AN INVESTIGATION INTO THE ROLE OF CONTRACT DRUG PURCHASING IN HOSPITALS

BY

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ABSTRACT

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Whereas health care resources are limited, demands upon them are insatiable. Drug expenditure has received particular attention in attempts to regulate increasing costs. For hospitals, contract purchasing is designed to regulate drug expense.

This thesis examines the contract mechanisms.

Information was collected from pharmacists and supplies officers in all English health regions and pharmaceutical companies supplying the bulk of hospital drug requirements.

The main findings of the research are:-

1 There is a large, unexplainable difference in price charged to various health regions for an identical drug. Price charged is independent of all obvious correlates.

2 Despite the oligopsonistic power of the National Health Service there is no centralised interchange of price or purchasing information between health regions.

3 Pharmaceutical suppliers view hospital drug purchasing as fertile for opportunistic pricing within the context of total profit regulation.

4 There is an ill-defined working relationship between pharmacists and supplies officers in the implementation of drug contracts, often amicable locally but tense and competitive nationally.

The overall impression is of a purchasing mechanism which, due to its political sensitivity, has, by default, become increasingly outmoded and represents a triumph of public accountability over individual negotiating skill. The overall regulation of pricing is in substantive conflict with the hospital contract system. One encourages UK research, the other not, while the savings in hospital purchase are redundant in the context of both overall corporate and Governmental financing.

Cost savings are unknown. Other methods of acquisition such as prime vendor buying should be considered, as a means of improving purchase efficiency for both supplier and purchaser.

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INTRODUCTION

British society as a whole takes pride in its carrying of responsibility for payment of medical expenses rather than forcing this role upon those who use the services available. The present National Health Service (NHS) system dates from 1948, although it was preceded by a scheme which began in 1911. According to the N.H.S. Act 1946, a free and comprehensive health service would be provided for all. The cost, however, exceeded all expectations and whereas it was predicted that with a Health Service operation in existence the volume of disease would fall, in fact the demand far exceeded the supply of services. In the first year of the NHS, the cost was £53 million more than had been predicted and with successive years the cost rose without there appearing any glimmer of an interruption in the upward spiral. The lofty ideal of shifting the financial burden from those who use the service to all members of society in employment has developed less prominence as the user has become more and more accustomed to paying his prescription charge for his medicine. It was not long before pressures were applied to reduce the burden. No aspect of the service received more attention than the drug bill because it was an obvious expense. By 1981 it was consuming more than ten per cent of the NHS financial allocation of £13 billion. Over the years much thought has been given to the prices being charged by the pharmaceutical manufacturers, because any attempt to restrict the clinical freedom of the doctor to prescribe the drug of his choice would be considered taboo. Additionally, the general practice sector of the NHS, unlike the hospital sector, enjoys a theoretically limitless budget so any attempt to control general practice prescribing costs is beset with problems at the very outset. Likewise in the hospital sector, despite the existence of a limited budget, no great successes in controlling prescription costs have been achieved. What has been seen is the imposition by successive governments since the late 1950's of restrictions on profit-making by pharmaceutical manufacturers which supply both the hospital and general practice sectors of the health service. These restrictive arrangements have taken the name of Voluntary (subsequently changed to Pharmaceutical) Price Regulation Schemes. In addition to these, hospitals have been given strong

encouragement by government to make contractual purchasing arrangements with suppliers so as to lower the prices being paid for the drugs purchased, the assumption being that a contractual purchase was cheaper than one not contracted. Scope for such buying agreements with suppliers has been magnified by the discretion afforded hospital pharmacists to purchase and supply one brand only of each drug by local inter-professional consent. The "contract" is the legally binding agreement between the Health Authority and the supplier, under the provisions of which the Authority agrees to buy under stated conditions that particular drug referred to in the agreement from that supplier at the price offered by the supplier and accepted when the agreement came into force. Contract drug schemes first emerged in the late 1940's, with hospital pharmacists taking the initiative and assuming a dominant role in their organisation. With the emergence of specialist supplies officers as a distinct discipline within the health service, a situation arose in some places in which the roles of the two employees clashed. Disputes arose as to which of them should have the pre-eminent role in hospital drug purchase, whereas elsewhere, with goodwill shown by both parties, their tasks were perceived as being complementary.

The investigation described here concerns itself with contract drug purchasing by hospitals in England. The main objective is to determine how efficient the present contracts are and to suggest possible improvements to increase efficiency. Encouragement in this task has been provided in the views of a Supply Council Report (1) published in late 1982. It remarked:

> "we are convinced there are ways of improving the efficiency of hospital purchasing and management of drug costs without unduly affecting the total market ...
>
> Considerable improvements could be achieved in the current methods and practices in contracting and buying of pharmaceuticals in the hospital service, and would result in administrative savings and reduced costs for some items."

As well as an understanding of the legal and economic backgrounds, there is a need to investigate the historical development without which the present system cannot fully be understood. Remarkably, considering the amount of public money involved, the subject is little researched and poorly documented, a failing it shares with health service supplies generally (2).

It is a possibility that any books on the NHS or pharmaceutical industry might be politically biased since both are subjects on which politically-minded individuals tend to have fixed opinions and the holders utilise the opportunities presented to put forward those views and so influence others. So whereas due note has been taken of the printed word, it has been viewed with scepticism and treated with caution. The publications of the government, health authorities and professional bodies give an insight into the contribution made by the contract system to health service development.

The contract system as it exists now reflects the constraints which both central government and its agencies have placed upon it. There is still latitude allowed, which the Regional Health Authorities have taken advantage of. What emerges therefore are differences in approach, variation in the number of drugs under a contractual scheme, as well as the quantity and respective proportions of input of the supplies officers and pharmacists. A comparison of the Regional schemes shows considerable variations and an attempt has been made to relate the efficiency of the contracts in the Regions to those prevailing factors. Clearly the working relationship between the supplies officer and the pharmacist is bound to influence the efficiency of the contract and what becomes clear is that the historical problems have yet to be resolved. The pharmacist as the expert on drugs and supplies officer as the expert on buying must both play a part, but where one seeks to usurp the role of the other or where one imagines that the other is attempting to usurp his role, problems are bound to arise. The countrywide diversity with which the scheme is applied and enacted is examined and evaluated, so allowing guidance for future contracts.

In 1980, of the estimated £180 million spent on drugs by English hospitals, about £100 million was under a contractual arrangement. The administrative cost of the system is unknown. Likewise the savings, if any, resulting from it are unclear. What is a certainty is the level of criticism of the contracts as they exist at the moment, this criticism coming from health service staff involved as well as suppliers who are finding that the contract is becoming less and less attractive to them.

There is the feeling among many suppliers that the balance of rights and obligations is uneven with the rights granted to the buyer and the obligations resting upon the supplier and this contention is discussed.

As an academic topic for investigation it is multidisciplinary, composed of aspects of law, economics, politics, purchasing, marketing, pharmacy, management and social science, and possibly as a result of its diverse nature has received little attention from any discipline. Following the consideration of the published findings, the methodology is given and the primary findings in relation to the derived hypotheses are presented. It is hoped that this research will help to create a better understanding of drug purchasing under contract, resulting in an improved service which utilises to the utmost the scarce resources available to it, serving the best interests of all parties concerned.

References

1 Report of the Pharmaceutical Procurement Commodity Advisory Group, (Chairman Greenleaf, J.C.) Supply Council. 1982. paras. 2 and 12.

2 Report of the Supply Board Working Group, (Chairman Salmon, B.L.) DHSS. 1978. para.95.

SECTION ONE
SECONDARY DATA

CHAPTER 1

PURCHASING

1.1 General Nature

"Purchasing" denotes the act of and the functional responsibility for procuring materials, supplies and services. It encompasses physical storekeeping and inventory control, whereas "buying" is a more limited concept, being restricted to the act of procurement alone. A "market" is defined as the closely interrelated group of sellers and buyers. It includes all the sellers in that industry and all the buyers to whom they sell. The term "market structure" refers to the organisational characteristics of a market which seem to exercise a strategic influence on the nature of competition and pricing within the market. Those characteristics determine the relations of sellers in the market to each other, of buyers in the market to each other, of the sellers to the buyers, and of established sellers to potential new entrants to the selling field.

Bain (1.1) refers to the most salient aspects or dimensions of market structure as being:

"(a) The degree of seller concentration - described by the number and the size distribution of sellers in the market.

(b) The degree of buyer concentration - defined in parallel fashion.

(c) The degree of product differentiation as among the outputs of the various sellers in the market - that is, the extent to which their outputs (though similar) are viewed as nonidentical by buyers.

(d) The condition of entry to the market - referring to the relative ease or difficulty with which new sellers may enter the market, as determined generally by the advantages which established sellers have over potential entrants.

The potential importance of each of these characteristics is fairly obvious. Seller concentration refers, for example, to whether the number of sellers is one, few or many (monopoly, oligopoly, atomism) and to the relative sizes of sellers with any given number. Theory and observation suggest that the character, intensity, and effectiveness of competition among sellers will be significantly influenced by the degree of seller concentration.

Buyer concentration has a similar significance in determining the character of competition among buyers and the character of the relationships between buyers and sellers that condition ultimate market performance.

> Product differentiation refers, for example, to whether on one hand the products of competing sellers in a market are viewed as identical (homogeneous) by buyers, or, on the other hand, differences in quality, design, packaging or reputation among the competing products lead various buyers to have various degrees of preference for certain of these products as compared to others. The extent to which competing products in a market are differentiated may clearly be expected to influence the competitive inter-relationships of sellers in the market, their conduct and their market performance.
>
> The condition of entry, or height of barriers to new entry to a market, characterizes the extent to which established sellers have advantages over potential entrant sellers. It thus determines the relative force of potential competition as an influence or regulator on the conduct and performance of sellers already established in a market."

The market structure for drugs shows a relatively small number of sellers, less than two hundred, with wide size distribution, sales ranging from £78 million to £ several thousand. There is a small number of buyers, the NHS taking almost 50 per cent of the industry's output, exports about 30 per cent, direct consumer purchases of over the counter preparations about 10 per cent and others, mainly non-NHS hospitals about 10 per cent. Product differentiation is wide covering medicinals for the prevention or treatment of every known disorder. The number of suppliers within each product group is relatively small, and that number is obviously dependent upon the degree of focus concentrated upon therapeutic groups. For example, whereas there is one supplier for tobramycin there are about ten for aminoglycoside antibiotics, of which group tobramycin is a member, and there are about fifty suppliers of antibiotics generally. Entry to the market is restricted by manufacturing equipment costs, and the legal and ethical emphasis on quality, resulting in high human resource and capital outlay needs. Additionally patent protection and the concern for quality of product in the mind of the prescriber militates against speedy acceptability and easy access to the market.

The market conduct is the behaviour pattern followed by businesses in adapting or adjusting to the markets in which they operate. It concerns itself with the price policies of firms, that is their aims, their

methods of price establishment, their production outputs, product choice, marketing expenditure, as well as the interactions between competing companies.

The end results arrived at in the market as a result of the market conduct of the companies is the market performance which encompasses the price, output, production and selling cost and product design.

1.2 Objectives and Maximisation of Utility

Organisational buying behaviour is defined (1.2) as the decision-making process by which formal organizations establish the need for purchased products and services, and identify, evaluate and choose among alternative brands and suppliers. The term decision-making includes acquisition of information, its processing, choice processes, objectives and other criteria to be used in choosing among alternatives. Contract drug purchasing forms a small but significant portion of government buying activities. The government obviously gives consideration to social, economic and political factors in formulating its policies. Although the profit motive is lacking, the budget in the NHS is a constraint preventing the realisation of all its objectives. Within the limited health care budget there is at present theoretically no limit on the amount of money to be spent on prescription medicines but there is a general awareness that excessive expenditure on that sector of the service reduces the allocation for other needs. The government effectively controls the legal environment of buying and so it possesses both the power to regulate as well as the power to purchase.

The objectives of government purchasing were defined in a Government paper (1.3) published in 1967. It stated:

> "the primary objective of Government purchasing is to obtain what is needed, at the right time and in such a way as to secure the best value for money spent".

That purchasing function has grown considerably since the advent of the NHS and central government is now heavily involved in the distribution of health goods. The view of the Government was (1.4) that centralisation provided:

> "advantages arising from buying in bulk, including economy, variety control and standardisation....Purchasing in bulk will not always be advantageous. As with the reduction in the variety of products purchased, there is an optimum level dependent on industrial capacity, on the economies to both supplier and user of short haul deliveries and on the need to maintain competition and the stimulus to innovation in the supplying industry. None the less, the Government believe that there is considerable scope for the development of its purchasing... to the benefit of the economy as a whole."

On the subject of consultation with industry, the Government stated (1.5) that:

> "Fruitful co-operation between purchaser and supplier depends upon mutual regard for the interests of the other."

If the generalised views of the Government are focussed upon the pharmaceutical industry, the impression gained is of a high risk industry in which the research effort of many years and the investment of many millions of pounds could result in worthless products. The risk is further compounded by the possibility of a successful product being superceded by a competitive innovation without warning. The industry as part of the private sector of the economy, is required to make a profit to survive, but its principal market is the government whose paying agency, the Treasury, has no direct control over it. So the industry has increasingly taken on the role of scapegoat for a major share of the blame arising from the apparently uncontrollable rise in costs of the NHS, and a significant thought exercising governments over many years is the achievement of value for money in drug purchasing. In the contract arena, the manufacturer faces the risk of not being awarded a contract to supply the hospitals of a Regional Health Authority for one or two years. On its part the government wishes to see a thriving pharmaceutical industry, as described by the Sainsbury Report (1.6) and the Supply Council Report (1), which is recognised as having been, over the years, a major exporter. Stahl and von Grebmer suggest (1.7) that the trend toward state intervention in the distribution of health goods will increase over the coming years.

In seeking to achieve its objectives in purchasing, the government has regard to the social, economic and political consequences of its actions (or lack of them). Thus the aim is to promote high employment, efficiency, progress and stability for the whole economy and efficiency for the various industries. In order to maximise the attainments of the economy as a whole as well as those of specific industries the government pursues several lines of approach to ensure a competitive market. These are described by Bain as follows (1.8):

> " (a) Control of market structures, involving in a constructive vein securing and maintaining market structures which are conducive to good performance, and in a remedial vein alteration of market structures which are linked with and apparently a factor causing poor market performance.

(b) Control of market conduct, both constructively and remedially, largely through prohibitions on conduct which tends to lead to poor market performance.

(c) Direct remedial measures to reallocate resources among industries in order to hurry the attainment of competitive adjustments that the market should eventually accomplish but is unduly slow in bringing about.

(d) Possible "relief" measures to redress inequitable income positions during prolonged processes of market adjustments."

The government therefore has the obligation

(a) to prevent, or if it already exists, to remedy monopolistic tendencies in industry by, for example, adopting legal measures to prevent the emergence of a company with too large a share of the market,

(b) to prevent collusion among competitors,

(c) to provide subsidies as necessary to ensure the viability of the industry. This would encompass its control of prices to ensure a viable pharmaceutical industry,

(d) to provide patent protection to act as an incentive to the invention and innovation of new products, and

(e) to influence the innovation of new drugs by its spending on research and development.

The objective of purchasing staff is to buy in the most efficient way and so contribute to the profitability of their organisation. That there is no profit making in the NHS does not preclude the buyer from seeking to ensure that the allocated resources are spent judiciously.

The buyer aims to obtain supplies in such a fashion as to satisfy reasonable demands consistent with low stockholding and economic order quantities. Those purchases must be at the lowest price, provided the goods meet the predetermined quality standard, and the service offered satisfies the user.

In addition to acquisition of goods the purchaser retains a library of information on supplies and makes the contents of that information store available to users to facilitate their choices.

England, possessor of an uncommon blend of skills, being an authority on both purchasing and marketing, describes (1.9) the good purchaser

as one who considers proper quality, service and delivery as of basic importance, but regards a price that is fair both to his own company and to the supplier as an integral part of every transaction. England continues his description of a good purchaser as follows:

> "Is reasonable in his demands on a supplier, but never forgets that his primary responsibility is his own company. Is courteous and businesslike in his treatment of vendors' representatives.
>
> Has technical purchasing competency, including "Tools" of purchasing (procedures, records, filing and so forth).
>
> Has knowledge of commodities, the processes by which they are produced, the manner in which they are marketed, and the uses (processes) to which they are to be put...
>
> So controls the inventory of each of his materials, in view of the probable rate of production, that he has the most economical quantity on hand and on order that current and prospective price and market conditions warrant...
>
> Has knowledge of available suppliers, materials, substitutes, price trends, and general business conditions, as well as trends regarding specific commodities in which his company is interested, and
>
> Possesses an appreciation of the essential interrelation of sales, engineering and design, production, and finance, so that he
>
> Is expected to contribute, and is capable of contributing, to sound decisions regarding broad company policy formulation and administration, particularly where procurement matters are involved...
>
> He sincerely believes in his job, is loyal to his company, and practices the highest possible standard of ethics at all times."

Suppliers' goals include the provision of goods of required quality and quantity at a reasonable price delivered at the time and place arranged. By such means the provider will maximise his profitability. Suppliers often view the market globally and permit or encourage low or no profit sales in one sector, be it geographically or administratively defined, with the intention of recouping elsewhere. England characterises the good supplier as one who is progressive

as to policies, procedures, organization and research, possesses financial strength and is honest and fair with its customers, employees and itself, believes that it shares with its customers the same interests, has adequate productive capacity and technical competence, possesses satisfactory labour conditions, pursues a sound procurement policy itself and is in reasonable proximity.

The goals of suppliers and purchasers converge with particular clarity in NHS buying, with potential for conflict or concord being heavily dependent upon the approach adopted by each party. An RHA report of July 1979 suggested (1.10) that a direct approach or discussion between the NHS staff and suppliers would help improve contracting.

Ideally good supplier - good purchaser systems ensure a continual source of suggestions regarding processes, materials, and markets.

1.3 Conflicts and Satisfaction of Corporate and Personal Goals

The government's aim is to promote high employment, efficiency, progress and stability for the whole economy and efficiency for the pharmaceutical industry. For the latter it indirectly encourages export potential by differentially controlling profitability and by encouraging research, and it discourages monopoly tendencies in industry.

The encouragement of research - based industry brings the government into covert conflict with its agencies, Regional Health Authorities, which have no interest in the modus operandi of pharmaceutical companies and their export potential or achievements.

The goal of the District Health Authority is to purchase drugs at the lowest possible price consistent with adequate quality, to ensure continuity of supply and to purchase in the most cost efficient way. In order to achieve this the Authority might desire that its own staff control the function so that it would be more responsive to the local needs of its staff, and by implication, its patients.

Operational results do not always coincide with organisational goals. Government efforts to control company profits make individual drug price negotiation a fruitless exercise. Furthermore the philosophy of government support to research - based concerns is negated by Health Authorities buying from generic "copiers", albeit at lower prices.

A Health Authority may unwittingly not be purchasing at the lowest price, a contributory factor being the poor communications in the NHS. That the quality of drugs bought is adequate is undisputed, but it is possible that medicines from some manufacturers may be viewed as unacceptable on the basis of outdated technical information which prevents some otherwise suitable material being bought.

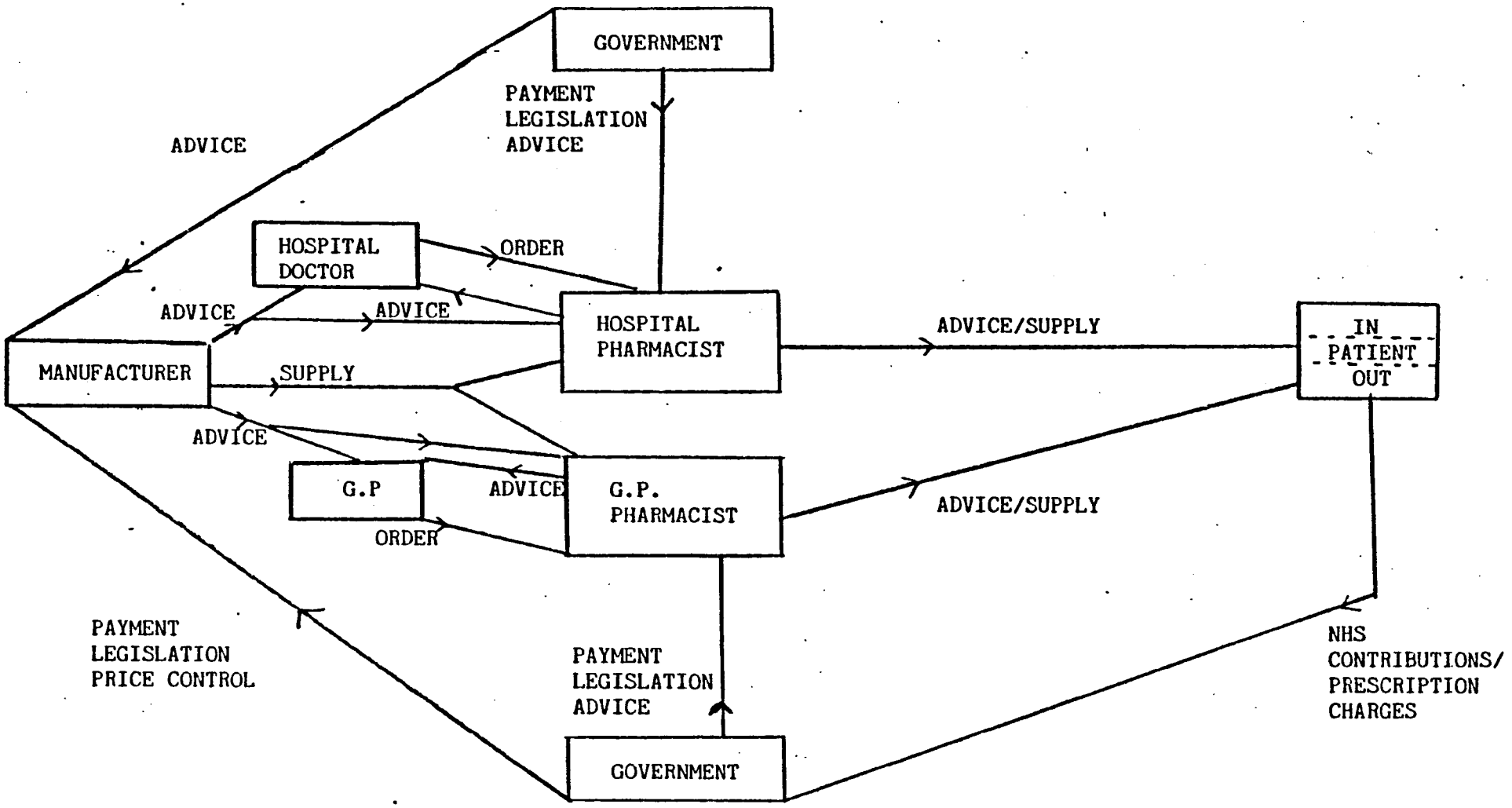
The need for continuity of supply in the aims of RHA purchasing is not necessarily satisfied by contract award. Despite its legalistic terminology NHS contract purchase does not guarantee business to a supplier or supplies to the Health Authority.

The purchasing by a Health Authority in the most cost efficient way is a topic analysed in depth later. Since the cost of the operation is unknown and since other methods of goods acquisition have not been examined, a question mark must hang over that aspect of NHS buying.

Those performing the buying are the remote employees of a Regional Health Authority, suspected of attaching less importance to the individual specific needs of a dozen or so district authorities than their own overall requirements. The conflict is not entirely divorced from the overall dimension of the perceived but nevertheless misplaced view by Districts of Regions as being cast in the Orwellian role of "big brother" as a result of the monitoring function held by the RHA. Superimposed upon the structure and its real or perceived conflicts are those of the individuals who are actively concerned with the pursuit of their personal interests and career goals, and who regard them as of primary interest. Furthermore, the members of the two disciplines primarily involved, namely pharmacists and supplies officers, pursue, subliminally or consciously, the restrictive sectional interests of their professional organisations as well as those personal ones of status, prestige, recognition and self-fulfilment. There is also functional conflict with inadequate boundaries of jurisdiction, and that conflict is reinforced by poor communications within the NHS as well as between the DHSS and the NHS, and poor co-ordination and understanding resulting from the enormous scale of the service as exemplified by its status as the largest employer in Europe.

Health Service purchasing is characterised by the large number of people involved as well as the wide range of their roles. The presence of a contract superimposes a committee structure in the decision making process and centralisation in the purchase function. One can identify users, influencers, deciders and buyers, with the possibility of a professional group playing different roles in neighbouring Health Authorities. It is essential, therefore, in analysing the modus operandi of contract purchasing to consider all the groups who participate in the decision-making process. Prescription drugs are perhaps unique in having such a large number of parties involved in the production to use chain, as illustrated in Figure 1.1. They are manufactured by the pharmaceutical company, sold to a wholesaler or pharmacist in hospital or community practice, prescribed by a doctor under the influence of industrial advertising and promotion, dispensed by the pharmacist, consumed by the patient and are paid for in the main by the taxpayer. The purchase of drugs, along with other goods by

FIGURE 1.1: THE MEDICINE PRODUCER - CONSUMER RELATIONSHIP



hospitals is "one of the few predominantly commercial operations in what is primarily a service organisation." (1.11).

