had forced the issue in the first place.[38] The PAC's views also played a part in the appointment, in 1953, of the Guillebaud Committee to examine NHS costs. Its task, the Treasury noted, was 'to advise the Government how an increasing charge on the Exchequer can be avoided. What really worries us is not so much the current level of expenditure, heavy though that is, as the future prospect that it will – and with some show of justification – go on increasing year after year for as far ahead as we can see'.[39]

The official view at the Ministry of Health was that the classification system developed by the Joint Committee on Prescribing (now the Cohen Committee) provided a basis for more economical prescribing; Cohen had identified six categories of drugs, one which the Committee recommended should be prescribed freely, three should be prescribed subject to satisfactory pricing arrangements with the manufacturers and two consisting of drugs of unproven therapeutic value. The ABPI, however, was in general hostile to the proposal and the work of the Committee, as were its members. In its evidence to the Guillebaud Committee, Glaxo Laboratories Ltd was highly critical of Cohen, arguing that the Committee had become a *de facto* licensing body but one which operated without disclosing the basis of the criteria it used.[40]

The industry was not, however, alone in its opposition to a list of approved drugs for prescribing. The Conservative government, which had come to power in 1951, was committed to ending the remaining wartime controls and an approved list smacked of a return to a controlled economy. Moreover, the medical profession was implacably opposed to an approved list, on the grounds that it would interfere with their professional freedom to prescribe. As we shall see, the Ministry usually retreated rapidly when faced with the threat of opposition from doctors or the pharmaceutical industry, or, its worst case scenario, from both at the same time. It has also been noted that the pharmaceutical industry regularly contributed to Conservative party funds and that members of the medical profession had tended to support the party.[41]

The negotiations begun in 1954 proved to be lengthy, overly lengthy in the view both of the Treasury and the Public Accounts Committee.[42] While they were still in progress, the Guillebaud Committee reported in 1956. Its conclusion, deeply disappointing to the Treasury, was that there was no significant evidence of widespread 'extravagance' (the word used by the *Economist*, in discussing the report's findings) in the NHS.[43] The Committee had commissioned a very detailed enquiry into pharmaceutical costs, carried out by Dr Brian Abel-Smith of the National Institute of Economic and Social Research and Professor Richard Titmuss of the London School of Economics. Noting that while much of the information they required was not available, the authors reported to Guillebaud that looking at the increases in 1948/49 and 1952/53 they could only conclude that 'about half the increased cost of the pharmaceutical service was due to increased quantity, the bulk of the remainder was due to the changed composition of the drugs and dressings'. The basic drug price index, they minuted, had increased by only about two per cent over the five-year period.[44] It may be noted, however, that the Guillebaud Committee did conclude that 'further efforts should be made to educate doctors to be more careful in their prescribing of expensive drugs as well as in the quantities they prescribed – and to educate patients out of the ''bottle of medicine habit''' [45] (see section V).

When the discussions between the Ministry and the industry on price comparisons and approved lists reached an impasse, the government suggested that target rates of return should be applied to manufacturers' profits, using the same rates as those applied to other government contractors. The ABPI quickly objected that the rates were not appropriate for its industry – the profit margins allowed were too low to permit research and development expenditure on the scale required – and soon offered instead its own scheme. After some three years of wrangling, it became the basis of the first Voluntary Price Regulation Scheme, agreed in 1957. The scheme was, as its name indicates,

voluntary, for the ABPI had no way of compelling its members to join. The subsidiaries of the American and European pharmaceutical companies which had been established in growing numbers in the UK, were not, at that time, members of the ABPI and were not, therefore, parties to the scheme.