The organisation of a contract arrangement for the purchase of drugs brings about the intervention of a further link in the chain in the person of the supplies officer, a non pharmaceutically qualified administrator who specialises in procurement and supplies activities. Webster and Wind (1.12) note the length of time required for buying decisions in organisations to be made because of the evaluations required and the complexity of the organisation. Thus the relationships in the buying process do not follow the chain of command but are horizontal between suppliers officer, pharmacist, doctor, etc.. No single discipline has the final say in the decision-making process. The major determinants of organizational buying behaviour are defined by Webster and Wind (1.13) as the environmental factors, the organisational characteristics, the interpersonal relationships among the members involved and the individual characteristics of these members. In an attempt to understand more clearly the buying behaviour, models have been established for organising and interpreting the information available (1.14). Webster and Wind have categorised those models as "task" or "nontask", "task" models emphasising task-related variables such as price whereas the "nontask" models include those which attempt to explain buying behaviour based on a set of variables, such as the buyer's motives, which do not have a direct bearing on the specific problem to be solved by the buying task, although they may be important determinants of the final purchasing decision. They are shown in Table 1.1 (1.15).

TABLE 1.1: A CLASSIFICATION OF DETERMINANTS OF ORGANIZATIONAL BUYING BEHAVIOUR

Source of influence	Task Variables	Nontask Variables
Individual Factors	Desire to obtain lowest price	Personal values
Interpersonal (Social) Factors	Meetings to set product specifications	Off-the-job interactions among company employees
Organizational (Formal) Factors	Company policies with respect to product quality	Company policies regarding community relations
Environmental Factors	Expected trends in business conditions	Political factors in an election year

Webster and Wind describe those factors which have an effect on the decision to buy (1.16). The environment exerts an influence on the organization, its members and the patterns of interaction among them. The task-related environmental forces are primarily derived from inter-organizational relations. Of utmost importance are the marketing stimuli presented by prospective suppliers, but in addition there are the technical, political and economic characteristics of society. The nontask factors include the influence of other organizations and the social-cultural-political environment.

The formal organization is defined by its objectives, policies, procedures, structure and systems of rewards, authority, status and communication, and these influence the buying process. The task influences include policies defining the criteria as to the quality to be purchased, delivery requirements and stockholding. The non-task factors are the systems for rewarding performance, assigning status and power to individuals, and for communication. The status and power enjoyed by the supplies officer, the purchasing pharmacist the quality control pharmacist and the prescriber are examples of this category. The transfer of information among members of the organization can influence the purchasing decision. The establishment of a committee to discuss buying, and the specific composition of such a committee may significantly influence the decision.

The interpersonal factors are the social ones. Those who play a role in the buying process are the influencers, users, deciders, buyers and gatekeepers. The buying group has a pattern of communication and a set of shared values (norms) which direct and constrain the behaviour of the individual within it. Deciders have formal authority and responsibility for deciding among alternative brands and vendors. Influencers do not necessarily have buying authority but can influence the outcome of the decision through the application of constraints. Buyers have formal authority for selecting vendors and consummating the buying decision. This authority may be constrained by other members. Users may have little or no authority or influence. Gatekeepers control the information flowing into the buying group and include secretaries, drug information pharmacists, quality controllers, supplies officers or pharmacists who can control the activities of representatives who call on others. They can prevent a representative detailing

a drug to an influencer or user. One individual may occupy several of the roles listed and several individuals may occupy the same role. All individuals are influencers, but not all influencers occupy other roles. The individual behaviour of the person involved in the buying process defines the system. Each person applies his set of needs, goals, habits, past experiences, information and attitudes to the purchase decision. The individual also accepts and strives for the accomplishment of the goals of their groups and organisation. Of importance are the individual's self confidence, reaction to risk, tolerance to uncertainty, age, income, education, professional identification and personality, his awareness, attitudes and preferences towards suppliers and brands, and his methods of obtaining and processing information regarding alternative sources of supply.

The roles of the individuals involved in the buying process have been defined by Webster and Wind (1.17) as outlined in Table 1.2.

TABLE 1.2: DECISION STAGES AND ROLES IN THE BUYING CENTRE

	User	Influ-encer	Buyer	De-cider	Gate-keeper
Identification of Need	x	x			
Establishing specifications and scheduling the Purchase	x	x	x	x	
Identifying Buying Alternatives	x	x	x		x
Evaluating Alternative Buying Actions	x	x	x		
Selecting the Suppliers	x	x	x	x	

Webster and Wind define the roles as follows:

> "Users may exert their influence either individually or collectively. In many cases the potential users are those who initiate the buying process or even formulate the specific purchase requirements," or use their influence "by refusing to work with the materials of certain suppliers for any of several reasons."

Although prescribers are demanders of drugs rather than users, they should be classified as users in terms of their role in the buying centre.

Webster and Wind continue:

> "Influencers are organizational members who directly or indirectly influence buying or usage decisions... by defining criteria which constrain the choices ... or providing information with which to evaluate alternative buying actions ... technical personnel are known to be significant influencers."

Buyers have "formal authority for selecting the supplier and arranging the terms of the purchase ... Although the buyer may have formal authority for negotiating with suppliers for committing the organization to supply contracts, the choices available to him may be significantly limited by the formal and informal influence of others. For example, technical personnel may have authority for establishing specifications and may do so in a manner which forces the buyer to deal with a particular supplier."

The buyer's influence is "especially apparent in determining the set of feasible suppliers and in selecting the suppliers ... and (the influence) depends ... on the nature of the buying task. It can be relatively routine ... applying previously established criteria to a limited range of acceptable alternatives, a function that is essentially clerical in nature; or it may be somewhat more complex if there is the need to negotiate prices and other conditions of sale as part of the process of arranging the purchase contract."

Deciders have "power to determine the final selection of suppliers. The buyer may be the decider, but it is also possible that the buying decision actually will be made by somebody else and left to the buyer for implementation. In actual practice it is not always easy to determine when the decision is actually made and who actually makes it. A de facto buying decision may be made by ... a specification that can be met by only one supplier ...

Gatekeepers ... control the flow of information into the group ... the buyer may have formal authority for allowing salesmen to call upon the engineering department or may be responsible for maintaining a library of catalogues... General management also may be exposed to important sources of information, and technical personnel especially are likely to be exposed to information about new products and new technology of interest to the firm."

Webster and Wind (1.18) note the activities of the purchasing agent:

"the purchasing agent typically feels that he must be involved in the decision process at the earliest stages - that is, at the stage of defining the need for purchased products or services ... He wants to ... assure that the best value is received from available alternatives in the marketplace. Especially if the buyer is ambitious, he will want to achieve management recognition and enhanced status within the organization and, identifying with the profession of purchasing, he will actively seek to enlarge the scope of his authority and responsibility. He will actively fight any tendency to keep the purchasing function from being involved before the final stages of placing orders and he will resist specifications that limit the alternatives that he can consider. The purchasing agent's ambitions and desires for increased status cause disequilibrium and upset the stability of his relationships with other members of the buying center. Instead of being on the "receiving" end

> of the purchasing decision process, where requisitions are given to him for routine clerical attention, he tries to make the interactions flow both ways by encouraging people to accept his advice, information, and guidance as they define specifications, set schedules, evaluate vendors, and so on. He wants involvement at all stages of the buying decision."

Those views on the role of the buyer are examined in the primary research. At this stage it is timely to note the expanded role of the hospital pharmacist over the last ten years and his development of an active role in providing advice to prescribers in addition to his traditional role of dispensing the requirements of the prescriber. His education and skills are being used more and he is deriving greater job satisfaction as a result. By contrast the skills of the Supplies Officer are, in the opinion of many, not utilised sufficiently. A move to negotiation in the award of a contract might remedy this and is discussed later.
In view of the absence of negotiation on price in contract awards, a statement of the Supply Board Working Group seems surprising.
It stated (1.19) that supplies work is "concerned essentially with getting the best value for money in the purchase of goods, and having to match the commercial expertise of suppliers." It might be considered unfair to suggest that in a negotiation, the negotiating expertise of the industrial manager would outclass that of the health service Supplies Officer and therefore that is a good reason for the absence of negotiation in NHS contract awards. Those negotiating skills which the Supplies Officer has acquired are excluded from the competitive tender system of contract purchasing.
Turpin (1.20) states that "Procurement is a specialized function which can only be carried out efficiently by people with specialized skills" and this reflected the 1971 Rayner report on Government Defence Procurement. Turpin suggested (1.21) that "substantial economies can be realized (in government procurement) if the work is efficiently done by properly trained officers." Hyman has remarked (1.22) upon the inefficiency of supplies management in many health authorities. He advocated (1.23) some or more training in supplies matters for, inter alia, all pharmacists, and supported "continuous career training for all supplies officers, including some periods in industry and other public services."
The contracts award committee is composed of personnel representing diverse interests and professions. Webster and Wind relate (1.24) that:

"Buying committees are used where the judgments of several organizational members are felt necessary to evaluate alternative buying actions ... Buying committees are often found in organizations where several distinct viewpoints are represented in the buying situation and need to be taken into consideration in evaluating buying alternatives."

The committee faces four problems described as problems of objectives, personnel, navigation and leadership, and decision making. The problems of objectives encompass the:

"(a) defining and agreeing on the objectives of the committee ... (b) explicating and solving the conflicting objectives of the various departments represented, and the conflict between the departmental objectives and the committee's objectives ... (c) determining the individual objectives and their congruency with the departments' and the committee's objectives."

The problems of personnel relate to the personalities of the participants:

"their talkativeness, shyness, defensiveness, friendliness, argumentativeness, and especially the leader's personality, his dominance or submissiveness, his leadership pattern, his desire to be liked, and so on."

The navigation and leadership problems arise because:

"Committees can get so involved in their activities and content matters that they may lose direction. It is one of the functions of the committee's leadership to provide the required direction. In addition, the leadership should open and maintain communication among the committee members and help resolve the various problems confronting the operation of the committee."

The problems of decision making are those of the possibly greater difficulty of a group than an individual to make an efficient decision:

"the need for unanimity versus the majority rule, specificity versus general decisions, and so forth."

A further aspect of contract awards is the centralization implicit. Centralization is the process of concentration of effort. In the context of purchasing it implies a management policy that channels all procurement through a purchasing department.

Webster and Wind (1.25) report a conceptual framework within which the effects of centralization versus decentralization on buyer behaviour is examined. Centralization influences the buyer's job in five ways:

"(1) the geographical location of the buyer;
(2) the authority relationships between buyers and users;
(3) the authority relationships between the buyer and the top purchasing executive;
(4) informal relationships between buyers and users;
(5) the formal nature of communication between buyers and users."

It was hypothesized that in centralized purchasing the buyer's loyalty domain would be mainly in the purchasing group, where formal rewards were given by the purchasing manager and social rewards by other buyers. In decentralized buying, the buyer feels more loyal to users than to the purchasing department because he is closer to and has more frequent contact with the users and because the users are in a better position to offer him important social rewards and formally evaluate and reward his performance. The award of a contract and its consequent centralization of purchasing imparts a lower responsiveness to users' needs. Webster and Wind (1.25) state that the model seems consistent with actual practice.

1.4 Monopoly, Monopsony, Oligopoly and Oligopsony

The market form of an industry can show perfect competition or imperfect competition. Pharmaceuticals are an example of imperfect competition. Teeling-Smith says the obvious (1.26) in expressing the view that drugs resemble all manufactured goods in that they all no longer show classical price competition, since that only exists in theory, that of wheat farming. Normal supply-demand considerations imply that an increase in price causes a decrease in demand and an increase in supply. By contrast a decrease in price increases demand and decreases supply.

Egan et al point out that for industrial products there is greater flexibility given the shorter and more highly controlled production processes and rates (1.27).

They further state that an additional characteristic of industrial products is a high rate of product innovation and change. Competition is effected by dynamic product changes rather than price.

For drugs the price elasticity is virtually nil, that is supply (and demand) are unresponsive to change in price. Price elasticity, if less than 1, is inelastic; if more than 1 is highly elastic; if it is 1, it is perfectly elastic. The latter implies that a decrease in unit price produces such an increase in supply that the value of sales remains constant, or an increase in price produces a decrease in demand with value of sales remaining as before. Although there is little price awareness by prescribers and so little price competition, there is product competition between similar treatments or different brands of the same drug. Instead the price charged is determined by the patent status of the drug as well as the operation of the PPRS.

Perfect competition is defined as a market where the product is homogeneous, entry into the market is free and the behaviour of any one producer has no real effect on the market price. Imperfect competition can be represented by monopoly, a situation in which there is one supplier of a product, oligopoly, where there are few suppliers, monopsony, where there is one buyer and oligopsony where there are few buyers. In the case of the first two, the supplier has influence over price, can control supply but cannot dictate demand, whereas in the last two the purchaser holds the influence over price, can dictate demand but has no control over supply.

The supplier or purchaser can therefore exert an effect on the market price where imperfect competition exists in all instances other than a market structure showing an oligopolistic supplier and an oligopsonistic buyer (bilateral oligopoly) or bilateral monopoly which is unknown to exist in practice.

The United Kingdom human medicine market consists of three sectors. These are

(a) NHS prescriptions,

(b) Private prescriptions,

(c) Over the counter sales.

Private prescriptions form a very small part of that market with estimates ranging up to 10 per cent by value of the home market. Of the remainder about 75 to 80 per cent consists of NHS sales and 20 to 25 per cent consists of over-the-counter or household sales (1.28). In addition, export sales from 1969 to 1981 have been running at the rate of £4.0 million to £5.5 million for every £10 million of home sales (1.28). In other words sales to markets abroad are not quite as valuable as those to the NHS.

The Government, as purchaser of NHS medicines, holds a near monopsonistic position. It should therefore be expected to be capable of influencing the market price. The Government's power over price determination is reinforced when Health Authorities award contracts as this effectively reduces the number of buyers acting on behalf of the DHSS, increases the value of the individual orders placed and so strengthens the control which the buyer may exert over the supplier. A complicating factor, however, is that the DHSS buys on behalf of the NHS but the demander is the prescriber who neither pays nor is acutely aware of the price of the drug, but is influenced in his demand choice by the efforts of the DHSS and the manufacturers. The oligopsonistic power is therefore in several respects more theoretical than real, unless, as in hospitals, contract purchasing brings in its wake low brand loyalty, reducing the influence of the demander and increasing that of the buyer.

The sellers of a drug are few, in which case the market structure is described as having oligopolistic sellers (1.29) or if the drug is patented there is one seller only and so has a monopoly.

A monopoly assumes the absence of a close substitute product and so

the monopolist faces no imminent threat of competition. The absence of a close substitute product is rare in pharmaceuticals. The trend in pharmaceutical manufacturing is for companies to become fewer but larger (1.30, 1.31) and this trend is bound to shift the equilibrium from atomism toward oligopoly and oligopoly to monopoly.

The pharmaceutical manufacturers therefore become more vulnerable to investigation under monopolies and mergers legislation, a prerogative of the Secretary of State for Trade and Industry. In addition the Government uses the PPRS negotiations and, if necessary, statutory provisions to influence prices.

The price charged by the retail seller of medicines is maintained as a result of a judgment of the Restrictive Practices Court in 1970 (1.32). It was considered that for proprietary, that is over-the-counter, medicines Resale Price Maintenance abolition would result in a substantial reduction in the number of establishments selling the goods, and in the case of ethical products, that is prescription drugs, there would in addition be a substantial reduction in the quality or variety of goods available. It could be suggested that since the Government effectively controls resale prices of medicines through the PPRS and the Patents Act, abolition of Resale Price Maintenance would not in the long term lower prices, although, in the short term, wholesalers would reduce stock and deliveries, and prescription demand would be met less quickly.

In 1973, the Monopolies Commission reported (1.33) on the supply of chlordiazepoxide and diazepam. They found that a monopoly existed and that it was "undesirable that Roche Products should supply these drugs to NHS hospitals and the armed forces free of charge, or at low prices which are unrelated to cost savings, for the purpose of keeping competitors as far as possible out of that part of the market." (1.34) In addition they recommended that the manufacturer "should not differentiate in its selling prices between customers or classes of customers (including DHSS as purchaser for NHS hospitals and the armed forces) except to the extent that such differentiation is justified by normal commercial considerations such as savings in cost arising from bulk supply." (1.35)

The Commission recommended that the selling prices of the drugs under discussion should be reduced and this was achieved by the Government by way of a Statutory Instrument. There followed protracted legal

proceedings which eventually led to a settlement announced in November 1975 in which price arrangements satisfactory to both sides were negotiated.

Initially when it was established in 1948 the Monopolies and Restrictive Practices Commission was constituted as an investigatory body to see if monopoly situations existed and whether they operated against the public interest. Since then its successor bodies, the Monopolies Commission and more recently the Monopolies and Mergers Commission have tended to assume that monopolies automatically operate against the public interest. Thus the merger between the two pharmaceutical manufacturers Glaxo and Beecham was opposed on the grounds of reduced competition in research and development (1.36).

Health Service Regional Supplies Officers applied their thoughts to the economic purchasing criteria in 1969. Those ideas were endorsed by the DHSS and were reported (1.37) by the Supply Board Working Group in 1978 as follows:

> "When considering the economic unit of purchase it is obvious that the competitiveness in the relative industry must also be examined. For example in an industry which has comparatively few manufacturers of a particular product purchasing or contracting by greater number of authorities will tend to increase prices as each contracting authority will, through their individual demands, be in competition with each other and may tend to force prices up; and of equal consideration, in an industry that has many manufacturers of a particular product, large unit purchasing by an authority with enough purchasing power to influence the trade may tend to diminish the competitiveness. As cost effectiveness in purchasing depends to a great extent on competition among suppliers, this is a most important consideration. It follows that very accurate assessments must be made when looking at this question and particularly when investigating "monopoly" or "ring" prices. The temptation to achieve quick savings at the expense of a long term policy to sustain competition should be avoided."

When those thoughts are focused upon drug purchasing the conclusion to be drawn is that sometimes health authorities compete with each other for drugs in short supply resulting in possibly raised prices. If those authorities' purchasing arrangements are consolidated the possibility of the trade being markedly affected must be considered. Loss of business from an oligopsonistic buyer could force businesses out of the market resulting in higher rather than the anticipated lower prices. The message of the Regional Supplies Officers seems to be that some degree of co-operation among buying authorities would be beneficial, provided it is kept within bounds, but the number of companies must not be allowed to diminish excessively.

Appendix 3 to the Supply Board Working Group Report is an analysis of the shortcomings of NHS supplies arrangements written by one of the members of that Group. It stated, (1.38), inter alia:

> "Manufacturers must be competitive and the supply position must not be allowed to deteriorate into a monopoly or near monopoly situation."

Turpin completes the picture of the relationship between government and industry as follows:

> "The way in which government procurement is carried out can have a significant effect upon the growth, competitiveness and efficiency of British industry ... If the government exercises a considerable power as a purchaser, industry possesses a countervailing power, greatly fortified where conditions of monopoly or oligopoly obtain ... For each side to act in this situation with exclusive regard to its own immediate interest is unacceptable." (1.39).

The market for drugs bought by Health Authorities can best be described as bilaterial oligopoly which is oligopoly plus oligopsony. There is a significant degree of buyer concentration and a significant degree of seller concentration. The characteristics predicted for the conduct and performance of such a market are described by Bain (1.40):

> "full control over price in the hands of neither buyers alone nor sellers alone, express or tacit bargaining on price between buyer-seller pairs or between groups of buyers and of sellers, and some general tendency for the power of large sellers and that of large buyers to offset each other, so that price deviates from the atomistic level less than it would with oligopoly alone or oligopsony alone. That is, the "countervailing power" of large buyers and of large sellers may tend to blunt both monopolistic and monopsonistic tendencies, though arrival exactly at an atomistic outcome is not generally to be expected. Comparative degrees of seller and buyer concentration should have some influence on the outcome."

The policies of the seller and the buyer are in opposition in bilateral oligopoly. The bargaining or negotiation between the two parties results in a general price for all sales or a variety of prices. Bain (1.41) describes the different prices emerging as a sort of "chaotic discrimination" among different buyers and different transactions. He feels that solid-front bargaining is uncommon with group negotiations generally not appearing, but rather large buyers attempt to secure more favourable prices, in response to which sellers attempt to hold the prices firm. On the question of the effect of bilateral oligopoly negotiations on resulting price compared with that prevailing under different market conditions Bain is uncertain.

References

1.1 Bain, J.S. Industrial Organization. Second edition. New York. John Wiley. 1968. p.7.

1.2 Webster, F.E. Jr. and Wind, Y. Organizational Buying Behavior. Englewood Cliffs, N.J. Prentice - Hall. 1972. p.2.

1.3 Public Purchasing and Industrial Efficiency. Cmnd. 3291. HMSO. 1967. p.3.

1.4 Ibid. p.7.

1.5 Ibid. p.8.

1.6 Report of the Committee of Enquiry into the Relationship of the Pharmaceutical Industry with the National Health Service 1965-67 (Chairman, Lord Sainsbury) Cmnd. 3410. HMSO. 1967. paras. 316-319.

1.7 Stahl, I. and von Grebmer, K. Drugs and health care: Politics of a productivity approach. Pharm. J., Vol. 225, No. 6085, Aug. 1980, p.145.

1.8 Bain, J.S. Op. cit. p. 503.

1.9 England, W.B. The Purchasing System. Homewood, Ill. Irwin. 1967. (Irwin Series in Operations Management, No. 8) pp. 84-5.

1.10 Confidential document in author's possession, 1979. No. 51.

1.11 Salmon, B.L. Op. cit. p.51.

1.12 Webster, F.E. Jr. and Wind, Y. Op. cit.pp. 6-7.

1.13 Ibid. pp. 8 and 29.

1.14 Ibid. p.3.

1.15 Ibid. p.29.

1.16 Ibid. pp. 34-36.

1.17 Ibid. pp. 78-80.

1.18 Ibid. pp. 81-82.

1.19 Salmon, B.L. Op. cit. p.51.

1.20 Turpin, C. Government Contracts. Harmondsworth. Penguin. 1972. p.130.

1.21 Ibid. p.129.

1.22 Hyman, S. Managing Stores and Organising Supplies. Hospital Equipment and Supplies, Vol. 27, No. 4, April 1981, p.70.

1.23 Hyman, S. A brighter future. Hospital Equipment and Supplies, Vol. 27, No. 7, July 1981, p.43.

1.24 Webster, F.E. Jr. and Wind, Y. Op. cit. pp. 85-6.

1.25 Ibid. pp. 65-6.

1.26 Teeling - Smith, G. The Pharmaceutical Industry and Society. London. OHE. 1972. p.97.

1.27 Egan, J.W., Higinbotham, H.N. and Weston, J.F. Economics of the Pharmaceutical Industry. New York. Praeger. 1982. pp. 164-5.

1.28 ABPI. The pharmaceutical industry and the nation's health. Eleventh edition. London. ABPI. 1982. pp. 7-8.

1.29 Polanyi, G. and P. Competition, Risk and Profit in the Pharmaceutical Industry. London. ABPI. 1975. p.27.

1.30 Robinson, C.W. Memoirs of a 20th century druggist. Pharm. J., Vol. 228, No. 6181, June 1982, p.712.

1.31 Anon. A single British drug company - Professor Whalley's forecast. Pharm. J., Vol. 213, No. 5790, Oct. 1974, p.416.

1.32 Anon. RPM to continue on medicines: The judgment in full. Pharm. J., Vol. 204, No. 5563, June 1970, pp. 656-666.

1.33 The Monopolies Commission. A Report on the Supply of Chlordiazepoxide and Diazepam. HC 197. HMSO. 1973.

1.34 Ibid. para. 216.

1.35 Ibid. para. 238.

1.36 The Monopolies Commission. Beecham Group Limited and Glaxo Group Limited, the Boots Company Limited and Glaxo Group Limited: A report on the proposed mergers. HC 341. HMSO. 1972.

1.37 Salmon, B.L. Op. cit. para. 146 and p.124.

1.38 Ibid. p.76.

1.39 Turpin, C. Op. cit. p.17.

1.40 Bain, J.S. Op. cit. p.152.

1.41 Ibid. p.368-9.

CHAPTER 2

N.H.S. PURCHASING PROCEDURES

2.1 General Nature

The National Health Service Act 1946 (2.1) which came into operation on 5 July 1948 conferred on the Minister of Health the duty to promote the establishment of a comprehensive health service. When the Department of Health and Social Security was created on November 1 1968, the Secretary of State for Social Services took over this responsibility. The Secretary of State is responsible by law to Parliament for the provision and administration of a national health service in England. Whereas he is required to establish Regional and District (formerly Area) Health Authorities and is given power to decide what functions to delegate them, he has no legal power to control the activities of hospitals or personnel in the NHS (2.2). These functions are carried out by the 14 Regional and 193 District Health Authorities in England. Each of these is legally independent (2.3).

The Permanent Secretary to the DHSS is Accounting Officer and is personally responsible for the proper expenditure of the funds Parliament has voted for the NHS (2.4). The Secretary of State can refuse to supply health authorities with finance but he can only do so to the extent that enables the NHS to continue: He is responsible for seeing that there is a health service but he is not responsible for each particular unit of it. Despite this, he is answerable to the House of Commons for the NHS and any detail of day-to-day activity can form the basis of a question from a M.P. that he is obliged to answer (2.5).

The NHS Act 1946 authorized the Regional Hospital Boards to exercise various functions, including the acquisition of hospital supplies, on behalf of the Minister (2.6). Nevertheless the Board carried any liabilities incurred as if it were acting as a principal (2.3). The Minister was empowered, either by agreement or compulsorily, to acquire any equipment used in or in connection with the hospital premises. This was a provision of Clause 10 of the NHS Act 1946 (2.7). However, the acquisition of supplies was normally the function of the local health authority, as empowered by Clause 64 of that Act. The National Health Service Regulations, 1948,conferred upon hospitals the powers necessary for acquiring supplies, subject to any arrangements made by a Regional Hospital Board with the consent of the Minister (2.8).

The 1968 Health Services and Public Health Act authorizes the use of that power exercisable under section 46 of the Patents Act 1949, to procure medicines for the hospital service at lower prices than charged by patentees for the procurement of medicines for the general medical, pharmaceutical and dental services of the NHS (2.9).

The NHS Reorganisation Act 1973, which brought about the changes in the NHS on 1 April 1974, did not alter the ambivalence shown by the NHS Act 1946 toward the role of the Minister of Health. It states (2.10) that the Secretary of State shall have power (a) to provide such services as he considers appropriate for the purpose of discharging any duties imposed on him by the Health Service Acts; and (b) to do any other thing whatsoever which is calculated to facilitate, or is conducive or incidental to, the discharge of such a duty. He must ensure that the NHS operates satisfactorily, ensuring that goods are bought in the most efficient and economic way but his power to bring this about is limited to advice to area and regional health authorities in varying degrees of persistence on how they might purchase supplies (2.11).

The National Health Service Act 1977 (2.12) consolidated certain provisions relating to the health service and repealed certain enactments. Section 17 of the Act empowered the Secretary of State to give directions with respect to the exercise of any functions. Section 57 of that Act notes that the:

> "Secretary of State may by order provide for controlling maximum prices to be charged for any medical supplies required for the purposes of this Act. The Secretary of State may by direction, ... concerned with medical supplies, require persons ... or undertakings ... to keep such books, accounts and records ... as may be prescribed by the direction, ... order ..., or notice, to furnish at such times, in such manner and in such form as may be so prescribed such estimates, returns or information relating to the undertaking as may be so prescribed."

Schedule 11 to that Act deals among other matters with the orders and directions under section 57 of the Act and the restriction on disclosing information. Paragraph 5 of the Schedule states:

> "No person who obtains any information by nature of section 57 above and this Schedule shall, otherwise than in connection with the execution of that section and this Schedule or of an order made under that section, disclose that information except for the purposes of any criminal proceedings, or of a report of any criminal proceedings, or with permission granted by or on behalf of a Minister of the Crown."

Clearly Section 57 of the NHS Act 1977 provides the legal basis to the PPRS detailed later. It is possible that those who refuse to supply information on the operation of the Scheme do so under the assumption that to provide such information would run counter to Schedule 11 to that Act!

The market for pharmaceuticals in the United Kingdom in 1979 was £1351 million with a predicted value for 1980 of £1594 million (2.13) this including items bought by patients. Hospital and community drugs dispensed in England in 1978-79 were worth £673 million and £781 million in 1979-80 (2.14). In 1980-81 approximately £185 million were spent on pharmaceuticals by English hospitals and £775 million by the Family Practitioner Services (2.15). An estimate of the Office of Health Economics, a body sponsored by the Association of the British Pharmaceutical Industry showed the U.K. general practice prescription market to be £735 million in 1979 (2.16) and hospital market to be £165 million (2.17). That hospital figure is 2.8% of the total hospital revenue budget (purchases and salaries) (2.18) and if salaries are excluded, it forms 10.7% of hospital purchasing costs (2.19), the most expensive commodity.

The information on total expenditure on contract purchases of drugs in the health service is incomplete (2.20). From the information available, it was estimated that in 1975/76 total capital and revenue expenditure of Regional Health Authorities was £593.1 million, of which 22.7% consisted of purchasing under central arrangements, 33.8% under co-ordinated regional and area arrangements and 43.4% under unco-ordinated arrangements. Drugs expenditure during that financial year amounted to £67.9 million of which 4.9% was under central purchasing arrangements (2.21). Expenditure figures for co-ordinated regional and area arrangements, as well as unco-ordinated arrangements are available for two regions only (2.22).

For one region co-ordinated arrangements accounted for 47.6% of drug expenditure (compared with 40.1% for all commodities) and unco-ordinated arrangements consumed 47.2% of drug expenditure (compared with 36.6% for all commodities). The other region showed co-ordinated arrangements for drugs of 58.4% of all drug expenditure (compared with 39.4% for all commodities) and 36.0% for unco-ordinated purchases of drugs (compared with 49.6% for all commodities).

It can be deduced that the value of co-ordinated purchasing of drugs varies but generally accounts for a greater proportion of expenditure than goods generally. Nevertheless, this was considerably less than the 80% that might be obtained (2.23).

The relationship between the buyer, an agent of the government, and the seller, private industry, is one in which a balance between the control over the supplier and the freedom required by it is stuck and regulated by contract. Turpin (2.24) describes it as a kind of treaty, by which the conditions of a relationship of interdependence are established. Hyman (2.25) feels that to be meaningful at law and useful in practice, a contract must define quantities to be purchased over stated times, at different prices, to given delivery points. In practice, this is not the case. As in other public services, contract purchasing occurs by competitive tendering. Since most tenders are based on estimated quantities to be supplied as and when demanded, this constitutes a standing offer which may be revoked at any time. The contract therefore exists only in respect of orders placed while the offer stands. Only specific quantities for tender would allow a definite offer and thus the contract is not binding.

Beynon, a NHS supplies officer, refers (2.26) to "confusion" about the precise nature of a contract and suggests it results from the use of "supplies jargon." He further declares that the term "contract" is often used for convenience and not in a strictly legal sense. Salmon (2.27) stated that in present circumstances, it is often not possible to be sufficiently specific about future quantities to permit a binding contract to be made, and he felt that the standing offer will always have a place in the purchasing arrangements of the NHS, as it does in many other organisations.

Health Authority drug purchasing is manifestly different from community arrangements in respect of the professional discretion accorded to the hospital pharmacist to supply an equivalent brand to that prescribed. In effect this allows the hospital to stock only one brand of each drug. Since several manufacturers compete against each other for the supply of unpatented drugs, that aspect of drug purchase lends itself particularly well to a competitive framework in which each unpatented drug is obtained.

Tendering has traditionally been the means of purchase of many patented as well as unpatented drugs, but recent moves suggest that tendering is highly inappropriate for patented drugs and some analysts feel that negotiation would provide cheaper prices for patented drugs. The aim of the tendering procedure is to provide competition in public authority purchasing. The independent preparation of tenders by prospective suppliers is an essential feature of the system. Collusion among suppliers therefore strikes at its roots on economic and ethical grounds. The economic ones are the loss of economic efficiency and the financial burden on the purchaser and the ethical grounds are those of deception for financial gain.

Collusive tendering falls within the scope of the Restrictive Trade Practices Act 1976. It is, however, difficult to detect. An obvious precaution is to avoid undue regularity and predictability in the choice of firms invited to tender. An approved list of firms should be sufficiently large and regularly updated to allow competent new suppliers to be placed on it (2.28).

The operation of contracting is governed by the National Health Service Regulations 1973 which require Health Authorities to make Standing Orders for the regulation of their proceedings and business (2.29). Standing Orders govern the award of contracts and apart from ensuring that public money is subjected to public accountability they afford protection to the officers who purchase. Rix suggests (2.30) that there is nothing in Standing Orders to encourage officers to undertake further action to promote purchasing efficiency. Rix continues:

> "Standing Orders alone cannot guarantee efficiency in purchasing and they may sometimes even hinder efficient purchasing."

Rix identifies the motivation of the purchaser as being concerned primarily with safeguarding his reputation which depends on his obeying the rules rather than on his "value for money" performance.

2.2 Tendering

Since the 19th Century, one of the leading principles of government contracting has been that they should be let by competitive tender (2.31). The tender is the offer made by the potential supplier which is accepted or declined. It is a practice approved by the Public Accounts Committee for a record to be made in departmental files of the reasons for departing from competition in particular cases, so as to facilitate inquiry by the Comptroller and Auditor General. Within each government department, the Accounting Officer is responsible, under the Minister, for all financial matters in his department. Since the late 1920's the Permanent Head of each department holds this office. He is appointed by the Treasury but he is not the Treasury's servant or representative in the department. He is responsible to his Minister for economical administration and has responsibility to Parliament and is required to sign the Appropriation Account of his department which is laid before the House of Commons. He has to answer to the Public Accounts Committee for the correctness of the account and is held responsible for the efficient and economical administration of the business of his department (2.32). The Public Accounts Committee is a committee of Members of Parliament appointed each session to examine the Appropriation Accounts and the Reports on them of the Comptroller and Auditor General and it calls for explanations from the Accounting Officers of the departments (2.33). The Comptroller and Auditor General must discover and report upon any neglect or violation by departments of the established contracting principles. His report of 1946 stated that the examination of contract methods was one of the leading functions of his officers (2.34). This includes the working of the system for placing contracts and accepting tenders and is an integral part of his statutory duty to satisfy himself that the expenditure conforms to the authority which governs it and he must check the formal regularity of expenditure by government departments (2.35). The Public Accounts Committee must ensure that departments observe the recognised principles of contracting and where its report draws attention to any defect of contracting procedure, the Treasury assumes responsibility for seeing that the matter is rectified by the

department concerned (2.36).

It is evident that buying by government agencies is considerably circumscribed.

Turpin holds the view that competitive tender is an effective means of getting the needed goods at lowest cost and is easy to administer (2.37).

Turpin described (2.38) competitive tender as "almost an article of faith." Webster and Wind describe (2.39) the low-bid or competitive tender system as "a form of investment-reducing strategy" designed to reduce perceived risk. That risk, in their view, is a function of the uncertainty which an individual has about the outcome of a given course of action and the consequences associated with alternative outcomes. They continue:

> "The individual may be uncertain either about the goals that are relevant in the buying situation or about the extent to which a particular course of buying action will meet those goals ...
>
> Two types of consequences will be of importance as determinants of the amount of risk perceived by the organisational buyer in a given buying situation. First, uncertainty about the performance of certain products and vendors will be significant determinants of perceived risk. Second, the individual may be concerned about the reactions of other people to his decisions, the psychosocial consequences of his actions.
>
> The importance of the consequences resulting from a given buying action will increase as a function of the importance of the goals being pursued and as a function of the amount of time, money, effort, and "psychosocial" investment involved in the buying decision."

Webster and Wind suggest that high perceived psychosocial risk can be reduced by decreasing the amount of personal involvement in the buying situation:

> "The individual can adopt a "count-me-out" posture and refuse to accept responsibility for the outcome of the buying decision."

Another element of risk is that of bias. Competitive tender is designed to diminish the risk of bias or favouritism in contract awards and tendering firms will feel that they have an equal chance of getting the contract. The tenderer is free, in law, to withdraw his tender at any time before it is accepted by the department. No binding

contract arises if tenders are invited for the supply of goods only as and when ordered by the department (2.40). In this case the tender takes effect as a standing offer to supply goods as ordered and unless it has been agreed for consideration that the tender shall not be withdrawn, the tenderer may withdraw his offer at any time, though orders already given will be binding (2.41). In the United States, a bid is irrevocable by the tenderer once opened by the authorised government officer, and the contracting officer is bound by law to accept the most favourable bid among those opened, unless he rejects all tenders made. In the United Kingdom, no equivalent obligation on departmental contracts officers exists (2.37).

Competitive tender can be of two varieties. These are (i) open or full in which the purchaser invites potential suppliers to submit a complete tender containing the relevant figures, and (ii) limited, restricted, selective or closed in which the purchaser invites interested undertakings to make themselves known and then it selects from the candidates those from which it will request a tender (2.42). Fully competitive tender is seldom invited for Government work since Departments prefer to limit competition to a list of approved firms of known capabilities and financial standing which have had experience of departmental work (2.43). When joint contracting schemes were established by hospital authorities in 1949, open competition was at first used but was progressively abandoned in favour of selective tendering except as an occasional means of testing the market and of seeking new sources of supply. Selective tender is nearly always the sounder procedure if the quality of workmanship, such as applies in medicines, is important. It avoids waste of resources when many firms spend time and effort in the preparation of tenders with little or no prospect of winning the contract. Turpin (2.43) states that the general adoption of selective tender results in a closer relationship between the government department and the firms regularly invited to tender and results in the reorganisation or rationalization of an industry. The principles of admission to and exclusion from departments' approved lists must safeguard the public interest and be fair to contractors (2.44). The lists should not be so short as to

discourage competition and invite collusion (2.45), in which the firms combine together in a 'ring' with the object of eliminating competition among themselves in tendering (2.46).

Baily (2.47) is highly critical of the procedures applying to government purchasing. He states:

> "But in the case of government departments, procedures evolved in the nineteenth century to ensure and display public accountability sometimes continue to be applied rigorously in the second half of the twentieth century when the whole role and scale of government has altered radically. Like Caesar's wife, government buyers should be above suspicion. But they should also seek ... ' the best value for money spent'. The civil service has tended to regard purchasing as a job which anyone could do, without special skills or training, simply by sticking rigidly to a set of rules designed to show for all to see that purchase decisions are made with complete impartiality, without fear, favour or improper influence, and indeed without personal responsibility attaching to any individual. 'Commercial common-sense is what is missing,' according to one government contractor; 'the civil servants are not to blame - they bend the system to make it work. The system was designed solely to prevent fraud, so no one has any real executive power.'
>
> The doctrine of ministerial responsibility, the doctrine of public accountability, the tradition of anonymity, the strong internal pressures to standardized, rulebook procedures and a highly formalized bureaucracy, have all combined to produce the sort of situation one supplier described thus:
>
> 'It isn't unusual for the paperwork for major contracts to be kicked around for a year and a quarter ...' to ensure the best value for money spent one must take positive steps; the best buy will not result from the negative aim of the avoidance of grounds for criticism ... The Banwell Report (2.48) criticized local authorities for sticking too rigidly to 'outmoded procedures' ... 'On the question of public accountability ... much emphasis has always been laid on the need for local authorities so to deal with contractors as to avoid any suspicion of favouritism.' The traditional ritual of open competitive tenders, sealed tenders opened before a committee as the clock strikes the hour, no negotiation, etc., indeed rules out suspicion of corruption or favouritism. 'But experience shows that it is fallacious to suggest that the lowest tender obtained in open competition will necessarily result in the lowest final cost.' "

Baily concludes his discussion of this topic by quoting from the National Economic Development Office paper 'Action on the Banwell Report' published by HMSO in 1967 (2.49).

"Competition still has an important part to play, particularly in the field of public expenditure, but we consider that other methods including negotiation can be used with advantage. Our emphasis is on the need for flexibility and freedom of choice; not "is it orthodox?" but "is it the best solution?" should be the test. Concern to demonstrate that money from the public purse has been spent wisely will continue to be an inevitable and healthy necessity amongst all public authorities: but it must be more widely recognized, by elected representatives and officials alike, that rigid adherence to procedures sanctified by long tradition is not necessarily the best way to take full advantage of modern techniques, industrialization and modernization; and that the Best Buy is more likely to result from the wise use of available modern methods."

Baily (2.49) notes that the NEDO urged the Ministry of Housing and Local Government to press local authorities to improve their buying methods, while noting some improvements since the Banwell Report of 1964. The NEDO repeated the recommendations several times, strongly endorsing the Banwell conclusion. Baily's views had been revised by 1978 when the fourth edition of his book had modified his previous strongly held views and replaced them by milder comments such as "there has been a tendency for all purchasing decisions to be taken by committees so that no individual could be held accountable for success or failure."

Another chink in the competitive tender system arose in 1967 with the governmental interdepartmental inquiry into Marks and Spencer procurement methods. The Report of the inquiry was not published but the Minister of State, Treasury, Mr. D. Taverne, in a written answer (2.50), stated that:

"Experiments based on the company's practice, modified as necessary to meet the Government's different circumstances, are being undertaken in suitable fields of supply by the Ministry of Defence, the Ministry of Public Building and Works, and Her Majesty's Stationery Office. The experiments involve departures from the conventions of competition and formal contracting and considerable delegation to purchasing officers."

Mr Taverne, had prefaced his answer with the statement that:

"The Report outlined aspects of the company's practice of establishing long-term close relationships with selected suppliers, and recommended their adoption in Government purchasing."

Turpin is somewhat cynical regarding the benefits of competitive tender. He proffers the view (2.38):

"The interest of the administration in the satisfactory performance of contracts took second place to the financial interest of the Treasury. In more recent times the virtues of competitive tender have seemed less self-evident. Opinion in industry is far from unanimous in its favour"

Turpin continues (2.38):

"Government departments place too rigid a reliance on competitive tender through fear of the Parliamentary Question. Competitive tender often means costly delay and can be wasteful of resources in that tenderers may have to hold capacity in reserve in prospect of getting the contract, while other work is declined or postponed. From the government's view, continuity of association between user and supplier is sacrificed and with it the economies to be gained from an uninterrupted flow of work, as well as the benefits that can accrue to a procuring agency from the exercise of continuous quality control and from the joint planning of projects and long term programmes."

Turpin states (2.38) that:

"It is therefore not surprising that government officers with responsibility for contracts have on occasion expressed scepticism about the value of competitive tendering as traditionally applied in government procurement."

Housley, a United States hospital administrator, expressed (2.51) the view that "Good purchasing is the art of negotiation and the better the negotiation, the better the prices." He stated that volume of sales does not necessarily achieve a better price. Although "bidding (competitive tendering) is an age-old technique", Housley felt that it "often creates confusion, bad will and mediocre prices." He felt that suppliers may be responsive to competitive tendering if the value of the order is sufficiently large and he suggested that individual item bidding was "out-moded" and should be updated by a contract for a whole category of items, for which suppliers "are very responsive and accommodating." This could be applied to drugs in Britain by the award of a contract for a wide range to a wholesaler. Housley describes such a system as offering:

"the hospitals this opportunity. It provides clout and leverage for price, quality and performance ... encompasses all supplies of a certain category - the small as well as the large volume items, the less expensive items as well as the most expensive, etc. As a result, the hospital consistently gets best overall price, quality and service with a fraction of the time and effort expended with traditional methods."

An anonymous correspondent wrote (2.52) in Contract Journal in 1970 concerning competitive tendering for building work. He referred to the 1944 Simon Report comment that:

> "the operation of the competitive system of tendering gives no encouragement for honest dealing and presents difficulties which do not exist in other industries."

The article continued with the comment by its author that:

> "the least that can be required of a good tendering policy is for contractors to be told in retrospect of the state of competition on jobs for which they have submitted bids."

The author continued by advocating the holding of "post-mortems over tenders" and referred to unduly low tenders and the difficulties they cause:

> "In Holland and Italy, the practice is to accept the second lowest tender. Why should not this be tried in Britain. It would put a completely new face on the competitive situation ... Tendering must be made even more selective. Contractors should be told more of the state of the competition. The cut-throat edge of the competitive tendering situation should be tempered in the interests of both client and contractor. Subeconomic bids should be rigorously passed over."

Matthews (2.53), the chairman of a leading firm of building contractors has described the tender system as "a gross misuse of our national resources." He stated (2.53):

> "Government departments and local authorities in particular have traditionally regarded competitive tendering as the means of securing the best job at the lowest price, but this view is surely mistaken. Contractors incur considerable costs in tendering and the price of every contract awarded cannot help but include the cost of all previous unsuccessful tenders. It is the tendering stage, so often abortive, which also wastes the valuable time of some of the most able executives in the building industry. Yet for every contract secured, perhaps a dozen are tendered for without success ... Tendering is an out-dated system in a modern world, and it is in the interests of contractors, their clients, and the country's economy to hasten its final demise."

Rix emphasises (2.54) the need for a more far-sighted view of the value of sound purchasing and deplores the concentration on tendering to the exclusion of negotiation. He suggests:

> "in some circumstances negotiation may be the best method of awarding a contract.
>
> An offer cannot be invited from a company after the tenders are opened, even if no offer has been received from the best known source of supply. It is necessary to re-invite

tenders which means going through the whole process again, and in many cases time does not allow this course of action.

Discussions cannot be entered into for the purpose of amending a tender after it has been received ... This can cause considerable difficulties when an offer is ambiguous ...

There is an undoubted pressure on purchasing officers to use the tender system and this certainly reduces the flexibility of approach to the market ...

It takes a professional purchasing officer to recognise where beneficial results can be achieved by circumventing the rules in a manner acceptable to ratepayers and auditors."

The Audit Commission, the independent watchdog of local government spending decried (2.55) the range of prices paid by the various authorities for standard items in a report published in July 1984. Unfortunately it appeared to afford little recognition of the dilemma facing all public concerns in their need to purchase by tender. Such price variations are unremediable.

Van Dyke, Roering and Paul (2.56) pointed out that bidding (competitive tender) realises the lowest possible price only under certain conditions.

1. Where the value of the purchase is sufficient to justify the expense to buyer and seller;
2. The specifications are clear to both;
3. The market consists of an adequate number of sellers;
4. Sellers want to bid and are therefore willing to price competitively;
5. There is sufficient time for this process.

They continue:

"When any one of these conditions does not exist the buyer is more likely to obtain the best price through negotiation."

Using these criteria it can be suggested that Health Authorities could arguably obtain the best price for the drugs they require through negotiation rather than competitive tender.

Scott, a contracts officer with the Central Electricity Generating Board, asserts (2.57) that negotiations usually arise for reasons of urgency, proprietary or monopoly supply and occasionally technical excellence.

Farrington explored the relevance of various factors to effective purchase price management in a survey completed by industrial buyers.

He showed (2.58) that negotiation skills were identified by respondents as the most appropriate to effective purchase price management. He suggested that was an indication of the wide use of negotiation in resisting price increase requests and in achieving cost reduction objectives. Contractual aspects were considered of minor importance by the respondents. Farrington further showed (2.59) by a simulation exercise that there was a totally absent desire on the part of buyers to negotiate on contractual aspects of purchases, and an unquestioning attitude adopted toward the price and terms suggested by the supplier. Even when obvious cost savings were available from other sources, 33% of respondents remained loyal to the existing supplier. This suggests that development of negotiating skills could produce significant savings on purchase price in all areas of commerce, including drug buying.

As yet it has been assumed that competitive tender and negotiation are mutually exclusive. Such is not the case, as described (2.60) by Van Dyke, Roering and Paul. In describing the studies of seller behaviour that buyers may perform those authors suggest:

> "When they see who the lowest bidders are, and evaluate the current financial situation faced by each, they may use the information to negotiate with the low bidders for an even lower price than originally submitted."

The tendering procedure can be divided into four stages (2.61)

1. Preparation for tender
2. Invitation to tender
3. Opening and assessment of tenders
4. Award of the contract

The first stage begins with the department defining specifications. To ensure an equal and effective competition, the specifications should be as simple, clear and unambiguous as possible. Several departments make use of a pre-bid conference in which potential tenderers are invited, the department's requirements are explained, the proposed contract is described, and suggestions from the firms invited. This secures the co-operation of prospective contractors. A department will often during this stage, arrive at its own estimate of the contract price, which is a useful item of comparison of tendered prices (2.62).

The next stage is that of invitation to tender. At one time it was regarded as good practice to invite all the firms on the approved list to tender on every occasion. Before tenders are invited, listed firms are sometimes informed of the proposed contract and are invited to express willingness to tender. Firms that do not wish to tender can then be excluded and invitations are sent to the firms likely to be genuine competitors. The Public Accounts Committee during the 1961-62 session stressed that invitations to tender should not be issued to firms whose tenders are likely to be rejected on grounds extraneous to the competition, such as lack of technical capacity to undertake the contract (2.63). Tendering and evaluation of tenders can be very expensive and the cost of wasted tenders may in the long run have to be borne by the government in higher prices. It can be assumed that if a firm tenders for six contracts and is awarded one, then the successful one must pay for the cost of preparing the other five (2.63). The Public Accounts Committee of the 1961-62 session stipulated that the invitation to tender must define as clearly as possible the requirements of the department and the factors to be considered in the assessment of tenders.

The third stage of the tendering procedure is the opening and assessment of tenders. As described above, this has little practical legal significance and the offer can still be withdrawn. Even a stipulation to the contrary in an invitation to tender is illegal. This stage can be complex if, as in the case of drugs, tenders are invited for a range of different items and if tenders grade prices according to quantities. The tenders are subjected to detailed analysis by the department's technical officers. During assessment there must be close co-operation between those (supplies officers) who organise the contractual arrangements and those (pharmacists) who buy using the contracts. The pharmacist knows what he wants and he may know the technical capacity of the firms. The supplies officer probably knows more about the management of the firm and is responsible for observing the principles of government contracting and sound purchasing practice (2.64).