The first VPRS gave new drugs three years of freedom, when the manufacturer alone set the price, usually as high as the market would bear in order to recoup some of the research costs. After that prices would be fixed by negotiation between the industry and the Ministry of Health. For all other drugs, 'export prices are taken as the criterion, if the exports of the drug are adequate to provide a market price. If this criterion does not apply, either a price based on the corresponding unbranded standard drugs, or a constructed trade price formula is used. If none of these applies to a case, there is direct negotiation between the manufacturer and the Government'.[46] As the ABPI itself admitted, 'such a scheme of formulae cannot, of course, always provide a theoretically exactly ''right'' price for each drug, but it is accepted by both parties as giving ''fair and reasonable'' prices over the wide range of products covered'.[47] The criteria of 'fair and reasonable' has remained in use ever since, without any more specific definition of its meaning.[48]

The results in the first year of the VPRS's operation were regarded by the Ministry of Health as 'disappointing' and did not produce the savings which had been anticipated. Although reductions in the prices of some 300 products had been made, the overall saving was, at some £400,000, well short of the £750,000 envisaged.[49] Meanwhile, the Hinchliffe Committee was appointed to examine the 'increase in the cost of prescriptions issued under the NHS' and the factors contributing to this. Hinchcliffe found some difficulties in assessing the value of some drugs, noting of products that 'sometimes formulation can considerably affect the therapeutic efficiency of a drug and where the prescriber is convinced of the superiority of a particular product, it is to be expected that he will prescribe it by its brand name'.[50] The report, however, concluded that, as a proportion of total NHS expenditure, the drugs bill was neither increasing at a faster rate than other services, nor taking up an increasing share of the whole.[51] This conclusion can hardly have been music in the ears of the Ministry of Health or the Treasury; *The Times* suggested that although the size of the drugs bill was not a problem, the belief that it was a problem itself constituted the problem.[52] In fact, in 1950 the drugs bill represented 8.4 per cent of total NHS expenditure; by 1955 it had risen to 9.8 per cent and by 1960 to 10.1 per cent.[53]

IV

The second VPRS, negotiated in 1960, retained the formulae noted above but established that direct negotiation was to take place in the case of patented products with sales of more than £500,000 a year. In the early 1960s, however, the climate of opinion in which the negotiations took place changed. In the USA, where the price of pharmaceutical products was left to the market mechanism, suspicion that some drugs, particularly antibiotics, were overpriced had been gaining ground. In 1959 the Congressional hearings called for and chaired by Senator Estes Kefauver began. The publicity the hearings attracted was immense and the evidence of overpricing and collusion in fixing prices which emerged created suspicions of the industry's practices across the world. On top of that, in 1960 the news of the thalidomide tragedy broke in the UK. In these circumstances

the industry found itself the subject of more official scrutiny on two fronts, both safety and pricing, as well as publicly voiced criticism and attack.

Summing up the public perception of the industry in 1963, Professor Ernst Chain, who had been involved in the development of penicillin and, more recently, had been working with the Beecham group in its successful R&D programme on the semi-synthetic penicillins, said:

> the climate of public opinion with regard to drugs is cool – to say the least; the word drug has acquired almost a derogatory tinge. In the minds of many people – and some of them in high places – drugs are immediately associated with deformed thalidomide babies, and those who take a more lenient view, still consider them as rather expensive, dangerous chemicals of somewhat doubtful value with which they are overdosed, and which are urged on them or their doctors by the persuasive voice of commercial propaganda; and as to drug manufacturers, these are downright suspect, and the picture of nasty, vulture-like, greedy creatures, predatory and thriving on human pain and disease, comes to the mind of lots of people.[54]

Despite this there was still a marked upward trend in the drugs bill, which continued to cause concern to both the Ministry of Health and the Treasury. As a proportion of total NHS expenditure, the drugs bill peaked in 1965 at 11.1 per cent.[55] It was the Treasury's officials who suggested, in 1963, that the Ministry of Health should seek 'to identify and follow up doctors who were prescribing excessive amounts of tranquillisers and anti-depressive drugs', the drugs then believed, but at that time not yet proven to be, the most likely to create dependency.[56] The Ministry proposed a pilot scheme on these lines to be carried out in Newcastle-on-Tyne but a suggestion, in a letter to the British Medical Association (BMA), that any cases of doctors found to be prescribing excessively should be referred to the Local Medical Committee (a disciplinary body) brought an immediate and outraged response from the BMA. They were 'adamant' they told the Ministry, that any such survey must be carried out in such a way 'that is completely divorced and never likely to be connected with subsequent disciplinary action'.[57] Agreement was reached later in the year for the surveys to go ahead, but the results were inconclusive. The Ministry's findings were reported as only indicating – and that tentatively – that GPs who took a special interest in psychiatry might 'prescribe anti-depressives somewhat more frequently than their colleagues' and that only in some cases had individual GP's prescribing costs fallen after visits from the investigators.[58]

The third VPRS was negotiated in 1964. It included provision for the price of unpatented products with sales of over £100,000 a year to be directly negotiated, but the industry also secured the extension of the 'freedom period' for new drugs from three to four years. The Ministry's working party on economy in prescribing continued, however, to examine and re-examine ways of reducing the cost of the drugs bill, ranging from more information on drug costs being sent to GPs to what one civil servant called the 'hoary old chestnut', an approved list.[59] By 1966 the working party was again considering a 'white list' of approved drugs. But a note from the Minister of Health in 1966 concluded: 'all the possible courses … would involve us in a major collision with the profession (to say nothing of the industry). Whilst we may have to face this at some time or other on freedom to prescribe, I should want to see more than a possible £m or two saving at the

end of the road'; the savings of the VPRS were put at £1.2 million in 1962.[60] The Minister had, after all, only just seen through the resolution of major dispute with the BMA and general practitioners which had threatened their resignations, *en masse,* from the NHS.[61] Fortunately the decision could be postponed since the whole relationship between the pharmaceutical industry and the NHS was under examination by a committee appointed in 1965. Following the advice given to him, the Minister noted, 'I entirely agree that we should await the Sainsbury Report'.[62]

When the Sainsbury Committee reported in 1967, it did cast some doubt once again on the pervasive view that the nation's drugs bill was too high: 'it is indeed highly probable, but in the nature of the case impossible to demonstrate quantitatively, that the total economic benefit from the ''therapeutic revolution'' has far exceeded its cost'.[63] It went on, however, to find some evidence of excessive profits on branded goods and made extensive recommendations for changing the price regulatory scheme. It suggested that the companies should make standard returns to the Ministry on costs, prices, profits and capital employed and this was embodied in the fourth VPRS in 1969, which also abolished the 'freedom period'. These were, however, aggregate sums in all cases. More controversially, Sainsbury also recommended the introduction of Standard Cost Returns giving detailed information on direct costs of labour and materials. This was not introduced. Not only were the companies and the ABPI implacably hostile to revealing what was seen as commercially sensitive information, but there must also have been doubts on the government side as to how this could be managed. There is no evidence that the Ministry of Health had staff qualified to interpret such information. Even in the early 1980s, the DHSS (in which by then the Ministry of Health had been merged) had a staff of only 12 administering the PPRS (as the scheme was renamed in 1978) and none of them were medically trained.[64]

Price negotiation through the VPRS and the PPRS continued to be on the basis of control of aggregate profits rather than direct costs, although, as Cooper had pointed out in 1966, 'profitability exercises in this industry are meaningless'.[65] He went on to write that 'it is clear that the VPRS does not lead to a sweeping series of price reductions but rather acts as a background safeguard ensuring that the State can negotiate where it considers that there is room for economy'.[66] Cooper also challenged the notion that the British were a nation of 'drug guzzlers', noting that *per capita* drug spending in Britain was one of the lowest in Europe.[67] By the time the 1969 VPRS came into operation most of the foreign-owned pharmaceutical companies in the UK had agreed to become a party to it. As Sainsbury showed, by 1966 only 27 per cent of products prescribed were supplied by British firms, 49 per cent being supplied by US firms and the remaining 24 per cent by European-owned companies, most of them Swiss.[68] Other methods of trying to control the prices charged by non-British companies were tried but were not, from the government's point of view, particularly successful.[69]

V

The attempts to control the drugs bill discussed so far were almost exclusively concerned with the supply of pharmaceutical products. Other than Guillebaud's rather weak suggestion that doctors should try to educate patients out of the 'bottle of medicine' habit, discussed earlier, and the Treasury's attempt in 1963 to force the Ministry of Health to

identify and discipline doctors who were over-prescribing, the consumption of prescription drugs, the demand side, was largely ignored. At least part of the difficulty lay with the complexity of the prescription transaction, outlined at the beginning of this article and with the determination of the medical profession to brook no interference with its members' right to prescribe. The notion of dependency on prescription drugs in both a specific and a more general sense, however, merits some discussion.