The harnessing of the expertise of both the supplies officer and the pharmacist would help provide a more efficient system. Such a view was given encouragement by a statement of two experienced pharmacists

Calder and Parker (2.65) in a report submitted to the NHS Supply Council in 1982. They felt that "The effectiveness of the (drug contract) system varies considerably depending on how closely Supplies and Pharmacy work together." Such an opinion was endorsed by the Supply Council Report (2.66) which stated:

> "We feel that there is room for improvement in collaboration between pharmacists and supplies officers to make better use of supplies officers' commercial and negotiating skills and thus form effective purchasing teams able to negotiate more positively with commercial suppliers in relation to both co-ordinated purchasing and other buying arrangements ... some Regions have appointed full-time technical pharmacists ... We recommend the appointment of technical pharmacists ... In many Regions supplies officers are involved only with the purely administrative arrangements for drug contracts. We feel better use could be made of their expertise in assessing the need for contracts, negotiating with suppliers and in other aspects of pharmaceutical purchasing and supply in Regions. The setting up of Regional Pharmaceutical Supplies Committees and Regional Pharmaceutical negotiating teams ... would ensure that such expertise is used to advantage ... "

Regional Pharmaceutical Supplies Committees were recommended to establish policy and oversee the work of the negotiating teams, to maintain liaison with the field and to link with the envisaged National Standing Pharmaceutical Supplies Committee and ensure co-operation with other Regions. The negotiating teams would negotiate with industry and purchase drugs above a given threshold, investigate and review packaging and its specifications and establish and maintain approved suppliers' lists. The negotiating teams would refer problems to the National Standing Pharmaceutical Supply Committee.

The involvement of pharmacists in purchasing has been researched by several workers. Muller and Krasner, of the Center for Social Research, New York City University, analysed (2.67) the prices paid for six drugs by 51 hospitals in New York, United States, and discovered a significant negative correlation with pharmacy salaries per bed. This suggested that "the more the hospital invested in professional pharmacy staff, the lower the drug price paid."

Bachynsky, a research officer with the Department of National Health and Welfare, Canada, sounds a note of caution when he warns (2.68)

against the cost incurred by too much involvement of pharmacists in group purchasing, suggesting that "every effort should be made to delegate a portion of the purchasing to nonprofessional persons." The Supply Board Working Group noted (2.69) the statutory responsibilities of pharmacists in ordering and evaluating medicines and those of supplies officers in the "preparation and maintenance of contracts." The Report continued:"Advantageous prices are achieved by the Regional co-ordination of the purchase of medicines." No clear delineation of roles in contract award was suggested by the Working Group. An attempt was made to clarify the subject by an RHA report of March 1979 which recommended (2.70) that someone with a good knowledge of the drugs market should be employed to administer the drug contracting procedures. That person would be able to "get out into the field" and meet and discuss terms on a face to face basis with suppliers.

A Regional Pharmaceutical Officer in 1983 asserted (2.71) that each drug contract must be under the control of a specialist pharmacist to ensure, inter alia, correct evaluation of suppliers and monitoring of standards. He continued:

> "Pharmacists were the key to value for money in terms of the procurement of pharmaceuticals."

An opposing view was promulgated at about the same time in a report published by a market research group which indicated (2.72) that the role of the pharmacist in purchasing may be diminishing or at least be under challenge. It suggested that cost reduction was "only possible using the supply officer facility and expertise." Farrington hypothesized (2.73) that departments which possess purchase price analysts and purchase researchers will be more sensitive to cost structure and be more effective in consequent price control.
The purchase of generics and proprietary drugs, that is unpatented and branded ones respectively, requires a different approach. Generic drugs are part of a competitive market and Calder and Parker suggest (2.74) that for those "an open tender system is required to give manufacturers an equal chance. With proprietaries, where there is generally no direct competition, some form of negotiation is likely to produce the best results." Calder and Parker continue by referring to the low profit margins in the generic market and the little money spared for quality control by companies and the resulting minimum

standards adopted. The Health Authorities require, therefore, a considerable input to check sources of supply and product quality. "The contract then becomes not just a price list, but a positive indication of acceptable quality for pharmacists at hospital level." (2.74). There appears to be a clearly defined role for pharmacists in contract awards.

Tenders were discussed in a publication of December 1965 of the Ministry of Health (2.75). That document informed hospitals of the review of procedures for dealing with late, incomplete or amended tenders:

"General Considerations

> The essence of an efficient tendering system is the preservation of strict equity between all tenders in a way which can, if necessary, be defended publicly. This means that, as a general rule, late, incomplete or amended tenders should not be accepted."

It went on to specify procedures and laid down rules on confidentiality:

"Confidentiality

> While decisions as to the acceptance of late, incomplete or amended tenders are under consideration, and while requotations or retenders are being sought, the tender documents, price-schedules etc. should be kept strictly confidential and held in safe custody."

The award of the contract is the last stage. A department is under no legal obligation to award the contract to the lowest or any other tenderer. It may invite fresh tenders. The important principle in government contracting is that the lowest satisfactory tender should be accepted. The Comptroller and Auditor General may bring to the attention of the Public Accounts Committee cases in which a tender has been accepted that was greatly in excess of others submitted. There may be a good reason for not accepting the lowest tender even if price is the primary consideration. The lowest price may not be the best price. Uneconomic prices may be a cause of loss to the government later, by low quality or the firm may go into liquidation. The Public Accounts Committee 1943-44 stated that a fixed price should be a good price, that is one which is likely to produce for the contractor a reasonable profit, but not more than a reasonable profit, if he executes the contract with due care and

diligence. Tenderers expect that tenders will be fairly considered on an equal basis (2.76). Justice must be seen to be done and the suggestion of any fraud in the conduct of the proceedings might well give rise to court action on the tort of deceit.(2.77). Turpin expresses (2.78) the view that there should be redress for an unsuccessful tenderer who has been the victim of capricious, biased or fraudulent action. There is no uniform or regulated procedure for the adjudication of such appeals, by which a fair determination of the matter is assured.

Breach of contract has a remedy in an action for damages which reimburses the injured party for the loss caused by the breach, including the value of the benefit that he would have obtained if the contract had been fully and exactly performed. The measure of damages is the difference between the contract price and the market price of similar goods at the time fixed for delivery. In practice it would be almost impossible for such a breach to be proved and the author cannot identify any instance of such a case coming to court. Unfortunately forms used in the contracting process bear no relation to those in the private sector. Furthermore each region has its own forms. Turpin (2.79), in describing the lack of standardisation in government forms, expressed the view that it would be in the interest of efficiency if suppliers would not have to adapt their judgement and procedures to a novel set of conditions when doing business with the government.

This argument has as much validity for the variation in forms for regional drug contracts as it does for government business generally. In Mersey Region, tenders for the drug contract are addressed and opened in accordance with Standing Orders. Up to 1984 the recommendations by the designated Supplies Officer were submitted to the Regional Supplies Officer for approval by the Regional Health Authority or Regional Team of Officers and he issued the letters of acceptance. It is now dealt with by the Regional Supplies Officer and is not delegated to a district's Officer. The conditions of contract are recommended by the DHSS. Even within Regions progress on standardisation of forms has been slow and though a Regional Working Party on standardisation of forms supported the use of a six part order form and recommended that Areas adopt that type of form to achieve

standardisation, this is not being used throughout the Region (2.80). The Supply Board Working Group reported on the need for rationalisation of specifications as a prerequisite to co-ordinated purchasing (2.81). For drug contracting considerable progress has been made in this sphere to ensure that drugs of an appropriate high quality are bought.

The timetable for award of a contract in the various regions would be similar to that of the Mersey Region which is as follows:

Estimates of full schedule and approved additions sent out		30 April
Estimates of full schedule and approved additions returned	by	1 June
Tenders issued to firms	by	22 June
Tenders returned from firms	by	20 July
Extract from tenders to schedules	by	6 August
Request to firm for samples	early	August
Quality control meeting to discuss samples	week beginning	6 August
Meeting of pharmacists and supplies officers to examine tender schedules	week beginning	1 October
Acceptances and rejections issued to firms	by	16 October
Synopsis to RHA for approval	by	23 October
Contract book distributed to hospital pharmacies	mid	November
Contract effective from		1 December

Another RHA allows about six weeks from issue of tender to return, about six weeks to compile the information received and decide upon acceptances, and about six weeks before the contract awards are notified to companies (2.82). The latter RHA, while allowing companies longer to deliberate than Mersey RHA does, compiles the information and deliberates more quickly but keeps the companies waiting longer before informing them of the outcome. Whereas the three components of the process require 15 weeks in Mersey RHA they occupy 18 weeks in another RHA. There is obviously variation in the timescales adopted by the RHA's.

The time between tender being submitted by supplier and acceptance by the Health Authority ranges from 4 to 19 weeks (2.83) with a mean of 13 weeks. That time has been criticised as being too long and the time between acceptance of tender and first delivery too short (2.84). Criticism has also been expressed that suppliers do not have sufficient time to consider the tender document before it must be returned (1.10).

Those timescales,which may be considered as typical U.K. examples, may be contrasted with information from the United States. Suggested time requirements for the various components of the tender process were promulgated by McAllister who suggested (2.85) that 3 - 4 weeks are required by vendors for analysis and quotation of price, 2 - 6 weeks are required by buyers to evaluate the offers and award contracts. 1 to 2 weeks are needed for preparations of contracts, and a timespan of 4 weeks prior to contract commencement is needed by companies to update their databases and arrange supplies.

The first task is the collation of estimated requirements. If there is sufficient demand additional items are added to the schedule. The complete schedule is issued with tender documents to those firms on the frequently revised list of possible suppliers. Any firm may apply to supply goods to the NHS. They must first apply for registration as an approved supplier and that usually involves a check on their financial and legal status and the Scientific and Technical branch of Supplies Division vet suppliers in terms of technical competence (2.86). Firms wishing to tender for items on the schedule may be asked to send samples which are tested. The standing orders on the procedure for receipt of tenders must be observed and the offers made by the firms are tabulated. These offers together with reports on the samples tested are provided to the adjudicating committee which consists of pharmacists and supplies officers with representation by medical staff and auditors of the RHA. The lowest tender is accepted unless one of the following conditions prevails:

(a) samples are not received,
(b) samples are not of appropriate quality,
(c) pack is inadequate,
(d) item is not to specification,
(e) pack is inconvenient,
(f) item is tendered at list price or DHSS contract price, or
(g) item for which alternatives are recommended.

The decisions are translated into the contract documents issued to the firms and the information sheets for participating departments. The information sheets contain the list of items, prices and contractors and copies are issued to the RHA and the DHSS. Firms not awarded a contract receive the appropriate non-acceptance letter.

The estimates provided by the user departments are inaccurate (1.10, 2.87, 2.88) and suppliers take little notice of them, and in many cases use their own records on drug uptake to assess likely purchasing quantities. Yet the NHS staff involved waste a great deal of time and effort collating the information (1.10) which is of little use. One region halved the workload for the supplies staff as a result of no estimates collation and the suppliers were delighted to help in the exercise (2.89). A few Regions have now discontinued collecting estimates of drug usage (1.10).

The result of a lack of commitment to buy a fixed quantity of goods is a standing offer which is not the most economic and efficient method of purchasing but it does save the negotiation of many individual contracts each year (2.90).

A firm purchasing commitment is more difficult to achieve in the case of drugs than other commodities because of changes in prescribing habits, but the use of many drugs could be predicted quite accurately. The United States General Accounting Office (equivalent to the U.K. National Auditing Office) wrote of the significant reduction in costs on the basis of committed volume (2.91). Hyman (2.92) described a system in French hospitals in which the uptake is guaranteed within 10-15% and the price is fixed for the year. Hyman felt that there should be firm commitments to suppliers so they can work economically throughout the year (2.93). The Supply Board Working Group deprecated the inaccuracy of estimates and the absence of firm purchasing commitments (2.94).

The frequency of renewal of the contract has been traditionally once a year, but seven of the fourteen English Regions have decreased this to once every two years. It has been suggested that the contract should hold for three or even five years. This would lead to better discounts and lower administrative costs (1.10, 2.70).

Past satisfaction or at least complacency with regard to NHS purchasing has been superseded of late by a questioning, and, in some cases, a critical attitude. An illustration of this is seen in the 1982 report of the Supply Council (2.95):

"We have examined the present arrangements for contracting and purchasing medicines for the hospital service and are convinced that there is room for considerable improvement, especially in the provision of reliable, compatible and interchangeable management information. The method and system of contracting also needs to be improved, ordering and the associated clerical activities need to be rationalised, better use made of available purchasing skills and unnecessary duplication of effort avoided. We confirm that ordering of pharmaceuticals should be under the control of a pharmacist."

References

2.1 NHS Act 1946 (9 & 10 Geo.6). Chapter 81. HMSO.

2.2 Hyman, S. Supplies Management for Health Services. London. Croom Helm. 1979. pp. 26 - 28.

2.3 NHS Act 1946. Op. cit. Chapter 81. S.13(1).

2.4 Salmon, B.L. Op.cit. p. 48.

2.5 Hyman, S. Op.cit. (1979) pp. 26 - 8.

2.6 NHS Act 1946. Op. cit. Chapter 81. S.12(1).

2.7 Hyman, S. Op. cit. (1979) pp. 36 - 7.

2.8 S.I. 1948. No. 60. HMSO.

2.9 The Health Services and Public Health Act 1968. Chapter 46. s. 59. HMSO.

2.10 NHS Reorganisation Act 1973. Chapter 32. Clause 2 (1). HMSO.

2.11 Hyman, S. Op. cit. (1979) pp. 35 - 7.

2.12 NHS Act 1977. Chapter 49. HMSO.

2.13 Anon. Predicted growth of West European Markets 1980. Scrip, No. 550/551, Dec. 1980, p. 5.

2.14 Jenkin, P. Commons Written Reply abstracted in Pharm. J., Vol. 225, No. 6100, Nov. 1980, p. 586.

2.15 Greenleaf, J.C. Op. cit. para.3.1.

2.16 Anon. O.H.E. statement. Pharm. J., Vol. 225, No. 6104, Dec. 1980, p.698.

2.17 A.B.P.I. The pharmaceutical industry and the nation's health. Tenth edition. London. A.B.P.I. 1980. p.39.

2.18 Office of Health Economics. Compendium of Health Statistics. London. O.H.E. 1977.

2.19 D.H.S.S. Health Service Prices Index. London. DHSS. Nov. 1978.

2.20 Salmon. B.L. Op. cit. para. 101.

2.21 Ibid. p.109.

2.22 Ibid. p.111.

2.23 Ibid. paras. 105 and 145.

2.24 Turpin, C. Op. cit. p.264.

2.25 Hyman, S. Op. cit. (1979) pp. 18-25.

2.26 Beynon, E.E. National Health Service Supplies. London. I.H.S.A. 1982. pp. 43-4.

2.27 Salmon, B.L. Op. cit. p.28.

2.28 Department of Trade. Collusive Tendering: A Consultative Document. D.O.T. July 1980. paras. 1, 7 and 12.

2.29 National Health Service (Regional and Area Health Authorities: Membership and Procedure) Regulations 1973, 13 (2), S.I. 1973. No. 1286.

2.30 Rix, C. Local authority purchasing and public accountability. Purchasing and Supply Management, June 1982, p.26.

2.31 Turpin, C. Op. cit. p.134.

2.32 Ibid. p.61.

2.33 Ibid. pp. 43-4.

2.34 Ibid. p.93.

2.35 Ibid. pp. 42-3.

2.36 Ibid. p.94.

2.37 Ibid. p.135.

2.38 Ibid. p.162.

2.39 Webster, F.E. Jr. and Wind, Y. Op. cit. pp. 100-103.

2.40 Percival v. LCC Asylums Committee (1918) 87 L.J.K.B. 677.

2.41 Great Northern Rly. Co. v. Witham (1873) L.R.9.C. p.16.

2.42 Rice, G. Government Purchasing Behaviour and the implications for Marketing. Bradford. University of Bradford. 1979. pp. 5 - 6.

2.43 Turpin, C. Op. cit. p.138.

2.44 Ibid. p.140.

2.45 Ibid. p.141.

2.46 Ibid. p.143.

2.47 Baily, P.J.H. Purchasing and Supply Management. Second edition. London. Chapman and Hall. 1969. pp. 7-8.

2.48 The Placing and Management of Contracts for Civil Engineering and Building Work. 1964. HMSO.

2.49 Baily, P.J.H. Op. cit. p.9.

2.50 Parliamentary Debates (Hansard) Session 1968-69. Written answers. HMSO 17 July 1969. Vol. 787. Col. 180.

2.51 Housley, C. Contract Purchasing means a buyer's market. Dimensions in Health Service, Vol. 53, part 4, April 1976, pp. 16-20.

2.52 Anon. Restrictive practices - the way forward. Contract Journal, Vol. 233, No. 4727, Jan. 1970, pp. 425, 428.

2.53 Matthews, V. The negotiated contract versus the open tender. Financial Times, No. 24998, 10 November 1969, p.13.

2.54 Rix, C. Op. cit. p.28.

2.55 Anon. Prices Advice to Councils. Daily Telegraph, No. 40144, July 1984, p.5.

2.56 Van Dyke, J.E. Roering, K.J. and Paul, R.J. Guidelines for Competitive Bidding. Journal of Purchasing and Materials Management, Vol. 11, No. 3, Fall 1975, p.27.

2.57 Scott, P. Tender Procedure and Negotiations. Purchasing Journal, March 1972, p.80.

2.58 Farrington, B. Industrial Purchase Price Management. Ph.D. thesis. Brunel University. 1978. pp. 246-9.

2.59 Ibid. pp. 254-6.

2.60 Van Dyke, J.E. et al. Op. cit. p.30.

2.61 Turpin, C. Op. cit. p.149.

2.62 Ibid. pp. 150-2.

2.63 Ibid. pp. 152-3

2.64 Ibid. pp. 153-4.

2.65 Calder, G. and Parker, A.K. Supply of Drugs to Hospitals in the National Health Service. 1981. p.8.

2.66 Greenleaf, J.C. Op. cit. paras. 5.1, 11.3, 11.4 and 11.5.

2.67 Muller, C. and Krasner, M. Pharmacy purchasing, formularies, and prices paid for drugs. Am. J. Hosp. Pharm., Vol. 30, No. 9, Sept. 1973, pp. 787-8.

2.68 Bachynsky, J.A. Group Purchasing for hospitals. Can. J. Hosp. Pharm., Vol. 23, No. 6, Nov.-Dec. 1970, p.229.

2.69 Salmon, B.L. Op. cit. paras. 114-5.

2.70 Confidential document in author's possession. 1979, No. 50.

2.71 Anon. Regional drug contracts criticised. Pharm. J., Vol. 231, No. 6249, Oct. 1983, p.470.

2.72 Anon. Purchasing pharmacist "under challenge". Pharm. J., Vol. 231, No. 6243, Sept. 1983, p.263.

2.73 Farrington, B. Op. cit. p.12.

2.74 Calder, G. and Parker, A.K. Op. cit. p.10.

2.75 Ministry of Health. Late, Incomplete or Amended Tenders for Stores and Services. Hospital Equipment Information. No. 15. Dec. 1965. HMSO para.53/65.

2.76 Turpin, C. Op. cit. pp. 155-6.

2.77 Ibid. p.157.

2.78 Ibid. pp. 157-9.

2.79 Ibid. p.104.

2.80 Ferguson, D.T. Outline Report on Supplies Organisation for the Mersey Regional Health Authority. 12 June 1974. p.19.

2.81 Salmon, B.L. Op. cit. para.143.

2.82 Confidential document in author's possession. Sept. 1982. No. 204.

2.83 Confidential supplier's document in author's possession.

2.84 Office of Health Economics. Hospital Purchasing. London. OHE. 1972. p.19.

2.85 McAllister, J.C. Bid solicitation and contract negotiation. Am. J. Hosp. Pharm., Vol. 41, No. 6, June 1984, pp. 1171-2.

2.86 Hyman, S. Op. cit. (1979) p.63.

2.87 Office of Health Economics. Hospital Purchasing. Op. cit. p.20.

2.88 Hyman, S. Op. cit. (1979) p.64.

2.89 Ibid. p.99.

2.90 Salmon, B.L. Op. cit. paras. 96, 97 and 147.

2.91 GAO Report PSAD-79-58A reproduced in Am. J. Hosp. Pharm. Vol. 36, No. 9, Sept. 1979. p.1172.

2.92 Hyman, S. Op. cit. (1979) p.201.

2.93 Ibid. p.215.

2.94 Salmon, B.L. Op. cit. paras. 5.9, 6.10, 95 and 148.

2.95 Greenleaf, J.C. Op. cit. para. 5.

CHAPTER 3

N.H.S. DRUG CONTRACT SYSTEM

3.1 Historical Development and Political Effects

The NHS gets its money from the state and the needs to be satisfied include those perceived by the government as being of greatest importance. Turpin (3.1) suggests that in government purchasing as in other fields the decisions can be expected to be political decisions, which take account of the ulterior social and economic consequences of alternative courses of action. In addition to this general political influence which applies wherever public money is spent there are specific political implications in NHS drug purchasing. The activities of the pharmaceutical industry have for many years attracted the close attention of those with political interests. Many Socialists favour a nationalised drug industry and regard the present independent manufacturers as profiteers at the expense of an impoverished NHS. The Conservative viewpoint is that the present free enterprise system stimulates competition, provides high export earnings and serves the NHS well. Furthermore Socialists see the NHS as fulfilling a monopoly role in the provision of health care whereas Conservatives see an important role for private health care alongside the traditional state provided scheme.

Health Authority drug purchasing might be considered to be fertile ground for political influences to make themselves felt, yet no published work which examines this topic has been found. Even the political pressures on purchasing of goods generally have not been previously analysed.

Since drugs account for more than ten per cent of hospital purchasing costs and are the most expensive of all the categories of goods bought, it might be thought that any political influences on purchasing would be reflected most clearly in the recommendations for the purchasing of drugs.

The historical background is depicted in Table 3.1.

The Minister of Health and his successor, the Secretary of State for Social Services, may issue statutory directions to the Health Authorities on their mode of operation but it has been policy since 1948 to allow Health Authorities to determine their own policies within very broad guidelines. No Secretary of State has issued a

TABLE 3.1: HISTORICAL DEVELOPMENTS IN NHS BUYING

Year	Development of Drug Purchasing	Other Influences	Reference
1919		Ministry of Health Established	
1945	Birmingham Hospital Pharmacists began co-ordinating drug buying and that led to a Regional drug contract.		3.2
1948	Hospital pharmacists said drug ordering should be by pharmacists.	Inception of National Health Service	3.3
1949	Drugs and dressings used in English hospitals accounted for £4.83 million out of £110 million	Parliament informed of variation in prices paid by four hospitals	3.4, 3.5
1950		Joint contracting encouraged by Ministry	3.5, 3.6 3.7, 3.8
	Hospital pharmacists viewed Regional or National buying as advantageous provided under pharmaceutical control. Optimum size of buying unit being examined	Ministry considering inquiry on competitive tendering. Locally many group contracts being organised	
1951	Guild of public pharmacists noted antagonism between supplies officers and pharmacists. Creation of post of supplies officer likely to alarm pharmacists	Public accounts committee pointed to delay in arranging competitive tendering.	3.9, 3.10
1952	Guild of public pharm. emphasised need for pharm advice and control wherever drugs bought		3.11
1953	A.B.P.I. produced "model conditions of contract"		3.12, 3.13
	Guild pressed for need for adequate pharm. advice in buying		
1954	Central contracting in 1 or 2 regions		3.13

TABLE 3.1: continued

Year	Development of Drug Purchasing	Other Influences	Reference
1955	Guild highlighted difficulties in estimating and limited advantages of buying inter hospital, Regionally or Nationally. Contract advantages applied to less than 200 drugs		3.14
1956	Guild to approach Ministry to discuss supplies officers' roles		3.15
1957	Suppliers requested at least two weeks for tender return Guild met Ministry to discuss supplies officers		3.16, 3.17
1958		Buying for 19 HMC's in Liverpool performed by 6 areas	3.18
1959	Most hospital pharmacists participating in group, area or regional purchasing. Guild disappointed that problems between pharmacists and supplies officers not resolved. Guild reiterated responsibility of pharmacists to purchase drugs. Ministry agreed chief pharmacist was a purchasing officer. Joint contracting discussed between ABPI and Hosp. pharmacists. Regional contract considered most suitable. Liverpool Regional Supplies Officer to confer with pharmacists on contracts	Extent and scope of area contracting in Liverpool being determined	3.19 to 3.26

TABLE 3.1: continued

Year	Development of Drug Purchasing	Other Influences	Reference
1960	Guild asserted pharmacist as drug buyer. Liverpool pharmacists and supplies officers reported on natural development of area buying but no advantages in regional buying. 12% of drugs bought on contract. Joint contracting to continue. Standard tender form to be prepared. Inter-Regional drug price variations noted.		3.27 to 3.31
1961	Individual purchasing by hospitals thought to cost 40% more than joint buying		3.32
1962	Regional buying to be examined but resisted by pharmacists		3.33, 3.34
1963	Regional buying would cut admin. costs and drug testing by 75%, but not favoured by hosp. pharmacists		3.35
1964	Regional contracts commenced in Liverpool, with a supplies officer being responsible		3.36
	Ministry policy to buy drugs centrally if substantial savings likely or for quality reasons. Public Accounts Committee welcomed collection and dissemination of information on drug prices. Liverpool supplies officers accepted that Pharmacists' technical advice was essential but negotiation of regional contract was duty of supplies officer	Ministry expressed wish to maintain comparative record of items on contract. Ministry asked by Public Accounts Committee about price information collected. Perm. Secretary confirmed he was collecting information. Bulk of supplies under contract	3.37, 3.38, 3.39

TABLE 3.1: continued

Year	Development of Drug Purchasing	Other Influences	Reference
1966	Guild of Public Pharmacists reported that Messer Committee Report unacceptable to hosp. pharmacists and called for no extension in contracting.		3.40
1968		DHSS established by amalgamation of the Ministries of Health and Social Security	
1970	Information from contractors suggested that conjecture was the system for assessing future needs in several hospitals.		3.41
1971		Conference on supply of medical equipment resulted in attempt to buy on fixed quantity, fixed price and period contract basis. Attempt failed because hospitals could not commit themselves to buy specific quantities in given period.	3.42
1976		Three regional chairmen reported a Supply Board was advisable	3.43
1977		Supply Board Working Group under chairmanship of Salmon appointed	3.43
1980		The objectives of the Supply Council listed.	3.44

direction to the NHS in connection with supplies (3.45). The statutory authorities of the NHS receive cautiously worded advice and guidance from the Department of Health. This advice need not be, and often is not, followed (3.45).