Over the last two decades the definition and use of the term 'dependency' in relation to prescription drugs has become much more specific than it was previously.[70] In broad layman's terms dependence is now defined as being characterised by a compulsion to take the drug, an inability to limit its intake and withdrawal problems, which may be both physical and psychological.[71] In the time span of this article the term was used more generally of both therapeutic and so-called recreational drugs (heroine, cocaine and cannabis), reflecting the understanding of a dependency relationship at that time. Official concern in the 1960s focused more on the latter than the former as the increasing consumption of heroin-type drugs and cocaine reached what were called 'epidemic' proportions among young people.[72]

However, in a lecture delivered at the Dundee meeting of the British Medical Association in August 1968, the main body of which was concerned with that 'epidemic', Professor W.D.M. Paton noted:[73]

> Some drug dependencies arise from medical causes: the diabetic who must have insulin … but for such the dependence only arises for a pathological reason. What we are concerned with today is dependence on drugs arising without such medical cause. But this group too is extraordinarily heterogeneous. People can become dependent on aspirin or purgatives or stomach powders or on almost any item in the Pharmacopoeia which they believe at one time or another has helped them.

The dependencies thus described by Paton may also, it has been suggested, have been underwritten by the situation in which medicine was prescribed. In recent years critics of the Western approach to medicine have suggested that modern medical practice encourages a 'dependency relationship' between patient and doctor: 'the mystique of medicine is maintained by many involved in health care and acts as an isolating force to remove the understanding of illness from the people and to create a dependency relationship between those who are ill and those who have the ''solutions'' to illness'.[74]

The medicalisation critique which has come to dominate research and writing in medical sociology argues that patients who lack scientific and medical knowledge find themselves in a vulnerable position *vis-à-vis* doctors, who have power and authority derived from their professional status and scientific knowledge. To an extent this has been echoed in writings with a Foucauldian perspective, which also emphasise the powerlessness and the dependence of the patient in medical encounters.[75] Medical historians have noted the evolution of the relationship between doctor and 'consumer' in the twentieth century in these terms: 'the clinical encounter was medicine's most significant moment: clinically diseases were being described in ways which emphasized the individual's responsibility, but the causal processes were accounted for in ways that privileged only the intervention of the medical expert'.[76]

In surveying the first 50 years of general practice under the NHS, Tait and Graham Jones concluded: 'the power of doctors was greatly enhanced by these drugs [the increasing range introduced over the period], but so was the potential for disagreement and mistrust in their relationships with patients'.[77] There is also some empirical evidence to suggest that patient expectations played a significant role in this dependency situation. Comments from doctors practising in the early years of the NHS suggest that patients expected a prescription as a result of the consultation.[78] The Collings Report on general practice was published in the *Lancet* in 1950. It noted of one practice, representative of a number of others: 'the bottle of medicine was the *sine qua non* of this practice. ''Notes'' (sickness certificates) and ''bottles'' were asked for by almost everyone seen and were supplied on request'.[79] In further research on the early days of the NHS, one GP referred to the old pre-NHS tie-up between the consultation and the bottle of medicine, together costing 3s 6d (£0.175), and noted that people expected a prescription. Another said: 'in the days when you were dispensing yourself, you could dispense things that didn't cost very much, but when you are writing out an NHS prescription, it becomes more difficult to prescribe coloured water, and therefore you prescribe something that is going to cost more'.[80]

Patient expectations about their health also changed in the immediate post-war years, particularly as a result of the introduction of penicillin and the antibiotics: 'the very success of medicine in apparently removing the scourge of infectious disease, meant that the post-war generation assumed a right to be healthy'.[81] And there were expectations too of medicine and the results it might produce; 'it appeared that medical science was capable of almost anything'.[82] Western economies prospered in the post-war years, particularly that of the USA, where the era 'opened with a widespread expectation in the [pharmaceutical] industry that there existed a vast potential market for new pharmaceutical products and that catering to this market, however costly, would prove to be highly profitable'.[83] With the discovery of antibiotics, the innovatory advantage in the industry, held by Germany since the late nineteenth century, passed to the USA. Universal access to healthcare, along with assumptions that disease was banished and magic bullets were or would be available for all problems fuelled consumer expectations and demands.