The Public Accounts Committee has taken an interest in contract purchasing, has influenced DHSS guidance, and is referred to below. An examination of the advice issued to Health Authorities shows that since the inception of the NHS, about sixty circulars, reports or letters referring to purchasing in general or drug purchasing in particular have been issued. Some of these have been of major consequence, others are little known. The guidance which is given is considerable and it creates the quasi-legal framework within which the contract system has evolved. Included in the list is a report, the Bradbeer Report, which, while not strictly speaking constituting advice from the Ministry of Health, nevertheless had an influence on Ministry guidance.

It should be noted that in the first years of the NHS, identical circulars were issued to Regional Hospital Boards (RHB), Hospital Management Committees (HMC) and Boards of Governors (BG). HM refers to hospital memorandum. DS refers to "Dear Secretary" letters. HC is Health Circular. HRC is NHS Reorganisation Circular. HSC(IS) is Health Service Circular (Interim Series). SCC refers to Supply Council Circular.

The year of issue appears in parentheses or following an oblique stroke. No significance should be attached to the differentiation of the guidance into categories of circular, memorandum, letters or reports.

GUIDANCE 1948 to OCTOBER 1951

The guidance issued, under a Labour government was as follows:-

RHB(48)8,	HMC(48)1,	BG(48)8
RHB(48)13,	HMC(48)2,	BG(48)5
RHB(48)13b,	HMC(48)2a,	
RHB(48)49,	HMC(48)35,	BG(48)39
RHB(49)89	HMC(49)72,	BG(49)74
RHB(50)7,	HMC(50)7,	BG(50)6

The first guidance, in paragraph 29 of RHB(48)8, HMC(48)1, BG(48)8 of March 1948 stated that it will be for Management Committees (and boards of governors of teaching hospitals) to decide the future methods and sources of supply, subject to any arrangements for central purchase of

particular items which may from time to time be made by the Minister or by the Regional Boards with his consent.

This was followed by circular HMC(48)2,paragraph 4 of which envisaged that hospital management committees would normally appoint a supplies officer whose duties would be to arrange for the acquisition, maintenance and distribution of equipment and supplies.

This was followed in September 1948 by HMC(48)2a. This referred to some misunderstandings which had arisen with regard to the responsibilities of these officers and those of hospital pharmacists, with regard to pharmaceutical supplies. It drew the attention of committees to the considerations that the Supplies Officer should be generally responsible for all supplies but that this general responsibility does not imply - particularly in the case of special supplies such as drugs - that individual orders should be made or approved by the Supplies Officer:

> "He must clearly rely on the advice of the pharmacist in relation to pharmaceutical supplies ... and must delegate adequate independent responsibility to the pharmacist ... Management Committees should ensure that the measure of independent action is effective, particularly having regard to:- The ordering, receiving and supply of certain poisons and dangerous drugs must legally be carried out by pharmacists."

The issue of HMC(48)2a of 1948 drew the comment from hospital pharmacists (3.3) that ordering of pharmaceutical supplies should always be in the hands of the pharmacists themselves. They wished to avoid over-centralisation in buying and viewed with concern the role of some supplies officers. The circular HMC(48)2a was regarded as ambiguous, but the editorial suggested that tactful consultation between the two disciplines before changes were made would prevent unfortunate developments.

The scene was set, at the very inception of the National Health Service, for pharmacists and supplies officers to challenge each other's roles rather than for co-operation between the two disciplines. HMC(48)35 of July 1948 indicated the respects in which arrangements had been made centrally by the Department for purchase and supply. It stated that consideration was being given to the extension of central supply arrangements to other categories of hospital equipment and supplies. It said that suggestions for further central provision would be welcomed and should be addressed to the Controller of supplies.

HMC(49)72 of 18 June 1949 stated that the Minister had under consideration the need for extension of central purchasing and contracting by the Department, in the interests of economy and better efficiency, to other major equipment and common user stores:

> "He has decided that this shall be undertaken wherever it appears to be economically or otherwise advantageous or necessary ... Hospital Management Committees ... are invited to suggest particular classes of goods to be considered for early action."

The circular referred to central contracts placed by or on behalf of the Department for streptomycin, with subsequent purchasing programmes probably including drugs. The Minister did not think it desirable that Regional Hospital Boards should themselves undertake any purchasing or contracting on behalf of hospitals. He hoped, however, that they would encourage HMC's to consider the economic advantages of joint contracting by groups of HMC's for items which could not be covered centrally by the Department, and that HMC's would press on with such arrangements.

On 23 January 1950, the Ministry issued HMC(50)7 entitled "Hospital Supplies Officers and Pharmacists" in order to set out in more detail the Minister's views on the proper division of responsibility between the pharmacist and the supplies officer. The Minister had been advised to define more clearly the considerations to be taken into account in the provision of pharmaceutical supplies. The procedure in obtaining those should be that the pharmacist should estimate the needs, a pharmacist should scrutinise these and pass them on to the supplies department for collation. The supplies department should take pharmaceutical advice on specification, preparation of tender schedules, special conditions of contract, etc. Pharmaceutical advice should also be taken on proposals for contract awards after tenders are received before recommendations are made to the Management Committee. Individual orders, which need not be countersigned by any other officer, should be placed by the pharmacist.

The Labour government during those years clearly emphasized the central role of purchasing and gave little encouragement to delegation of authority from the Ministry to local level.

GUIDANCE NOVEMBER 1951 TO DECEMBER 1958

During the years from October 1951 to December 1958, a Conservative government was in office. The Ministry during those years issued the guidance listed below:-

RHB(53)13, HMC(53)12, BG(53)13

Central Health Services Council, Report of the Committee on the Internal Administration of Hospitals (Chairman A.F. Bradbeer) HMSO 1954

HM(55)22

Central Health Services Council, Report of the Sub-Committee of the Standing Pharmaceutical Advisory Committee on the Hospital Pharmaceutical Service (Chairman Sir Hugh Linstead) HMSO 1955

HM(56)7

Report of the Committee of Enquiry into the cost of the NHS (Chairman C.W. Guillebaud) Cmd 9663 HMSO 1956

HM(57)25

Central Health Services Council, Interim Report of the Committee on Hospital Supplies (Chairman Sir F.Messer) HMSO 1957

HM(58)17

Central Health Services Council, Report of Sub-Committee of the Standing Pharmaceutical Advisory Committee on organisation of Hospital Pharmaceutical departments (Chairman Sir Hugh Linstead) HMSO 1958

Report of the Joint Sub-Committee on the Control of Dangerous Drugs and Poisons in Hospitals (Aitken) HMSO 1958

HM(58)94

Central Health Services Council, Final Report of the Committee on Hospital Supplies (Chairman Sir F.Messer) HMSO 1958

HMC(53)12 entitled "Supplies" was issued on 20 February 1953 and it set out the scope of central contracting for supplies. It encouraged joint contracting by groups of Management Committees and emphasized the need for competitive tendering and the drawing up of contracts in proper form. It referred among other items to special drugs being supplied mainly direct by contractors to hospitals. The Minister felt that the arrangements (for central contracts) should be continued but stated that it was not proposed at that time to develop central supply arrangements on so wide a scale as envisaged in HMC(49)72.

He felt that before the end of 1954 extensions of existing schemes may become effective, including drugs (possibly on a pilot basis in one RHB area). He invited RHB's to encourage HMC's to consider the advantage of joint contracting and referred to schemes already started or contemplated. He hoped that joint contracting would be extended wherever economies seemed likely and that RHB's and BOG's would report periodically on the progress made. The circular continued:"It is not the intention to centralise contracting or supply in the Department if equally good results can be obtained by joint contracting." In referring to the need for invitations for competitive tenders, the circular stated that the invitations should be as widely spread as possible, if necessary by public advertisement, and all tenders should be treated confidentially. Contracts should be in writing and the prices at which they were awarded should be confidential. The standardisation of certain general conditions of contract was under consideration but meanwhile all contracts should include a "fair wages", a "corrupt gifts" and a "default" clause. Special conditions appropriate to the goods should be included in tender schedules. In the case of contracts providing for delivery of an unspecified or estimated quantity of goods as and when required during a stated period, provision should be made for termination by either party at the end of three months or at any time thereafter, provided one month's notice for that purpose was previously given by either party in writing.

The internal administration of N.H.S. hospitals was examined by a committee which produced the Bradbeer Report, published in 1954, and it reviewed supplies problems which centred on defining the optimum unit for purchasing and contracting. It concluded that a more detailed examination was needed, and this took the form of the Messer Committee, referred to below.

The C and AG reported for the year ended 31 March 1954 that as a result of his comments, the Ministry were preparing model standing orders for hospital authorities (3.46).

In 1955, HM(55)22 was issued and it brought to the attention of hospital authorities the Linstead Report. The Report stated that the choice of and decisions upon materials and sources of supply was a normal and important function of the pharmacy.

It stated that so long as selection of the material and source of supply and control of receipt and storage were in the hands of the pharmacist and may place his orders without delay, there may be advantage in using the services of the Supplies Department for other stages of the purchasing process. Differences of opinion between the two departments would be resolved by the two presenting their views to any Committees. The document HM(55)22 referred to the responsibility of the pharmacy for the provision of drugs and medicinal preparations and the promotion of economy in the use of medical supplies.

On 31 January 1956, HM(56)7 was issued and it was entitled "Standing Orders." It detailed model standing orders which would help ensure that hospital authorities complied with the requirements of the NHS (Regional Hospital Boards, etc) Regulations 1947. It stipulated that tenders were to be invited for contracts and detailed the procedure to be adopted for obtaining, submission, opening and acceptance of tenders and the form of contract.

The Committee of Enquiry into the Cost of the National Health Service (Guillebaud) reported in January 1956. While welcoming the appointment in 1955 of a special committee (Messer Committee) of the Central Health Services Council to investigate supplies, the Guillebaud Committee stated that it did not propose to offer any recommendations on the subject. It nevertheless went on to state that hospital authorities generally had not yet taken full advantage of the enormous volume of knowledge and well tried practices in supplies purchasing which were common to all large undertakings in this country. Progress in applying those practices appeared to have been slower than might have been expected.

HM(57)25 of 14 March 1957 brought to the notice of hospital authorities the Interim Report of the Committee on Hospital Supplies 1957 (Chairman, Sir Frederick Messer, M.P. (Labour)), and recommended them to follow the Report's advice. This Report was completed in June 1956 but was not published until 1957. It referred to the comparatively little progress since 1953 in developing inter-group arrangements and contracts were largely at group or hospital level.

It referred to lack of detailed evidence of the overall financial savings achieved by joint contracts but felt that savings were being made. It stated that joint contracting should reduce administrative costs and strongly advised the adoption of joint contracting schemes, devised to meet the individual circumstances of hospital authorities. It compared prices under Ministry contracts for hospitals in Wales and Scotland with those under two joint schemes and found no price advantage one way or the other.

As far as central supply was concerned the Report noted:

> "It is right that central supply arrangements should remain on the present limited scale, i.e. that they should be substantially confined so far as value is concerned to those categories of drugs ... which necessitate central supply arrangements owing to the inadequacy of available supplies or to the limited sources of supply which are available."

HM(58)17 was issued on 18 February 1958 and it stated that the Minister of Health accepted the Report to which it referred, that of the Joint Sub-Committee on the Control of Dangerous Drugs and Poisons in Hospitals under the chairmanship of Janet Aitken, which was published in 1958. Paragraph 18 of the Report referred to the pharmacist ordering drugs. It made note of the evidence given to the Committee that in some hospitals the Supplies Officer orders receives and stores medicines. The report stated "This latter is a contravention of the Poisons Rules; the Supplies Officer may not store poisons nor order or store Dangerous Drugs." The Committee felt that the purchasing of medicines should <u>always</u> be the responsibility of the pharmacist. This did not rule out the recording of transactions in the Supplies Officer's department, nor, of course, the Supplies Officer advising on the wording of contracts; but the pharmacist should be responsible for the ordering and also the storage.

The second Linstead Report, of 1958, was not published but was referred to in HM(59)43 which is dealt with below.

On 2 December 1958, HM(58)94 was issued. It brought to the attention of hospital authorities the Final Report of the Committee on Hospital Supplies, under the chairmanship of Messer, which was not published. The memorandum asked that careful consideration be given to the recommendations of the Report. The Committee suggested that joint contracting should be used for common user drugs which were not

bought under Ministry contracts. The Minister would continue to arrange for central contracting in any cases where this appeared suitable: for the rest, he hoped that joint contracting would be used as extensively as practicable. The Committee noted that central purchasing or contracting only applied if a clear cost saving would result or if sources or supplies were inadequate. The Committee took the view, with which the Minister agreed, that with few exceptions, group buying or joint contracting should be the general practice. On the question of responsibility of supplies officer and pharmacist in purchasing, the Committee felt that choice of materials and sources of supply was not solely a matter for the pharmacist; he must carry his administrative colleagues with him on all matters of importance. The Committee did not consider that the Supplies Officer should have the last word or be authorised to overrule the wishes of the departmental head without reference to the chief administrative officer or the appropriate Sub-Committee of the hospital authority. The Minister shared the view that both the Supplies Officer and the specialist head of department had a part to play in procurement. There should be no question of one officer seeking to overrule another. The Minister felt that special considerations arose in pharmacy owing to the pharmacist's statutory responsibilities. The Minister's view was that no precise delimitation of responsibilities was possible, both having an important part to play and the main need being an amicable working relationship and (as the Committee stated) the suppression of any individual desire to seek personal prestige.

All the documents referred to reflected the prevailing political influence with little sympathy being shown toward greater involvement of the Ministry in procurement.

GUIDANCE JANUARY 1959 to OCTOBER 1964

From 1959 to 1964 few advisory documents appeared. They were:-

HM(59)43

HM(61)78

HM(59)43 was issued on 28 April 1959 and it referred to the unpublished Report on the Hospital Pharmaceutical Service 1958.

It listed among the duties of the group pharmacist "co-ordination of pharmaceutical supplies, in consultation with the Supplies Officer."

The circular drew attention again to the lack of amicable working relationship between the supplies and pharmaceutical disciplines and expressed the view that the delimitation of responsibilities between the two was clear. The Central Health Services Council in accepting the Report decided that further study was needed and this resulted in HM(66)33.

HM(61)78 of 14 August 1961 on the subject of "Hospital Drug Costs" reminded hospital authorities of the importance of controlling their costs and stated that "a reasonable, and indeed, a desirable, practice" was the substitution of "less expensive drugs of equivalent therapeutic effect." Paragraph 5 stated that joint purchasing had "been found to produce substantial economies when applied to drugs and dressings. Boards and Committees are asked to satisfy themselves that no item to which this method could with advantage be applied has been overlooked."

During the years 1959 to 1964, under a continuing Conservative administration, no changes in emphasis on the more local procurement of supplies took place.

GUIDANCE NOVEMBER 1964 to JUNE 1970

The guidance during the years November 1964 to June 1970 consisted of the following:

HM(65)22

HM(65)67

HM(65)90

Hospital Equipment Information No. 15 1965

Report of the Committee on Hospital Supplies Organisation (Chairman J.F. Hunt) MOH 1966

HM(66)33

Hospital O and M Service Reports No. 9 H.M.S.O. 1966

HM(66)69

HM(67)95

HM(70)21

Report of the Working Party on the Hospital Pharmaceutical Service (Chairman Sir Noel Hall) DHSS 1970

HM(65)22 was issued on 10 March 1965 and was entitled "Quality Control of Hospital Supplies of Drugs and Dressings." The memorandum commended to Hospital Authorities an appended report of the Hospital Pharmacists' Consultative Committee. The aim was to initiate a

procedure to enable hospital authorities to be safeguarded against supplies of doubtful merit. The Ministry would provide in confidence on request information on fitness of firms to supply medicines. The Department would carry out inspections of firms to ensure that a standard procedure applied. Contracting authorities were advised to issue invitations to tender rather than advertise their requirements.

HM(65)67 of 25 August 1965 supplemented the reference in the Model Standing Orders circulated with HM(56)7 to the definition of "pecuniary interest."

HM(65)90 issued on 30 September 1965 dealt with Hospital Costing and envisaged changes as from 1 April 1966 to improve the arrangements and to make greater use of the results. Though it did not specifically refer to supplies, the memorandum suggested that the new costing system would provide a framework for further detailed studies.

Hospital Equipment Information No. 15 was issued in December 1965 and referred to tendering procedures. It is discussed elsewhere.

The Hunt Report of 17 January 1966 had a major impact on procurement in the health service. Hunt was appointed on 26 November 1964 to review the organisation for the purchase and distribution of goods. His Group reported that joint contracting represented 23% of total supply expenditure (range less than 10% to more than 75%), central contracting accounted for 10.6% of total expenditure, leaving almost two thirds at hospital level. The Report's paragraph 49 referred to the proposition that the hospital pharmacist should himself make contracts for pharmaceutical supplies and it rejected the proposition stating that the head of the specialist department (pharmacist) should provide for the supplies officer expert advice about suitable specifications, sources of supply, quality control etc.. It recommended "area" supply units, 60-70 in number.

The Report, in paragraph 68, bemoaned the fact that the hospital service had for long operated independently of government policy in purchasing. The author of this thesis regards this as unrealistic. In paragraph 81, it recommended a hospital service supply board separate from the Ministry. It decided against an extension of the Ministry's participation in the supply field.

On 20 May 1966 memorandum HM(66)33 was issued. This announced publication of a report by the National Health Service Central Organisation and Methods Unit on the ordering and receipt of pharmaceutical supplies and the Minister asked hospital authorities to study the conclusions of the report. The study showed (paragraph 11) that in the hospitals visited working relationships were generally good with a high degree of co-operation amongst officers concerned with the various duties regardless of how these happened to be allocated locally. It remarked that good will achieved amicable working relationships. The report noted the growth of regional and area joint arrangements, under which both pharmacists and supplies officers were members of contracting committees and recommended their extension (Pages 11 and 12). It referred to the estimated savings in one Region of £50,000 in one year as a result of joint contracting (Page 12). The report recommended that the pharmacist should choose the manufacturers but the supplies officer could give valuable assistance in tendering and preparation of contracts (Page 13). It recommended that the pharmacist should place the order which should not be countersigned by other officers (Pages 15 and 16).
On 14 September 1966, memorandum HM(66)69 was issued and it brought to the notice of hospital authorities the Hunt Report previously issued. It commented on it and invited discussion. The examination of the comments led to issue of HM(67)95 on 29 December 1967. The Minister agreed to recommend establishment of "area" supply units, greater in size than the groups at that time, and the setting up of a hospital service supply branch in the Supply Division. Ultimate responsibility for supplies would rest with Regional Hospital Boards, which should appoint a Regional Supplies Officer. The Minister stated that changes in the list of products being bought on an area or regional basis would not need approval, but the Ministry would keep in touch with Regional Hospital Boards by asking for periodical reports.
The Minister agreed that the Supply Division would influence purchasing, would offer guidance to hospital authorities on "best buys" (Page 17 of Report) and quality control, would determine the levels at which supplies should be purchased, the methods of purchase and would make central contracts where these were financially or otherwise advantageous (Page 19 of the Report). The Minister agreed

that the decisions of supply branch as to the level at which goods should be purchased would be mandatory (Page 25 of Report).
HM(70)21 of April 1970 covered the issue of the Report of the Working Party on the Hospital Pharmaceutical Service. The Report was published in February 1970 by the Working Party set up by the Minister of Health in April 1967 under the chairmanship of Noel Hall. It commented in section 4.24 on the development of Hospital Supplies as outlined in HM(67)95, suggesting that it should be entirely beneficial to the hospital pharmaceutical service and that the Pharmaceutical Areas proposed and the supply areas might share common boundaries. Section 4.30 stated that the Regional Pharmacist would be a member of regional supply contracting committees.
The principles of the Labour party were not compromised by procurement policies during the years 1964 to 1970, with a strong emphasis on the role of central government with a strengthened supply division in the Ministry with mandatory powers.
GUIDANCE JULY 1970 to SEPTEMBER 1974
The guidance issued during these years was as follows:

DS (Supply) 12/71
HM(71)70
DS (Supply) 34/71
DS (Supply) 11/72
DS (Supply) 18/72
DS (Supply) 56/72
DS 19/73
HRC(73)5
DS 120/73
DS (Supply) 26/73
DS (Supply) 31/73
DS (Supply) 57/73
DS (Supply) 4/74
DS (Supply) 11/74
HSC(IS) 73

Letter DS (Supply) 12/71 invited Regional Hospital Boards to comment on draft standard supplementary conditions of contract for stores purchases.
According to HM(71)70 the Secretary of State in September 1971 accepted the recommendations of the Noel Hall Report, referred to previously, and asked that they be implemented.

In November 1971 DS (Supply) 34/71 set out the agreed supplementary conditions of contract suggested in DS (Supply) 12/71. It referred, inter alia, to the estimated quantities indicating "only the probable requirements for the period referred to and the Authority shall not be bound to order such quantities."

DS (Supply) 11/72 asked that appropriate wording regarding safety, quality and efficacy of medicinal products be incorporated in the conditions of contract purchases.

DS (Supply) 18/72 of May 1972 recommended draft specific wording on duration of contract and price changes to be added to the standard supplementary conditions. It referred to contracts being "not legally binding," details of agreement to changes in contract prices following notice by suppliers, and details of duration of contract following notice by either party.

On 11 September 1972, DS (Supply) 56/72 was issued. It dealt with protection of commercially valuable information and requested that Authorities followed the guidance. It referred to information on contract prices which necessitated a high degree of discretion in its use and disclosure only to those needing to know in the hospital service. Such information was not, in the Department's view,normally in the category that justified the formal classifications (of confidentiality) referred to.

DS 19/73 of 1 January 1973 drew the attention of Hospital Boards to Directives on public contracts adopted by the European Economic Community to which Hospital Authorities became subject following the entry of the United Kingdom into the EEC on 1 January 1973.

HRC(73)5 of February 1973 offered guidance to Joint Liaison Committees on supply matters in preparation for health service reorganisation to take place in the following year. It stated that it was intended that the majority of supply activities should be carried out at regional and area level. "The Department will establish policies and procedures appropriate to supplies matters, but other than this, responsibility for supply policy and procedure will rest with RHA's."

The foregoing quotation from paragraph 8 could not be understood by the present author.

DS 120/73 was issued on 1 June 1973 and referred to Public Sector Construction Contracts of the EEC and noted minimum periods for the

receipt of tenders (21 days) and for request to participate in tendering (21 days). These are generally applied in hospital drug contracting, though the letter refers to building works.

DS (Supply) 26/73 of 29 June 1973 stated that RHA's and AHA's must plan their supply organisations to accord with national policies for which the Department's Supply Division had ultimate responsibility. Among the activities of Supply Division were the determination of levels and methods of contracting, evaluation of supplies, preparation of national specifications, arrangement of central contracts where appropriate, rationalisation of supplies procedures, the providing of guidance and information to the Health Service and continuation of arrangement and financing such research projects as may be needed. No changes in emphasis between central purchasing and area or regional purchasing were recommended.

DS (Supply) 31/73 issued in July 1973 referred to slight amendments to the wording of DS (Supply) 18/72.

DS (Supply) 57/73 of 12 December 1973 dealt with the integration of community health and local education services with the other supply activities of health authorities in the reorganisation of the health service of April 1974.

DS (Supply) 4/74 was on the same subject as DS (Supply) 56/72, protection of commercially valuable information, and was cancelled by the issue of HC(76)28 two years later.

DS (Supply) 11/74 of 20 February 1974 amended and ratified DS (Supply) 26/73 previously mentioned. The DS (Supply) 11/74 letter provided standard general and supplementary conditions of contract for stores purchases with notes for health authorities' use. The conditions specify that "the contract shall be considered as a contract made in England and subject to English Law" but the notes state that "the condition (price changes) must not be used in contracts which are legally binding (e.g. fixed quantity contracts)." Clearly a contradiction in terms is used with the author of the letter apparently undecided as to whether a non-fixed quantity contract is or is not a contract. This was followed later that year by HSC(IS) 73 issued in August. It offered guidance to the reorganised health service on supply services. The Region would negotiate contracts for goods to be bought regionally. The circular noted that the

ordering of some medicinal products and storage of drugs were the responsibility of qualified pharmacists. The Central Department would monitor the supply arrangements of Regions and would concern itself with assessing progress in extension of Regional and Area contracts. Staff at Area would order supplies under national, regional or area contracts.

No decrease in emphasis on regional contracting occurred during this time of tenure of office of a Conservative government.

GUIDANCE OCTOBER 1974 to APRIL 1979

The guidance for 1974 to 1979 consisted of the following:-

DS(Supply)26/75

HC(76)20

HC(76)28

HC(76)33

Buying for the National Health Service (Collier Report) DHSS 1976

HC(78)6

Report of the Supply Board Working Group (Salmon) DHSS 1978

HC(78)21

HC(79)2

DS(Supply)26/75 of 19 June 1975 was cancelled by HC(78)6. The DS letter dealt with contracts for the purchasing of textiles and asked that "county of origin" be included in tender documents.

In May of 1976 HC(76)20 was issued. It reminded Authorities of the legal requirement to make Standing Orders for the regulation of their proceedings and business, and commended for their consideration and adoption a set of Model Standing Orders. Part V of the Model Standing Orders dealt with tendering and contract procedure. The procedure was clearly delineated in the circular and forms the basis for the present arrangements.

HC(76)28 of June 1976 dealt with Protection of Commercially valuable information in Health Services Management. It reinforced the earlier advice in DS(Supply)56/72 and DS(Supply)4/74 which were cancelled by it. It stated that information in tenders and all matters relating to contracts should be made known only to staff who "need to know" and kept in strict confidence; prices and similar details necessarily

circulated to ordering officers were not usually marked with privacy markings, but it was essential to treat them on a "need to know" basis. Staff with access to commercially valuable information were required to be particularly careful not to reveal prices paid to competitors under contracts.

The Collier Report published in July 1976 by a joint DHSS/NHS committee recommended co-ordinated purchasing of medical equipment. The Collier Report, though not dealing specifically with drugs had implications on a more general scale. It noted in paragraph 37 that:

> "the most economic unit for purchasing will often be larger than the individual Area. It is largely the responsibility of RSOs (Regional Supplies Officers) to define ... what the most advantageous size of contract should be and to arrange inter-Area, Regional and inter-Regional purchasing as appropriate ... inter-Regional purchasing should increasingly take over much of the Department's central contracting role, thereby leaving the Department's officers to concentrate on those matters, such as standards for evaluation, which they are best placed to do."

The Report did not stimulate any guidance from the Secretary of State on the topics dealt with under its terms of reference but Health Authorities in England were asked in the covering circular HC(76)33 to note the Report's proposals.

HC(78)6 of February 1978 entitled "European Economic Community" contained guidance on the provisions of an EEC directive concerning public supply contracts. NHS Authorities' contracts were subject to the directive, which enforced the principle of non-discrimination on grounds of nationality in the award of contracts and it required that contracts be placed on the basis of obtaining the best value for money. An appendix to the circular referred to the absence of consideration (being standing offers or non-fixed quantity call-off contracts) in many NHS contracts and so they are not legally binding. Nevertheless an Article of the Directive covered these contracts. The appendix to HC(78)6 noted that the time limits for receipt of tenders and for requests to participate in restricted tendering were minimum periods.

The Report of the Supply Board Working Group, which met under the chairmanship of Salmon, has been referred to previously. It was dated May 1978 and was issued under cover of HC(78)21 in which comments were invited. The Report examined the arrangements for procuring NHS supplies (excluding drugs and other items prescribed

under the Family Practitioner Services) and made recommendations on how to make better use of resources.

It recommended that the best level of purchasing should be determined for each supplies item (Page 6.8), that firm commitments should be given to suppliers to obtain the most competitive terms (Paragraph 5.9), and that ordering practices should be reviewed having regard to efficiency for the NHS and its suppliers (Paragraph 6.11). It recommended against the devolution of current central responsibilities to regions (Paragraph 7) but suggested four possible models for a new supplies body (Paragraph 14), recommending a Supply Council with no executive responsibility but having a secretariat (Paragraph 15). The Council would be a policy-making body, the implementation of the policies remaining with the Department and Health Authorities (Paragraph 200). The Council would determine the most effective level of purchasing, whether it be national, Regional or Area (Paragraph 179.2), and would negotiate a larger number of central contracts (Paragraph 187). This latter point was referred to in appendix 1 to HC(78)21, which was the letter from Mr Salmon to the Secretary of State covering the Report. Appendix 2 to HC(78)21 stated that the Council should determine the best form of contract.

The General Election of 1979 prevented the Secretary of State announcing his decision about implementation of the Report.

HC(79)2 of January 1979 accepted a recommendation in paragraph 76.1 of the Salmon Report that there should be no independent District supplies organisation.

The advice in the documents of those years was in line with the Labour party philosophy of a strong centralised influence in purchasing.

GUIDANCE MAY 1979 to PRESENT DAY

The advice took the form of the following

Consultative Paper on the structure and management of the National Health Service in England and Wales "Patients First" HMSO 1979

HC(80)1

HC(80)8

HC(80)12

SCC(81)1

SCC(81)2
HC(81)6
SCC(81)3
SCC(82)1
SCC(83)3
SCC(84)1

"Patients First" was published in December 1979 and it stated that the new district authorities should consider, with the regional health authorities, what should be done (in supplies services) and decide where it would be appropriate for one authority to provide a service for others (Paragraph 22), with maximum delegation to hospital level (Paragraph 12).

In January 1980, HC(80)1 announced the decision to appoint a Supply Council, with functions detailed in the appendix. The Council would develop policies and introduce arrangements which would enable authorities to make the best use of their supplies resources. It would provide a comprehensive NHS supplies information system, and advise the Secretary of State and Health Authorities on the organisation of supplies work, having regard to the basic organisation of the NHS and the need for purchasing decisions to be taken at the lowest level with due regard to the need for efficiency and economy. When this circular is contrasted with appendix 2 to HC(78)21, it is seen that the proposed seven listed functions of the Supply Council of HC(78)21 were telescoped into four of the later circular, yet the later one added the reference to "the need for purchasing decisions at the lowest level", a phrase absent from the original recommendations.

The most profound impact on NHS buying has come about through the NHS Supply Council.

The Secretary of State in June 1980 listed the objectives of the Supply Council among which was the determination of the organisation of supplies with the need for purchasing decisions at the lowest level, as well as the optimum level of purchasing within the NHS and the best form of contract (3.44). The latter mentioned aspects were originally debated at almost the inception of the health service. Despite a multiplicity of reports, working parties, circulars and memoranda, thirty years of effort had not clarified those fundamental issues.

In July 1980, HC(80)8 provided the necessary guidance to RHA's and to the new district authorities to implement the changes in structure and management organisation which were needed in the health service reorganisation. Paragraph 14 stated that the Supply Council would be giving guidance on the organisation of supplies.

HC(80)12 of December 1980 gave guidance on the application to NHS supply contracts of the GATT Agreement on Government Procurement. It dealt with the advertising of certain contracts and the country of origin of goods bought.

The Supply Council issued its first circular, SCC(81)1, in February 1981 and this informed Health Authorities that guidance would be issued on the organisation of supplies within three or four months and Authorities should avoid processing plans for change in supplies until that guidance was issued.

That guidance was published in May 1981 in SCC(81)2. It referred to the emphasis placed by the Public Accounts Committee on the considerable scope for financial savings in NHS supplies. It said that the DHSS interprets Government policy on contracts and the PPRS scheme and it would be inappropriate for these to be taken over by the Supply Council or other Health Authorities.

However, the arranging by the DHSS of central contracts was a candidate for transfer to the Council or other Health Authorities, and the Council would review this activity (along with other DHSS activities) as soon as possible with a view to transferring it to the NHS (Paragraph 8.2). The Regional Health Authorities were recommended to negotiate and manage contracts within national policies (Paragraph 11.2). District Health Authorities, within national and regional policies, would make arrangements to obtain goods not so far covered by contracts and arrangements negotiated above the District level (paragraph 11.1ii).

May 1981 saw the publication of HC(81)6 which provided, inter alia, guidance on the making of Standing Orders. It stipulated that Authorities "shall ensure that competitive tenders are invited for the supply of goods." However, under specified conditions, such as for low value orders if the agreement of the Management Team is obtained, competitive tender need not apply.

SCC(81)3 of June 1981 covered supplies information systems which the Supply Council recommended to Health Authorities.

In August 1982 the Supply Council issued SCC(82)1 which informed Health Authorities that duties associated with negotiating and placing national contracts for drugs were to be transferred during 1982/83 to S.W. Thames RHA. Thus the suggestion previously promulgated in SCC(81)2 was given firm support in SCC(82)1.

Supply Council Circular SCC(83)3 of November 1983 announced the provision of revised and updated conditions of contract for the purchase of goods.

Supply Council Circular SCC(84)1 issued in December 1983 demonstrated the futuristic view of purchasing symbolised not only by its title (84)1 despite its issue in 1983 but also by its content. It announced the publication of a paper entitled "Future Objectives for the Supply Function in the NHS in England" which, inter alia, bemoaned the existence of too few fixed quantity contracts. Paragraph 4.6 referred to the norm being the ""call-of" type of "contract"" in which "this so-called "contract" is a purchasing arrangement with no legal commitment by either party to it." It continued:

> "As suppliers are aware of the position and cannot be sure of the volume of business they might get, their prices reflect this and NHS Authorities do not, therefore, get full value for the total expenditure made on the product. In order to redress this situation a primary objective must be for Health Authorities to negotiate fixed prices for fixed quantity or exclusive contracts that are legally binding.
>
> Substantial cost benefits will accrue if this is done but it will require commitment from all parties to the contract
>
> National policies emanating from the Council will invariably require this commitment. Regional Supplies Committees will also need to consider this on all their existing and future contracts.
>
> The targets to achieve this objective will be:-
>
> (a) Within one year:
>
> Where possible, re-negotiate existing "arrangements" on a firm price for quantity or exclusivity and ensure commitment by users; and
>
> (b) Within two years:
>
> All future contracts to be firm in price in return for commitments on quantities and or exclusivity."

In referring to the need to encourage a strongly competitive and innovative U.K Health Care Industry, the document noted the need for RHA's "to forge "partnerships" with contractors to ensure effective performance of the contracts."

The Supply Council showed a determination to do more than pay lip-service to efficient contract purchasing by demanding the institution of fixed prices in return for fixed quantity purchases. The first major change in emphasis after thirty five years and numerous working parties and reports was to be seen in U.K. hospital purchasing. However, the document made no reference to the administrative level of purchasing though it did refer to "too many small value orders" and "too much duplicated stock held in too many stores." Perhaps the document's "National co-ordination of Procurement" and "fragmented use of total National supplies resources" hint at further major changes in emphasis on the "where?" of buying in addition to the "when?" and "how?"

It is seen that the documents issued since May 1979 comply with the devolutionary philosophy of Conservative party thinking.

3.2 Present Knowledge and its Limitations

The Department of Health receives details of prices paid on contracts from each Regional Health Authority. That the DHSS has this information is confirmed in a letter to Hyman from the Department dated 22 November 1977 which read:

> "RHA's have been asked to send us some basic information about each regional or inter-regional contract they make, viz. period of contract, commodity, estimated value, and subjective analysis sub-code (i.e. relating commodity to the Finance Division subhead). We also expect them to monitor area contracts in their own region similarly and at the end of each financial year to send us a summary. By comparison of what we receive against information received in our Finance Division from Authority Treasurers, we hope over a period to build up a picture of how contracting procedures are developing under certain broad subheads. In view of present staffing difficulties in the NHS and in this Branch, we cannot say yet if all Regions will be able to meet our request or how much time we shall be able to devote to sorting out discrepancies and I am therefore unable to say what information we may be able to release outside the NHS in time." (3.47).

Hyman expressed the view that nobody knew even the total number of contracts, other than national ones, in existence, the amount spent on them and whether or not the prices paid were the best available (3.47).

The pharmaceutical industry has bemoaned the lack of information available. The Office of Health Economics, an organisation founded by the Association of the British Pharmaceutical Industry stated that optimal solutions to the level and means of purchasing could not be derived with reasonable confidence from quantitative data. Information on costs and quantity of purchases, parameters easily measurable, seldom existed. In practice, very little was measured as a matter of course in a way that would provide management with useful empirical data for decision making and this meant that practical opportunities for rational purchasing could be missed (3.48).

The Working Group appointed by the Secretary of State in 1977 to examine procurement of NHS supplies was critical of the lack of information available.

Reference is made elsewhere to the comments in the Group's Report (Salmon Report) paragraphs 95 and 101. The Report stated that the NHS does not have, and never has had, an adequate supplies information system in general use. The primary information exists, but it is in such diverse forms and maintained in such different ways that collection is impossible. The Working Group had considerable difficulty in obtaining, even in respect of Regional contracts, information which could be collated to give a national picture, "and we know that this kind of difficulty permeates all levels of the Service." (3.49).

The Public Accounts Committee session 1979-80 reported (3.50) that 60 per cent of expenditure on supplies was under co-ordinated arrangements and it was hoped that it would reach 80 per cent within four or five years.

Additional criticism, including that of lack of information on central contracts, was voiced in paragraphs 81 and 148 of the Salmon Report. Any details given on the subject of contract purchasing must be viewed with caution.

Central purchasing arrangements are the responsibility of Supply Division of the DHSS. (3.51). These include the drugs dextran, chloramphenicol and heparin which are mandatory arrangements, which mean that the DHSS expects Health Authorities to use the particular brands exclusively when buying these (3.52) (3.53). The reasons for the central purchasing are that it may be essential to have central control of production, to prevent shortages of supply or to encourage a supplier to produce it in the small quantities needed when a multiplicity of separate small contracts with individual Health Authorities would not be commercially acceptable to suppliers (3.53). Further benefits of central contracts are the savings that can be made, the imposition of standardisation, the saving of administrative time in that individual Health Authorities do not need to seek quotations, the obtaining of professional advice, for example from the British Standards Institution, and the preparation of a detailed specification ensuring a high quality product.

Disadvantages of central contracts are the possibility of high administrative costs which may not be apparent, the fear, on the part of Health Authorities, that they will lose their individuality, the

long delay in receiving deliveries following orders being placed, the lack of appreciation of the needs of the individual hospital, and the low degree of satisfaction engendered following complaints being made.

The Supply Board Working Group felt that there might be scope for more central purchasing of medicines after consultation with doctors and pharmacists (3.54). The Group was not in favour of delegation of the central contract to the Regions (3.55). The Group referred to criticism expressed by Health Authorities of aspects of the central arrangements (3.56), and one member of the Group referred to better prices than those on central contract being paid and he indicated that central purchase techniques needed overhaul (3.57).

The value of the central contracts in England for drugs dropped from £3.4 million in 1975/76 to £2.4 million in 1976/77. This represented a drop from 4.9% to 2.8% in the spending on central contracts as a proportion of total drug spending. During those years the total revenue expenditure on all goods rose from £534 million to £619 million and the proportion of all revenue goods bought on central contract fell from 22.5% to 21.4% (3.58). Clearly central contracting does not play a big role in drug purchasing by hospitals, but is estimated for all goods to save 7.9% of expenditure (3.59).

The value of regional and area contracts is estimated to be about half the drug expenditure incurred by the hospitals. These contracts for all goods are estimated to save about 6% of expenditure (3.60).

In 1963, the Public Accounts Committee minuted a saving of £850,000 from £1½ million spent on contract drugs in the year up to the end of November 1962 (3.61).

3.3 Countrywide Variation

The present state of contracts' operation is a function of the political, legal and economic pressures and the historical perspective of a body of guidelines and experience within the constraints of which the system has evolved. Any drug purchasing under contract consists of standing offers of the supplier with no obligation to buy a given quantity but the NHS accepts the offers when it suits the health authority. The contracts are organised at national level by the DHSS as well as at regional, area or local level. Non contract purchasing from manufacturers or wholesalers also takes place and in an emergency from other hospitals or nearby retail pharmacies.

Negotiations of contracts for goods on a regional basis were being carried out in 1978 by the fourteen Regions as follows; in three cases by Region, in eight cases by Area, in two by Region and Area jointly, and in one by the joint efforts of Region, Area and District. Of 56 multi-district area health authorities, ordering under contract occurred at area level in 13, at area and district level combined for 33, and at district level for 10. Of 34 single district AHA's, all ordered under contract (3.62). There is variation, therefore, in the organization of the contracts in the regions of the country though all share the same basic framework.

A contract seeks to regularise a purchase but in so doing it centralizes to some degree the buying operation. The primary motive for centralization is to produce economies likely to be achieved in buying larger quantities, to provide consistency and control in various purchasing sites and to provide specialised skills in the purchase. The consequences of these aims are the resultant changes in the system once centralization is achieved. There is a need to question the financial benefits accruing, the efficiency of the buy-to-use chain and the impact the change has on the job satisfaction of those affected. No study of these in the setting of health service drugs purchased has apparently been performed. Nor is there any definitive work to describe the degree of centralization, in other words, the geographical authority, likely to attain the best results. Various workers have pondered on the subject and their thoughts are provided in an attempt to shed a little light on this obscure subject.

The Supply Council Report (3.63) noted the large number of hospitals' pharmaceuticals' ordering points and recommended they should be reduced, where possible, to not more than one per district so as to reduce unnecessary administration and increase control. The number of ordering points is analysed in the primary research of this thesis.

The Supply Board Working Group Report stated that there was insufficient application of economic criteria in determining the best level at which to contract for supplies, but felt that more contract purchasing could be achieved (3.64). Whereas large scale purchasing may produce economies of scale, many people in the health service fear that an increase in central contracting would not be in the interests of the Service and industry (3.65). At all levels in the health service, vested interests militate against economic criteria being used in purchasing arrangements. Regional Supplies Officers in 1969 produced a statement which established criteria for determining the best contracting level and this statement was endorsed by the Department of Health (3.66).

The Mersey Regional Supplies Officer's Report on supplies organisation for the Mersey RHA of 12 June 1974 noted that market research would continue to play an important part in further determining levels and methods of contracting, activated by himself (3.67). Unfortunately, there is no evidence that it was already a feature of contracting. On 1 June 1975, Regional Supplies Officers again recommended the application of appropriate economic criteria and saw a need to increase co-ordinated purchasing (3.66). The Supply Board Working Group of 1978 expressed the benefit of co-ordinated purchasing, did not doubt that significant savings had been achieved and felt that there was further scope for co-ordinated buying. The Group was of the opinion that the NHS should follow the example of organisations outside the NHS and purchase at the level which would bring most advantages to all.

The Group, in referring back to the Hunt Report 1966, suggested that to obtain best value for money, a central body should often place contracts and users would be required to buy only through

these contracts (3.68). This was a thought which had been expressed in the organ of hospital pharmacy in 1962, which stated that a strong case could be made for bulk of drug contracting to be carried out by the Ministry which would avoid duplication of effort (3.69).

Despite the passage of time, little progress on the question of the optimal level of contract organisation appears to have been made and in 1980, an area supplies officer bemoaned the paucity of detailed studies on the effects of the size of supply units as far as savings on period contracting and on the purchase of non stock items - some 60% of the budget - were concerned (3.70). The suppliers, according to Williamson, when calculating the price, have regard to the total value of business being offered, the size of the individual deliveries, whether quantities are specific and whether manufacturing runs can be maintained. He expressed the hope that the full benefits from the huge purchasing power of the service could be obtained while avoiding a monolithic supplies organisation. Thus there would be flexibility to provide that special service for patient care together with a high regard for economy (3.70). Experience in the United States shows that group purchasing can lead to considerable savings and is recommended by the U.S. General Accounting Office (2.91). In the United States the number of hospitals purchasing pharmaceuticals through groups increased from 41% in 1975 to 72% in 1978 (3.71). In Britain, the emphasis appeared to be directed toward inter-regional groupings. This was recommended to the DHSS by Regional Supplies Officers in June 1975. By the end of 1977, five consortia of regions had been created (3.72). They were:

(1) the 4 Thames and East Anglia Regions,
(2) Northern and Yorkshire Regions,
(3) North Western and Mersey Regions,
(4) Oxford, Trent and West Midlands Regions,
(5) South Western, Wessex and Wales.

Despite discussions taking place within these groupings, no apparent progress appears to have occurred.

This conclusion is borne out by a study undertaken by the Supplies Officer of Warwick AHA and referred to by Calder and Parker. It showed (3.73) that Oxford, Trent and West Midlands RHA's looked at the possibilities of a joint contract to increase their purchasing power, were disappointed with the results of their study and felt that no significant financial advantages would be gained by inter-regional contracting.

The administrative level of contracting is a topic which has been considered by one RHA. The result of its deliberations takes the form of an operational manual which states (3.74):

> "The decision to purchase goods at National, Inter-Regional, Regional, Inter-District or District level is dependent on various economic and commercial factors.
>
> Generally, it may be said that the correct level for purchase negotiations is that at which standardisation can reasonably be agreed, and where the commitment to purchase such items will attract the most favourable competition amongst suppliers."

Such an attitude is indisputable. That agreement on standardisation and commitment is possible at Regional level alone is indefensible. No evidence has been found to substantiate that view point.

The administrative level at which optimum prices are achieved remains a subject which has not been adequately investigated in the United Kingdom. Any possibility of such examination has been thwarted by changes in emphasis by the DHSS over the years, so one must look to the United States for inspiration. Three pharmacists, May, Daniels and Herrick evaluated the relationship of drug price and purchasing group size and showed (3.75) that drug prices were negatively correlated to group size in a linear relationship and prices were significantly lower in groups representing greater than 10,000 beds. It would be unwise to extrapolate those findings directly to the U.K since the United States analysis deliberately excluded public sector based hospitals, the context in which the hospitals of the two countries function within the total health sector bear little relationship to each other, and the industry profiles and behaviour in the two countries are likely to differ.

The authors suggested that there was a point where the additional growth of the group may result in minimal or zero reduction in

prices. If the industry and hospital variables in the two countries were identical thatoptimal bed group size would equate to that of a typical RHA. The U.S. study provides concepts which could usefully be tested in Britain because the authors succeeded in empirically testing the relationship between price and buying group size. Regretfully a facet common to both countries was the difficulty, reported by the authors, in determining the prices charged.

A factor which must be considered in any thinking about the level at which contracts are organised is the lower level of service given by suppliers as a result of more co-ordinated buying. If contracting results in lower profit margins for the supplier, he will lower the level of service to reduce his costs (3.76). The OHE felt that large scale contracts might prove counter-productive if lines of communication or flow of information between purchasers, suppliers and users were interfered with (3.77).

The Supply Council Report of 1982 stated (3.78):

> "The present system of drug contracting is unwieldy and needs revision. We concluded however that Regional Contracts for pharmaceuticals are serving a useful purpose overall although their operation could be improved.
>
> Regional Drug Contracts vary from Region to Region and involve a good deal of largely independent administrative activity and duplication of effort. A co-operative effort between Regions is needed to improve the efficiency of the arrangements. We recommend that there should be more co-ordination of activities between Regions, exchange of information about suppliers and quality of products and on the timing of contracts to help suppliers spread the workload and plan more effective production ..... We recommend that most contracting for pharmaceuticals should be at Regional level, co-ordinated Nationally by the Standing Pharmaceutical Supply Committee of the Supply Council. To achieve more effective purchasing we recommend that, in each Region, a small team be formed to negotiate, evaluate and monitor drug contracts and other purchasing arrangements. The team should consist of a supplies officer with expertise in drug contracting, a technical pharmacist, and the Regional quality controller ... this team should report to a Regional Pharmaceutical Supplies Committee composed of pharmacists and supplies officers and chaired by the Regional Pharmaceutical Officer or Regional Supplies Officer ..."

Despite absence of empirical evidence on the administrative level of buying firm decisions appear to have been taken.

The considerable variation in contract organisation in the regions of the country, within the national constraints, results in part from considerable opposition among HMC's and AHA's to transfer of authority over supplies personnel to RHB's and RHA's. Compromises and adaptation of local conditions and pressures led to variation in the degree of control of the regional supplies officer, and development of co-operation schemes depended on the attitudes of individuals and authorities involved. The Office of Health Economics in 1972 described (3.79) some regions as having poor communications, high prices and small scale inefficient purchasing. Where the size of the region or area justifies it, each supplies officer tends to specialise in one or more product groups (3.80), and so within a region the organisation of drug contracts may be delegated to one or more areas or even districts (3.81). So, for example, in Mersey Region, the organisation of the drug contract for the Region and in the name of the RHA took place in St Helens and Knowsley Health Authority until 1984, when the RHA took it over.