VI

The introduction of the price regulation of pharmaceuticals in the UK was based on an assumption that prices were too high. This view was vigorously maintained in the 1950s by the Treasury and the Public Accounts Committee and by the Ministry of Health rather less wholeheartedly.[84] It was, however, as we have seen, a view which was challenged at the time and may also be so in retrospect. Not until the 1960s was there any real evidence of over-high pricing and even then there was no examination of the real cost of the use of drugs in terms of costs of dosage and treatment. As Abel-Smith and Titmuss found in the 1950s, the information they required to make such judgements was not available. Even in more recent times, as a health economist has noted, 'it is commonplace for heath-care policy to be formulated and executed in a data-free environment! … Few health care systems have cost data which reveal the value of what society gives up when patients pass through a treatment episode'.[85]

During the period of this article, the primary reason for governments attempting to control the prices of pharmaceutical products was the belief that to do so would contribute to containing health-care costs, which increased very rapidly in the post-war years as the industry discovered and introduced new products and as medical practices changed as new knowledge diffused. A potent factor, particularly in the Treasury, was the fear that costs would continue to increase exponentially. It was not until the late 1970s and the early 1980s that a new cycle of rapidly spiralling costs became evident. As a result, in 1985 a Limited or Selected List was introduced in the UK for the first time. It was not a 'white list' of approved drugs, but a 'black list' of some 400 products in seven groups of drugs, including cough and cold remedies, vitamins and sedatives, which were excluded from prescription. All were available as over-the-counter (OTC) products. More products have been added to the excluded list since then.[86]

The original basis for the ABPI's opposition to an approved list was that it would damage the development of a strong, R&D-based industry in the UK.[87] However, when the VPRS was revised in 1969, to its stated objective of a 'fair and reasonable' drug bill for the NHS was added another objective, that the scheme should ensure that the industry in the UK was strong, efficient and profitable and capable of sustained R&D, which would develop new medicines for the home and export market. With its purposes enshrined in the regulatory scheme, there was less reason for the industry to oppose a blacklist, particularly one consisting mainly of products easily and relatively cheaply available over the counter.

Other measures to contain the drugs bill have included efforts to persuade doctors to prescribe, and pharmacists to supply, generic rather than branded drugs. During the most recent decade there have been further NHS reforms, which are likely to have an increasing effect on the drugs bill. The creation of fundholding GP practices, where fundholders' budgets include pharmaceuticals, may yet provide more direct and powerful incentives at local levels for economy in prescribing than ever did the exhortations of the Ministry of Health. Despite the 'demystification' of medicine and the strength of consumerism, both of which gathered strength from the 1960s on, the delivery of healthcare continued to take place in situations where an asymmetry of information played a significant part in creating a dependency relationship.

As the UK experience shows, regulatory systems are the outcome of conflicts between providers of health care and policy-makers and these, in turn, reflect also national economic and social structures and pressures. Between the power of the medical profession and the power of the pharmaceutical industry in the UK, successive governments found themselves squeezed; between government departments there were agendas that differed. The arguments for and against the UK system of price regulation have been rehearsed many times over the last 40 years.[88] The evidence of the UK experience, however, shows how extraordinarily difficult it is to unravel or change such a scheme once it is established. The interests and purposes of the most powerful players became embedded in the scheme in the 1950s, making changes difficult in the 1960s and thereafter.

NOTES

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7 For Japan see Howells and Neary, *Intervention*, chapter 4. There is a more recent discussion in L.G. Thomas III, *The Japanese Pharmaceutical Industry* (Aldershot, 2001).
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12 *Final Report of the Committee on the Cost of Prescribing* (London, 1959).
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66 Ibid., p.47.
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85 A. Maynard, 'Reforming the NHS', in Bishop *et al*. (eds), *Regulatory Challenge*, p.67.
86 For this and other measure see W.D. Reekie, *Prescribing the Price of Pharmaceuticals* (London, 1995).
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88 See Green (ed.), *Should Pharmaceutical Prices*.