Complaints arise that too many (or too few) items are on contract. An article in Public Pharmacist (3.69) referred to the Linstead Report suggestion of no more than 150 items being bought by bulk procurement, yet 300 or more items were not uncommon. Ammer showed (3.82) that a small number of items account for a large cost and a large number of items account for a small cost. High cost items account for 70-80% of costs, but consist of only 10-15% of the number of items stocked (A items). Similarly B items account for 20-25% of items and 15-20% of cost. C items are 60-70% of items but represent only 10-15% of cost. The A items therefore require close attention. The Supply Council Report of 1982 emphasised this point (3.83) in relation to "deciding which items should be included in drug contracts". It questioned the purpose of inclusion in Regional contracts of "items where there is no real competition" and concluded that such inclusion wasted considerable effort and those items should be moved from contract arrangements to some other form of buying guide.

Given that the average number of drugs stocked is 2,500 (3.84) or 3,500 items (3.83, 3.85), about 525 items account for 70-80% of costs. A Regional Health Authority was given a report in July 1979 by a firm of management consultants called in to investigate its drug purchasing

procedures which recommended (1.10) a reduction in size of its contract, that is the number of items included in it. That report analysed the contracting procedures of other regions and found a range from 200 to 1000 items on contract. Clearly, this variation could not be attributed to any sound economic reasoning. A Committee of Health Authority pharmacists set up in July 1979 reported (3.86) on the variation in contracting arrangements in English Regions. It noted:

> "Threshold value. There was no common method for deciding the point at which an item should be included in a contract. Some regions used an estimated total value for the item, others the estimated saving arising from including the item in the contract."

Bachynsky (2.68) warns against continually looking for new drugs to add to the list, stating "costs tend to increase faster than benefits and ultimately reach a point where there are no further gains to be made."

In considering the range of drugs on contract, one is left with the impression that there are forces at play to lengthen the list. The supplier of the successful brand gains prestige and possible community practice spin-off benefits when his drug is on contract. Assuming an increased contract value produces an increased saving over trade prices, a tenuous argument but one which is nevertheless prevalent, both supplies officers and pharmacists would acquire or assume a raised status as a result of an extension to the contract range. If the prescriber believes or is led to believe that he is prescribing contract drugs he would wish to see that range extended if in the process resources are being saved.

The period of the contract shows inter-Regional variation. A recent report stated (3.86) that the "majority of contracts were for one year. In some regions the period was two years." Information from a supplier shows (2.83) six of the Regions with one year contracts and seven with two.

It also becomes clear that some experimentation has recently been occurring, with one region reducing the duration from two to one year, one region increasing it from one to two years and one region changing to an on-going contract.

A preliminary management report for a Regional Health Authority suggested (2.70) a minimum duration of contract of three years and an ideal period of five years. Their further report expressed (1.10) a preference for two years.

Calder and Parker note (3.73) that "a number of regions are now moving towards a two year contract period which seems to offer a reasonable compromise." Despite all the experimentation and observations no reference to any scientific basis for the views expressed can be determined and it is suggested that it would be beneficial if such work were performed.

The contract is divided into sections in some regions (3.86), but the majority do not, and one region with a two year period divided the contract into two parts, negotiated in alternate years.

The effective date for commencement of contracts shows (2.83) inter-Regional variation. Over a 24 month period the starting dates occur quite regularly. Twelve of the 24 months show an English contract beginning, and the longest time span during which no contract becomes effective is four months. As a consequence, firms are constantly reviewing and revising their offfers, and are able to adjust their prices in accordance with recent contract adjudications. Less frequent contract renewals might be thought likely to reduce the work-load of firms and the prices offered.

The Contracts Working Party Report referred to previously (3.86) noted the variation in use of estimates:

> "One region had ceased to provide estimated quantities. Other regions expressed doubts concerning the value of submitted estimates. The accuracy of estimates submitted was frequently questioned."

The absence of reliable estimates of requirements was bemoaned by the Supply Council Report (3.87).

This topic is analysed later in the light of surveys referred to in the primary research of this thesis.

References

3.1 Turpin, C. Op. cit. p. 244.

3.2 Bryan, G. The early years : establishing secure foundations. Pharm. J., Vol. 220, No. 5586, Sept. 1983, p. 443.

3.3 Anon. Pharmaceutical Supplies. Public Pharmacist, Vol. 5, No. 4, Dec. 1948, p. 87.

3.4 Summarised Accounts of R.H.B.'s, B.O.G.'s, H.M.C.'s, E.C.'s and the Dental Estimates Board for England and Wales for the period ended 31 March 1949. HMSO.1949.

3.5 Report of the Comptroller and Auditor General. 1950(58) Vol. 15. HMSO.p. 397 iv.

3.6 Anon. Pharmaceutical Supplies. Public Pharmacist, Vol. 7, No. 1, March 1950, p. 7.

3.7 Treasury Minute 4 January 1951 on the Fourth Report from the Committee of Public Accounts Session 1950. Parl. Papers 1950-1.Vol 4.HMSO.1951 p. lxi.

3.8 St Helens and District HMC Report for 5 July 1948 to 31 March 1950.

3.9 Preston Robinson, C.H. The Purchasing and Storage of Medical Supplies. Public Pharmacist, Vol. 8, No. 1, March 1951, p. 25.

3.10 Treasury Minute 29 November 1951 on the Fourth Report from the Committee of Public Accounts Session 1950-1. Parl. Papers 1951-2. Vol. 4.HMSO.1952. pp.21-2.

3.11 Anon. Memorandum on pharmacy in the hospital service. Public Pharmacist, Vol. 9, No. 1, April 1952, p. 13.

3.12 Anon. Council at Work. Public Pharmacist, Vol. 10, No. 3, July 1953, p. 77.

3.13 Anon. Council at Work. Public Pharmacist, Vol. 11, No. 1, Jan. 1954, p. 17.

3.14 Anon. Pharmaceutical Supplies. Public Pharmacist, Vol. 12, No. 3,July 1955, p. 89.

3.15 Anon. A.G.M. Public Pharmacist, Vol. 13,No. 3, July 1956, p. 149.

3.16 Anon. Time for Tenders. Public Pharmacist, Vol. 14, No. 1, Jan. 1957. p. 40.

3.17 Anon. A.G.M. Public Pharmacist, Vol. 15, No. 3,July 1957, p. 164.

3.18 Report of Liverpool RHB for year ended 31 March 1958. p. 56.

3.19 Anon. The purchasing and supplies function of chief pharmacists. Pharm. J., Vol. 183, No. 5010, Nov. 1959, pp. 297-9.

3.20 Anon. Hospital Supplies. Public Pharmacist, Vol. 16, No. 1, Jan. 1959, p. 17.

3.21 Anon. The Council at Work. Public Pharmacist, Vol. 16, No. 3, July 1959, p. 162.

3.22 Anon. Purchasing Procedures. Public Pharmacist, Vol. 16, No. 4,Nov. 1959, pp. 227 and 232.

3.23 Anon. Council Meeting. Public Pharmacist, Vol. 16, No. 4, Nov. 1959, p. 232.

3.24 Anon. Hospital Pharmacists Consultative Committee. Public Pharmacist, Vol. 16, No. 4, Nov. 1959, pp. 247-8.

3.25 Minutes of the Standing Pharmaceutical Advisory Committee of Liverpool RHB. 23 November 1959.

3.26 Report of Liverpool RHB for year ended 31 March 1959. p. 56.

3.27 Anon. Purchasing and Supplies Functions of Chief Pharmacists. Public Pharmacist, Vol. 17, No. 1, Feb. 1960, p. 40.

3.28 Minutes of joint meeting of hospital pharmacists and supplies officers, Liverpool RHB.7 March 1960.

3.29 Report of Liverpool RHB for year ended 31 March 1960.p. 55.

3.30 Minutes of joint meeting of hospital pharmacists and supplies officers, Liverpool RHB.11 July 1960.

3.31 Minutes of Standing Pharmaceutical Advisory Committee of Liverpool RHB.20 July 1960.

3.32 Second Annual Report of the Liverpool Regional Hospital Pharmacists' Committee.12 April 1961.

3.33 Report of Liverpool RHB for year ended 31 March 1962. p. 46.

3.34 Minutes of Standing Pharmaceutical Advisory Committee of Liverpool RHB.25 January 1963.

3.35 Fourth Annual Report of the Liverpool Regional Hospital Pharmacists' Committee. 12 March 1963.

3.36 Minutes of Liverpool RHB supplies officers meeting. 15 January 1964 and 21 October 1964.

3.37 Evidence before Public Accounts Committee. 5 March 1964. HMSO.1964.

3.38 Fourth report of the Committee of Public Accounts session 1963-64. 7 May 1964. HMSO.1964.

3.39 Minutes of Liverpool RHB supplies officers meeting.15 July 1964.

3.40 Anon. The Purchasing and Supplies Functions of Hospital Pharmacists. J. of Hosp. Pharm., Vol.23, No. 1, Feb. 1966, p. 19.

3.41 Eleventh Annual Report of the Liverpool Regional Hospital Pharmacists' Committee.1970.

3.42 Salmon, B.L. Op. cit. p. 9.

3.43 Ibid. p. 10 and v.

3.44 Campbell, A.W.C. Hospital Supplies - the future. Hospital Equipment and Supplies. Vol. 27, No. 5, May 1981, pp 33-9.

3.45 Salmon, B.L. Op. cit. p. 47.

3.46 Report of the C.and A.G. 1953-4; 1954-5 (135).Vol. 8.HMSO p. 337 v.

3.47 Hyman, S. Op. cit. (1979) p. 33.

3.48 Office of Health Economics. Hospital Purchasing.Op. cit. p. 14.

3.49 Salmon, B. L. Op. cit. paras. 79-80.

3.50 Eleventh report from the Committee of Public Accounts session 1979-80. HC 498. HMSO. 1980. para. 16.

3.51 Salmon, B.L. Op. cit. para. 38.

3.52 Ibid.para. 129.

3.53 Ibid.para.112.

3.54 Ibid.para. 117.

3.55 Ibid.para. 186.

3.56 Ibid.para.136.

3.57 Ibid.p. 76.

3.58 Ibid.p. 109.

3.59 Ibid. para.121.

3.60 Ibid.paras. 122-4.

3.61 Minutes of evidence before Public Accounts Committee 12 Feb. 1963.Parl. Papers 1962-63. Vol. 4. HMSO. 1963. p.79 paras. 782-6.

3.62 Salmon. B.L. Op. cit. pp.101-4.

3.63 Greenleaf, J.C. Op. cit. para. 8.

3.64 Salmon, B.L. Op. cit. para. 5.8.

3.65 Ibid. para. 9.5.

3.66 Ibid. para. 146.

3.67 Ferguson, D.T. Op. cit. p.5.

3.68 Salmon, B.L. Op. cit. paras. 142-3.

3.69 Anon. Some Thoughts on Hospital Drug Contracts. Public Pharmacist, Vol. 19, No. 5, Oct. 1962, pp. 278-9.

3.70 Williamson, H. Time for change in supply organisation. Hosp. and Health Services Review, Vol. 76, No. 2, Feb. 1980, pp. 49-50.

3.71 Talley, C.R. Group Purchasing of Pharmaceuticals Cuts Millions from Health Care Costs. Am. J. Hosp. Pharm., Vol. 36, No. 8, Aug. 1979, p.1128.

3.72 Hyman, S. Op. cit. (1979) pp. 52-6.

3.73 Calder, G. and Parker, A.K. Op. cit. p.9.

3.74 Confidential document in author's possession, Sept. 1982, No. 204.

3.75 May, B.E., Daniels, C.E. and Herrick, J.D. Economies of Purchasing Group Size. Am. J. Hosp. Pharm., Vol. 40, No. 2, Feb. 1983, pp. 263-6.

3.76 Schabracq, A. The case for group purchasing. Health Care Canada, Vol. 21, April 1979, pp. 46-7.

3.77 Office of Health Economics. Hospital Purchasing. Op. cit. p.13.

3.78 Greenleaf, J.C. Op. cit. paras. 5 and 11.3.

3.79 Office of Health Economics. Hospital Purchasing.Op. cit. pp. 9-10.

3.80 Hyman, S. Op. cit. (1979) p.33.

3.81 Calder, G. and Parker, A.K. Op. cit. p.8.

3.82 Ammer, D.S. Purchasing and materials management for health care institutions. Lexington MA. D.C. Heath and Company. 1975. p.108.

3.83 Greenleaf, J.C. Op. cit. paras 3.2 and 5.3.

3.84 GAO Report. Op. cit. p.1177.

3.85 Twenty-fifth report from the Committee of Public Accounts. HC 764. HMSO. 1980. p.58.

3.86 Pharmaceutical Supplies Subcommittee. Pharmaceutical Contracts Working Party Final Report. May 1982. pp. 4-5.

3.87 Greenleaf, J.C. Op. cit. para. 10.1.

CHAPTER 4

N.H.S. DRUG PRICES

4.1 General Aspects

In considering the price paid for the medicine thought must be given to the behaviour and performance of the supplier and the buyer. Both have power to modify the price of the article. As described previously an examination of the market type reveals a small number of buyers facing a small number of sellers, that is, bilateral oligopoly. The sellers' policies and the buyers' policies are opposed to each other.

The price set by the firm may reflect collusion, either overt or tacit. The latter could arise in price leadership, in which one firm alters its price and the other follows suit. Defection from collusion could produce secret price cutting. In anticipating rival reaction prices of competitors may be interdependent but in many instances the price set may be completely independent of possible competitor action.

Webster and Wind (4.1) view the setting of a price, initiating a price change and responding to competitors's price changes as being among the most important marketing decisions:

> "In determining the firm's price strategy, four sets of factors have to be considered: (1) the effect of the price on the other marketing mix elements (the nature of the product, and the type and amount of advertising and distribution) and especially on the customer's perceived product quality and value; (2) the cost of producing and marketing the product; (3) customer's price elasticities; and (4) competitor's actions and probable reactions."

In the case of contract drug sales to Health Authorities, there is little effect of price on the customer's perceived product quality and value. The second factor is of major importance. The third does not apply. The fourth factor is a consideration of every supplier.

Webster and Wind make the apt comment (4.1) that competitive bidding (contracting) is common, but because it is expensive and time consuming to prepare bids (tenders), it is important to have an assessment of the likelihood of winning the sale and

the potential order value before deciding to bid. They sagely note that an understanding of the buyer's sensitivity to prices and the importance of price in determining the buying decisions is a crucial input to the design of an "optimum" price strategy. Since the market approximates to a bilateral oligopoly, control of price resides in the hands of neither buyers alone nor sellers alone, as described by Bain previously.

It is axiomatic, therefore, that a reduction in drug price could be achieved by actions on the part of the supplier or the purchaser. The government has powers as legislator to enforce its prices policies. Such powers are limited in that, as Turpin suggests (4.2), it would not be in the best interests of the government to compel the acceptance by suppliers of uneconomic prices. The resulting prices offered to the community pharmacists tend to be higher than those to Health Authorities (4.3, 4.4), an aspect examined in detail in the primary research.

Sometimes, health authorities or hospitals ignore contracts and negotiate directly with suppliers and undercut the agreed prices. It reduces the sales on contract and so affects the price which can be obtained next time, it weakens the relationship of the NHS with suppliers and it may remove or modify competition. That prices can be undercut is a comment on the weakness of the arrangement and normally it should be difficult to undercut a good co-ordinated purchasing arrangement on a wide scale (4.5). The author has evidence of undercutting on drug contracts which reflects adversely on the system.

Such undercutting is not restricted to the machinations of unsuccessful tenderers. It applies to the victors as well. This is demonstrated by the missive from the Mersey RHA contracting and purchasing manager dated 6 April 1984 reminding District Supplies Managers of the RHA's 'Notes for Tenderers' which incorporate a paragraph as follows:

> "Unless given express approval by this office, tenderers must not enter into any agreements with individual District Health Authorities for items included on any contract negotiated by this office. Failure to comply with this directive may result in removal from the Approved List of Tenderers. This applies equally to successful and unsuccessful Tenderers."

Clearly post-contract award price negotiation occurs and must result in lower than contract prices being offered.

The Minutes of the Mersey RHA Regional Hospital Pharmaceutical Committee of 1976 relate that:

> "some terms offered by firms not prepared to tender were more advantageous than contract prices."

They further stated that "some firms were unable to fulfill contract" (4.6).

In broad terms, it must be agreed that, as suggested by Salmon et al, an RHA by arranging contracts achieves not only "financial savings, in terms of the prices paid and of the cost of contracting, ordering, storage and distribution" but also "better specifications and standards," that is a drug of quality specified by quality control pharmacists, "a central point of communication" and "flexibility in response to changing market circumstances." (4.7).

The suppliers could reduce prices charged if health authorities were to reduce the number of delivery points and frequency of deliveries (4.8, 4.9).

Bachynsky stated that "there should be minimum quantities for single shipments and a stated period between orders, e.g. three months, so that hospitals and firms both have knowledge as to what can be expected to occur and when." (2.68).

Prices could also be reduced if individual firms were given a greater share of the business. Prime Vendor Purchasing or Volume Contracts are the terms used in America whereby all items of a category, for example all drugs, are bought from one source. This system has led to considerable savings (2.51, 4.10). Under this sytem if the annual estimated consumption has been bought, a rebate is issued at the end of the year based on a percentage of the value of the total purchase. A benefit of this system is that the contract price is protected from an increase yet any reduction in price is passed on to the hospital (4.11). It is claimed that the system gives a better service with the need for fewer staff and a minimum of paper-work, but some opposition to the scheme exists, based on the handing over of the total purchasing to outside control (4.12). There is the danger of the system developing into a monopoly and the system

is opposed by those in favour of a "free market" system (4.13) and those who feel that the continued existence of the best suppliers must be ensured (4.14).

Lee et al provided documented savings resulting from the alternative buying strategy. They reported (4.15) that primary wholesaler contract purchases resulted in a 15.6% discount from average wholesale price. Their work, in the United States, led to further investigations.

Rubin and Keller reported (4.16) "substantial group volume discount" resulting from prime vendor bidding and contract with one wholesaler, while Van Der Linde noted (4.17) prime vendor buying resulted in reduction of opportunity costs and maximum return on inventory investment.

Purchase from wholesalers is recommended by a correspondent to Pharmaceutical Journal (4.18) who doubts whether manufacturers' discounts produce such real savings for hospitals as is thought. That correspondent suggests that greater use of wholesalers would result in savings from (i) reduced hospital administrative costs of fewer accounts, (ii) reduction in manufacturers' distribution costs, (iii) increased wholesalers' viability with more thinly spread administrative costs, and (iv) revised invoice payment methods maximising the benefits from prompt discounts' payment.

A United States hospital pharmacist, Abramowitz, in noting the results of U.S. surveys showing that 70.3% of hospitals used competitive bidding successfully and documented savings of 19 to 30% in group purchases, defined the relative benefits of purchasing methods according to hospital size. He suggested (4.19) that for small hospitals, that is those with less than 200 beds, group purchasing was most beneficial, that for medium size hospitals, that is 200 - 399 beds, prime wholesaler was the best purchase method, and that for the hospitals with more than 400 beds competitive bidding was the most beneficial system of drug buying. Unfortunately Abramowitz's contribution to any discussion of the topic is limited by his failure to provide documentary evidence to substantiate his opinions. He does nevertheless extend the body of knowledge of the subject by itemising the advantages and disadvantages of primary wholesaler purchasing. Since no similar definitive British work has been performed, no strict comparisons are possible. Nevertheless some

general impressions are made and these lead to the conclusion that British studies would prove worthwhile.

There is no evidence of the competitive tendering system adversely affecting small firms, according to evidence provided to the Public Accounts Committee in 1965 (4.20) but in the long term price reduction may undermine the competitive environment by affecting the economic viability of suppliers or discouraging development of new goods (3.77).

This could result in a monopoly charging whatever price it wished (4.21). Pharmacists have benefited from the wholesaler service which gives a round the clock delivery service and would be loath to see this service curtailed (3.71, 4.21), particularly in view of the smaller stockholding needed when goods are delivered from local wholesalers and the lower administrative costs of one order to be processed to a wholesaler as opposed to several to individual manufacturers. Nevertheless the wholesaler is vulnerable where prices and profit margins are reduced (3.76). But there is nothing to prevent the utilisation of prime vendor benefits allied to the wholesaler service where the wholesalers would compete for the total drug business.

Roberts, a renowned hospital pharmacist, put forward the view (4.22) that "Tying the purchasers to direct dealing in many cases is not feasable (sic) and the convenience of dealing with the wholesaler is worth the increased cost."

Farrington (4.23) showed how contractual aspects have a direct relationship to price control, particularly at the price increase request phase, yet a survey he carried out to test the role that contractual aspects played in effective purchase price management showed that only 22.8% of respondents, in his view a low response, identified contractual aspects as being vital to effective purchase price management. He stated: "It provides another example of a general failure to comprehend the opportunities for the buyer in pricing management." He further suggests (4.24) that negotiation of prices is perceived by buyers as a key phase in industrial purchase price management, and (4.25) that the buyer perceives price to be a significant measurement of his job performance. By survey Farrington deduced (4.26) that buyers used long term contracts as a major method

to achieve cost reduction objectives. As regards time spent by buyers on pricing aspects of work 53.8% stated (4.27) that they used more than 20% of their available time on pricing aspects yet, as Farrington notes, no attempt was made by purchasing management during his research to define an appropriate work load to ensure a balance to enable all aspects of the buyer's job to receive attention.
There is also scope for price reduction by actions on the part of the suppliers. The supplier could keep prices firm for the duration of the contract as opposed to the present system of frequent price changes during the term of the contract. A suggestion has been made (2.70) that a "rolling contract" be designed. In this, each supplier's part of the contract would be reviewed cyclically.
Unplanned price increases increase the administrative costs of the system and should be discouraged (1.10). They also make the contract into an academic exercise. This is compounded by a lack of knowledge of prices which should be paid and so purchasers in the NHS are working at a serious disadvantage. Hyman wrote (4.28) that in part the quality of the supplies system can be measured by the price it pays for good products delivered as and when required.
The administrative cost of NHS drug buying to be set against nominal savings has been assessed by a few observers.
The Supply Board Working Group estimated that supplies administration was costing £20 million to service an annual supplies expenditure of £700 million (4.29). The proportion of the £20 million devoted to contracts is unknown. One of the members of the Working Group wrote that supplies expenditure, consuming 12% of revenue, could be ultimately reduced by about £30 million per year (4.30). The member of the Group suggested that among other factors the supplies service should have a detailed period of consultation with suppliers and should negotiate effective competitive purchasing arrangements.
An NHS administrator attempted to cost the contract system to test the validity of the belief that large scale contracting saves the health service money. Edwards (4.31) estimated the cost of organising the contract and related this to the savings generated. The study was of a regional contract for the supply of dressings which bear similarities to drugs in having a large proportion of the output of the industry being bought by the government or one of

its organisations. Edwards concluded that it costs the health service a great deal of money, mainly in salaries, to raise large scale contracts. He repeated the often spoken suggestions that large orders enabled suppliers to regulate output, predict accurately future production levels, operate economies of scale in production, reduce paperwork to a minimum, ensure good cash-flow and economise on delivery costs. This would allow reduced prices to be offered. Edwards estimated that the cost of raising the contract was about 1% of the savings over list prices, or 0.1% of the annual value and felt that it was difficult to speculate on real savings. He felt that it was difficult to reduce costs, particularly those of salaries of experienced staff involved in all stages.

The difficulty of estimating the savings accruing from the negotiation of Regional drug contracts was referred to in the Contracts Working Party Report (4.32). It concluded:

> "there is no satisfactory way in which this figure can be calculated, as it is not possible to estimate prices that would be paid, in the absence of a contract, in any meaningful way.
>
> We investigated the methods commonly used to calculate 'savings' accruing from contract arrangements, and consider that simple calculation based on
>
> i) the difference between contract price and 'list' price, or
> ii) the difference between the contract price and the next lowest tender
>
> do not indicate the true financial value of contracts to the Health Service.
>
> It must be recognised that a contract has functions other than obtaining favourable prices.
>
> These include:
> i) Maintenance, at Regional level of an approved list of firms invited to tender, and hence considered suitable to supply.
> ii) Centralised evaluation of samples and suppliers.
> iii) Ensuring continuity of supply of certain items.
>
> In the absence of a contract, individual purchasing units would be required to undertake appreciable additional work, including quality assurance, to achieve similar standards of control, before comparison of prices could be considered."

The Supply Council Report (4.33) noted lower prices for items in competition and considerable savings from contracts for them. It

referred to the functions of contracts as related by the Contracts Working Party Report and added that contracts set out legal conditions of supply, established minimum acceptable labelling and packaging standards, allowed some uptake monitoring and eliminated unnecessary local activity so reducing administration. On the subject of ensuring continuity of supply, the Report stated that for "products such as heparin, intravenous fluids and vaccines there are sometimes a very limited number of suppliers and agressive (sic) quotations against regional contracts may result in one company securing virtually all the business ... such an event may raise problems of security of supply ..."

The 1982 Council Report (4.34) noted that contract prices for generic products related apparently to the choice of "approved suppliers" for tendering. The Report recommended that the DHSS be pressed to help Regions prepare product - related lists of approved suppliers and that Regions' lists of approved suppliers should be reviewed critically and made as comprehensive as possible.

There is evidence (1.10, 4.21) of contracts being awarded to companies which provide one or few drugs. This results in extra administrative costs involved in instituting the order, receiving the item, entering in the records and paying the bill. These may outweigh the benefits of the lower prices achieved.

Hyman feels that the contract should become a much simpler process of negotiation after the purpose, specification, and price have been assessed (4.35).

The Report for a Regional Health Authority (2.70) in 1979 suggested longer contracts, fewer suppliers, "rolling contracts", pharmacist involvement, regular contact in the field with suppliers, a reduction in paperwork and more consideration of the suppliers' needs. A further Report for a RHA (1.10) of July 1979 spoke of the advantage to be gained by quoting prices as standard prices with discount terms, the shortening of the contract, the maximum use of wholesalers, and the discontinuing of the collection and submission of estimates of usage.

The Public Accounts Committee in its 1979-80 Report (4.36) expressed the view that its members were "seriously disturbed by the admission that NHS money is being wasted" following an examination

of procurement of supplies in the NHS. It referred to the need for health authorities to carry out the recommendations of the proposed Supply Council and the paramount need to conserve NHS funds and proper co-ordination of buying taking precedence over the freedom of authorities to proceed independently. The Report continued:

> "we find it greatly disturbing that efforts to achieve economy in this field have gone on for 25 years without reaching a fully satisfactory outcome ..... there appears to be no proper excuse for this failure."

Criticism of the contract system has increased over the years. A Regional Pharmaceutical Officer in 1983 described (4.37) the drug contracts as a "sham" and a means of getting products into hospitals in the belief that they would then continue to be prescribed by G.P's. He suggested a percentage discount binding system instead of the present non binding system.

Hostility toward the traditional contract system does not stem solely from NHS staff. A marketing director of a large drug firm was quoted (4.38) as describing critically the present arrangements, doubting whether the labour involved in administering them was justified by the savings made for many products.

4.2 Influence of Price Regulation Schemes

The social benefits accruing to society as a result of the inception of the National Health Service in 1948 were, as predicted, numerous. Less predictable was the cost of that service to the taxpayer. Almost from the very outset the increasing financial burden received the close attention of the Ministry of Health, the Treasury and the Committee of Public Accounts of the House of Commons, with the drug bill attracting a major share of that scrutiny (4.39).

Clearly the total drug bill reflects the unit drug costs and the volume consumed, and so for any restriction on the total resource allocation to hold firm there is a requirement to control unit costs, volume or both. At an early stage in the development of the NHS the scene was set for such attempts.

The principle of a doctor's clinical freedom to prescribe as he feels most appropriate for his patient was soon to be threatened when on 10 May 1954 the then Minister of Health, Iain Macleod, informed the House of Commons:

> "We have not been able to reach agreement with the manufacturers on what we consider a reasonable level of profit, and we propose shortly to advise the doctors that satisfactory price arrangements have not been made and to ask them not to prescribe these preparations." (4.40)

The Association of the British Pharmaceutical Industry (ABPI), as the body representing pharmaceutical manufacturers, appointed representatives to negotiate with officials of the Ministry of Health and the Board of Trade and to determine whether prices were "fair and reasonable." (4.41)

It was intended that agreement would be reached between the two parties on "reasonable" profit levels and the threat of the Ministry (to advise doctors not to prescribe specified drugs) would be removed. The outcome of those negotiations was to become a major factor in determining, under the Voluntary (subsequently restyled Pharmaceutical) Price Regulation Schemes (VPRS and PPRS), the level of profits made by pharmaceutical companies from 1957 to the present day and it was in that context that the prices charged for drugs were to be determined.

The sales of the pharmaceutical industry, unlike those of any other non-nationalised industry, were to be subjected to government scrutiny, this unique treatment being accorded because between ninety (4.42)

and one hundred (4.43) per cent of the prescription drugs used were and are administered to NHS patients, and, in the main, the drugs are paid for by the taxpayer.

This subdivision sets out to examine the past and present organisation of Price Regulation Schemes and to determine their impact on drug prices generally and those prevailing in United Kingdom hospitals specifically. It is the author's opinion that the scheme exerts less influence on prices than generally thought and has no effect on hospital price specifically.

Method of operation of the schemes

In the past

The first intervention of the government in examining the profit levels of pharmaceutical manufacturers occurred in June 1957 when objective criteria were agreed for determining the prices to be paid to the manufacturers for the drugs supplied on NHS prescriptions (4.44). The agreement, the Voluntary Price Regulation Scheme (VPRS), related the price of prescribed medicines in Britain to the price in overseas markets, the price of a standard equivalent or ingredient cost plus allowances for processing and packaging. It assumed (4.39) that prices in export markets were competitive and that "most home prices were reasonable." Teeling Smith comments (4.45) that it was assumed that since abroad it was the patient or the private insurance scheme which paid, then the price was reasonable. This assumption does not appear to recognise what are suitable criteria for judging a reasonable price.

Under pressure from the Public Accounts Committee the scheme was revised in January 1961 and it gave the Ministry the option of requiring prices of widely used drugs to be related to costs and profits. Two years later the Public Accounts Committee viewed with concern the rise in prescribing costs and, as a result, the Health Department expressed the desire to seek ways of containing them and the Ministry agreed to take the Committee's view fully into account in the negotiations about to begin for the renewal of the VPRS. The Ministry stated (4.46):

> "whatever form or forms of voluntary price restraint are agreed with the Association of the British Pharmaceutical Industry, they must be clearly understood to be binding on all its members."

Agreement was reached between the Health Departments and the pharmaceutical industry on 1 July 1964 on a revised scheme which was due to be binding for three years and then be subject to termination at six months' notice by either side. This revised scheme, which was detailed in the Sainsbury Report (4.47), recognised the importance of research (4.48).

Under the terms of the VPRS agreement, for "research-based" preparations, the period of freedom from price regulation was increased from three to four years. The free period for other preparations was reduced from three to two years.

Prices to the NHS were established according to certain rules. The price to the NHS was not to exceed the weighted average of the price obtained in the six most important export markets (4.49).

During September 1967, the Sainsbury Report was published. It resulted from the Committee of Enquiry appointed in May 1965 to examine the relationship of the pharmaceutical industry with the NHS having regard, inter alia, to pricing and to the effects of patents (4.50). The Committee had examined:

> "the competitive conditions prevailing in the sale of medicines and the working of the Voluntary Price Regulation Schemes of the Ministry of Health. We found ..... that the price regulation schemes of the Ministry had serious weaknesses. As a result, we have concluded that the existing conditions under which medicines are supplied to the National Health Service are not such as always to secure that prices and profits are reasonable." (4.51)

On 17 November 1969 the Scheme was revised again (4.43, 4.52). Before 1969, the Ministry of Health had attempted to control prices of individual medicines by price comparisons and attempted to establish the production costs of individual medicines specially selected by the Ministry (4.43). The 1969 Scheme required more detailed financial information from the manufacturers with the company's overall costs and profits being considered rather than individual prices. (4.43, 4.52).

A further revision took place on 1 September 1972 (4.53). The DHSS Annual Report for 1972 states:

> "The new Scheme reduces the number of companies required to provide full financial returns each year: in future, only those companies with turnover in excess of £750,000 a year will be asked to do so.

> Companies with turnover between £100,000 and £750,000 will be asked to complete a simplified return and smaller companies will be exempt, though companies in both groups may be called upon to supply full returns if circumstances appear to warrant them. Profitability and sales promotion will continue to be assessed in relation to the facts of the individual company. The arrangements for agreeing price increases are simplified and apply to products with sales exceeding £150,000 a year, or £50,000 a year where this is more than 10% of the company's sales to the National Health Service." (4.53)

The Monopolies Commission Report of 1973 (4.54) noted that the agreement between the DHSS and the ABPI consolidated in the VPRS ensured the availability of medicines "on reasonable terms to the NHS" as well as ensuring a "strong, efficient and profitable industry."

The Report continued:

> "as sponsor for the industry, DHSS recognises the industry's contribution to the economy of the United Kingdom as a whole and wishes further to encourage its competitive efficiency at home and abroad. ABPI recognises the desirability of securing in the public interest that the prices of pharmaceutical products supplied to the NHS are fair and reasonable."

In 1973 the prices of ethical medicines supplied to the NHS were exempted from the control of the Price Commission under stages 2 and 3 of the Counter-Inflation Programme and remained subject to the control of the Voluntary Price Regulation Scheme (4.55).

In April 1973 the Monopolies Commission Report on Chlordiazepoxide and Diazepam was submitted to Parliament, the Government accepted the Report's recommendations and by an Order dated 12 April 1973 fixed the price of those two Roche drugs (4.55). In November 1975 the dispute with Roche was settled with the Government laying an Order revoking the price fixing Order. Roche undertook to co-operate again in the Voluntary Price Regulation Scheme (4.56).

The VPRS of 1972 was succeeded by the Pharmaceutical Price Regulation Scheme (PPRS) of April 1978.

The Schemes gained increasing prominence. Research findings are that the proportion of proprietary preparations' cost which came under review by the Schemes gradually increased from 89% at the inception in 1957 to 99% in the last quoted year 1968 (4.57 - 4.61).

The PPRS at present

The object of the PPRS which became operative on 1 April 1978 is, by regulating companies' overall costs and profits in supplying medicines to the NHS, to ensure that the prices of such medicines are fair and reasonable (4.43). The DHSS recognises (4.43) that it would be a massive task to control individually the price of every medicine prescribed under the NHS.

The DHSS states (4.43) that:

> "the PPRS is operated on the basis that ..... if a company's overall costs and profits in supplying such medicines are reasonable, the prices of individual medicines supplied by the company are for practical purposes not in themselves significant and may be accepted as reasonable."

The DHSS memorandum continues:

> "Because it was considered an effective means of price control, the prices of medicines subject to the scheme were specifically exempted from control by the Price Commission. Because the NHS buys virtually all the medicines prescribed in the UK, and because of the continuing need to control public expenditure, price regulation of the industry has continued; but it is now the only industry subject to overall price control ..... Pharmaceutical companies are aware that, quite apart from statutory powers which would enable the Secretary of State to control prices by order, those products which are monopolies could be referred to the Monopolies and Mergers Commission. In practice, companies - after some initial reluctance ..... in 1969 - now co-operate to a high degree in the operation of the scheme."

The 1978 Scheme requires companies to submit annually to the DHSS forecast financial returns within the first three months of the accounting year to which they relate (PPRS para 5.4). The previous Schemes suffered from the retrospective identification of a high level of profitability six months after the end of the financial year, according to the notes on the operation of PPRS provided by DHSS, as well as a letter written by a spokesman of DHSS (Personal Communication of 12 February 1982). Those turnover figures related in the 1972 Scheme were doubled in the 1978 Scheme, producing one category for sales of under £200,000 a year, one for sales of £200,000 to £1,500,000 a year, and one for sales over £1,500,000 a year (PPRS para 4). There are also provisions under which rebates of excessive profits may be agreed.

The 1978 Scheme was reviewed in 1983 and from 1 April 1984 new provisions applied. The target rate of profit for each participating company was reduced by four percentage points and the allowable level of sales promotion was reduced (4.62).

The aims of the Scheme as printed in the official version of PPRS, para 1, are as described by the Monopolies Commission Report (4.54) in referring to the 1972 VPRS, and so have not altered.

Problems Encountered

Conflict in the role of the DHSS

Evidence given before the Committee of Public Accounts in 1980 (4.63) shows that the DHSS adopts a "sponsorship" as well as a regulatory role over the pharmaceutical industry. Further evidence (4.64) highlighted the information that fifty eight companies submit annual financial returns to the DHSS under the PPRS. While regulating the industry the DHSS must also ensure that the industry continues to export at a high level. In other words the DHSS "sponsors" the industry.

The Sainsbury Report of 1967 remarked (4.65) on the sponsorship and procurement functions of the Ministry:

> "the sponsorship function ..... may lead to a pulling of the purchasing punches."

It went on:

> "the Committee has received a clear impression from the evidence that the sponsorship function of the Ministry interferes to some extent with their directness of purpose in regulating prices."

It continued:

> "we were not unanimous in feeling that they (the disadvantages of the Ministry having two functions) justify our recommending the separation of these functions, but we note the sponsorship function discharged by the Ministry as a factor which we believe reduces the effectiveness of the direct negotiation system within the VPRS."

The Monopolies Commission Report of 1973 remarked (4.66):

> "it (DHSS) cannot exert its bargaining power as an independent buyer would exert it, since it must have regard to the effects this might have upon the general prosperity of the industry, including its exports and its research programme ..... we do not think that DHSS can be said to be in a position to bargain on equal terms with a monopolist seller of a given drug."

Evidence before the Public Accounts Committee of 1980 showed that there is a strong possibility of conflict in these two roles and it has been suggested that the two be divorced by making them the responsibility of different Government Departments (4.67). Discussions on this topic in 1983 between the DHSS and the Department of Industry resulted in a collective decision that the DHSS would continue with its dual responsibility (4.68).

An alternative strategy would be the establishment of a specialist regulatory agency. Such a device has been envisaged by Hartley and Tisdell (4.69) for the monitoring and policing of non-competitive contracts. The views of those distinguished economists, while not specifically referring to drug purchases by NHS authorities, nevertheless bear a message which may apply. In their opinion:

> "Such bodies might have the powers to investigate and re-negotiate contracts where profits are found to be 'excessive'. However, some models of regulation suggest that this arrangement might benefit industry rather than society!"

The fifty eight companies, referred to above (4.64) are chosen on the basis of turnover. An expedient which would release a company from the need to submit financial returns would be to create a subsidiary company. In theory this expedient can be nullified, since under paragraph 4.2 of PPRS, in the case of small companies:

> "The Department reserves the right to call for a full annual financial return if circumstances appear to warrant it."

Furthermore a spokesman for Supply Division of DHSS in a personal communication of 12 February 1982 stated:

> "Several major suppliers are formed of more than one company, but for the purposes of the PPRS their sales, costs, profits and capital are consolidated in the financial returns required under the scheme and they are assessed as one company."

When the topic of transfer prices was analysed by the Public Accounts Committee in 1983 it reported (4.70) that:

> "an external investigation into this problem was being undertaken, that the study would be welcomed and trust that it will be completed urgently."

The increase in number of trading companies by the creation of subsidiaries with separate names was referred to (4.71) by a publication of the Consumers' Association which suggested that

the formation of subsidiaries may lead to the allowance of greater promotional expenditure under PPRS, but it subsequently retracted that charge.

There is nevertheless suspicion of this formation of subsidiaries gathering momentum, but the reasons for it can only be speculated upon.

Levin, an industrialist in the pharmaceutical industry, noting (4.72) that everywhere economic contraints are putting those in charge of health budgets under heavy pressure, continues by stating that the UK scheme is:

> "simple but a very effective method of controlling profits, linking the level of those profits to the company's contribution to the economy. Thus a company which has a high UK capital investment in building and equipment, which exports substantially from the UK and which engages in original research in Britain is permitted a relatively liberal deal on prices by the DHSS. Smaller companies, which cannot afford high investment in research or plant and which have little or no export business will find that their permissable level of profitability is severely restricted and their opportunities for increasing prices seriously limited."

Levin's comments provide a little more insight into the operation of the scheme and show it as favouring the large against the small and therefore morally questionable.

Levin's reflections were given support by the Public Accounts Committee in 1983 which reported (4.73):

> "DHSS do not apply the average overall return to individual drug manufacturers. Instead they set each company a reasonable annual target rate of return relating to its NHS business. They base each target rate on their view of the merit of the company, having regard to its contribution to the economy by its investment, research and development expenditure and value added in manufacture in the United Kingdom, and by the value of its exports."

The Report subsequently described (4.74) the DHSS practice of setting individual target rates for firms as being a "cause for concern ..... the use of subjective judgment ..... a difficult administrative task for the Department, and leaves them with very wide discretion."

The "liberal" deal allowed to certain companies by the DHSS gives the impression of patronage to the industry generally or even favouritism to individual companies. Certainly sound economic reasonings do not appear to play too big a role in it with subjective reasoning taking the place of the expected objective criteria. The title of the Schemes was prefaced by "Voluntary" from 1957 to 1978 and then the word was replaced by "Pharmaceutical". Though not widely known, it must be stated that the government has had, under the Emergency Laws (Re-enactments and Repeals) Act 1964, the power to control the maximum prices of medical supplies to the NHS (4.75). Exercise of those powers would be at variance with the spirit of the Scheme (4.76). Nevertheless, the DHSS issued a direction under section 5 subsection 2 of that Act, which requires suppliers to provide such information as may be prescribed, to two companies which had refused to supply information in connection with the VPRS (4.77). The power was consolidated under the Health Services and Public Health Act 1968 which authorised the use of that power of hospitals to procure medicines at lower prices than charged by patentees for the procurement of medicines for the general medical, pharmaceutical and dental services of the NHS (4.78). The author of this work suggests that replacement of the term "Voluntary" was apposite.

The relationship, symbiotic or otherwise, between the industry and the DHSS has been examined by Wade. He suggests (4.79) that the Scheme appears successful if prices in Britain are compared with those in other countries. He continues:

> "It works because both parties concerned with prices wish the scheme to work. The State cannot demand prices so low that it exposes itself to the accusation that it has driven drugs off the market or has made the discovery of new drugs more difficult: the pharmaceutical industry cannot be indifferent to allegations that it is profiteering at the expense of the sick."

Wade's views coincide with those previously aired by Enoch Powell as quoted by Teeling-Smith (4.80). The present author suggests that any alleged "profiteering" of the industry is not at all unexpected. It is the raison d' être of any company or industry and is a motive of which the ABPI need not feel ashamed. By participating in the Scheme the ABPI ascribes to its members the more altruistic

qualities of humanitarianism while it is portrayed as sublimating the less philanthropic desires of its member companies.

Price Control

The Office of Health Economics, a body established by the ABPI, criticised the VPRS in 1975. It argued (4.81) that the scheme was based on the assumption that normal competitive forces did not exist. It suggested that the DHSS used that erroneous assumption to justify bureaucratic price controls:

> "price competition for pharmaceuticals is just as vigorous and effective in that market as in any other market for innovative goods. ..... the market success of a prescription medicine would, other things being equal, be affected by its price relative to alternative products on the market ..... a free market price mechanism can often achieve a better allocation of resources than bureaucratic controls, even within a centrally directed sector of the economy, such as the NHS."

The Office of Health Economics director reinforced those opinions in 1982 when he suggested (4.82) that the price of the drug was a significant factor in the prescriber's decision making.

The contrary viewpoint has been expounded in government reports as well as the writings of individuals. The Hinchcliffe Report of 1959 (4.83) suggested that the pharmaceutical market is product-competitive. This view was endorsed in the Sainsbury Report of 1967 which suggested (4.84) that the market for branded ethical products is product-competitive rather than price-competitive (that is drugs compete in terms of efficacy rather than price primarily); and that product competition alone provides little incentive to reduce prices, although it does have the advantage of providing incentives to develop new products. (4.85).

The Monopolies Commission Report on the Supply of Chlordiazepoxide and Diazepam felt (4.54) that:

> "price restraint ..... does not come from the patient but from DHSS as the ultimate paymaster for the NHS. ..... The main instrument, through which DHSS seeks to negotiate reasonable price levels with individual manufacturers is ..... the VPRS."

Any lingering doubts concerning where efforts should be exerted to restrain the total drug bill were dissipated in 1983 with the publication of the Tenth Report from the Committee of Public Accounts which noted (4.86) that:

"the reasonableness of expenditure incurred by the NHS on drugs depends fundamentally upon whether DHSS ..... have established effective control over manufacturers' prices."

Clearly the volume of prescriptions, mirroring the prescribing habits of the medical practitioners, was to be relegated to an inconsequential sideline.

In a similar fashion the influence which could be exerted upon the prescriber to reduce unit drug costs must be considered as minimal. The Monopolies Commission Report, in referring to the measures taken by the DHSS affecting the competitive situation, pointed (4.87) to the visits made by Regional Medical Officers to doctors:

"DHSS told us that discussions between doctors and RMO's about prescribing are naturally difficult to conduct. Choice of treatment is entirely within the general practitioner's discretion and DHSS say that it would be wrong for the RMO to question this in any way. While the intention may be to bring considerations of cost to the general practitioner's attention, this has to be done in a completely fair way, without appealing to force majeure or going beyond strictly factual material.

The RMO is, therefore, positively briefed not to instruct a general practitioner to prescribe one product rather than another."

The authors of the Monopolies Commission Report of 1973 clearly did not feel that the price of a drug weighed heavily among the various considerations of the prescriber.

Wade (4.79) states that the practitioner is insulated from the cost of the drug prescribed. Happold (4.88), in a book markedly supportive of the pharmaceutical industry, states:

"demand is not responsive to price. Especially in a country with a free-issue medical service, the doctor when prescribing is almost wholly concerned with what medicament is best for his patient. Considerations of cost are very secondary, even if doctors in Britain may be asked to explain and justify an above-average cost of prescribing ..... The physician's opinion of effectiveness is the predominant factor in what is prescribed".

Happold does not believe that there is price competition between the (products of the) manufacturers. Happold noted the absence of a market mechanism to help determine the price of a new drug. Reekie, in a publication of the Office of Health Economics pointed (4.89) to the isolation of the prescriber from financial responsibilty and noted that the doctor "is not employed to make a financial best buy."

Perversely patients may conspire to prevent financial savings in seeking expensive medicines. The editor of Monthly Index of Medical Specialities (MIMS) is quoted (4.90) as having said:

> "patients with access to Mims were asking for the more expensive (and therefore "better") drugs."

The Ministry (and later the Department) of Health, over the first fourteen years reported large price reductions as a result of the operation of the Scheme and these are reflected in Table 4.1. As can be seen from an examination of the Table, the reported savings increased, slowly at first, to a maximum of £3.7 million in 1966 and then dropped to a reported figure of £0.9 million in 1971. Subsequent years showed generally decreasing savings attributable to the Scheme, with increasing savings reported most recently. The question must inevitably be asked:

> "From what level is the calculation of money saved made?"

A cynical view would be that large savings could be reported as a result of the manufacturers pre-setting their prices at a higher level in anticipation of them dropping as a result of negotiation. It must be stated that the sources of figures quoted in Table 4.1 vary but nevertheless are thought to reflect the real position.

The large fall in savings attributed to the Scheme coincided with the major change in its operation, resulting in the companies' overall costs and profits being scrutinised rather than individual drug prices. The DHSS admits that its methods prior to 1969 had disappointing results which were criticised by the Committee of Public Accounts (4.43). Yet the apparent savings after 1969 were generally smaller than before that year. It may be thought that the published savings should be viewed with caution.

Profitability of the Industry

The Sainsbury Report of 1967 noted the need for "clearly defined guidance on the definition of a reasonable level of profit on capital" (4.102). The Supply Board Working Group Report noted (4.103) that the object of the PPRS is to ensure that each pharmaceutical company's profits from the supply of medicines to the NHS, measured by return on capital employed, are reasonable.

The Comptroller and Auditor General in his report (4.104) of 6 January 1983 noted the acknowledgment by DHSS of the "difficulty in administering the profit control aspect of the scheme" ..... and:

TABLE 4.1: SAVINGS ATTRIBUTABLE TO VPRS AND PPRS FOR VARIOUS YEARS

YEAR	ESTIMATED NET SAVING £ MILLION	REFERENCE
1957	0.037	4.91
1958	0.376	4.91
1959	1.073	4.91
1960	1.768	4.91
1961	1	4.92
1962	1.2	4.93
1963	1.1	4.94
1964	1.1	4.94
1965	2.25	4.95
1966	3.7	4.57
1967	0.6	4.59
ending September 1968	2.3	4.61
ending September 1969	1.15	4.96
15 months ending December 1970	0.7	4.97
1971	0.9	4.98
1972	-1.0	4.53
1973	-0.2	4.55
1974	-20.0	4.99
1975	-37.0	4.56
1976	-45.0	4.100
1977	N/A	-
1978	N/A	-
1979	15.3	4.101
1980	7.6	4.101
1981	11.4	4.101

N/A = Not available

NOTE A negative value in the "saving" column denotes net price rises attributable to the scheme. The scheme can influence price rises as well as price falls.

"the uncertainties about the reasonableness of transfer prices" and "the inadequate evidence to establish the efficiency of the industry."

He concluded that DHSS felt that PPRS represented "good value for money" furnishing medicines "at reasonable prices" ..... but "They recognised the limitations of the scheme and acknowledged that it remained open to review and refinement."

The reasonable level of profits is based on a target agreed with the Treasury but has never been published because the target rate for return on capital is commercially sensitive and secret information. It is thought to be fairly generous (4.105).

An examination of Table 4.2 shows that return on capital employed in the pharmaceutical industry has been, until recently, consistently higher than manufacturing industry generally. Furthermore within the industry there is considerable variation in profitability, with a range during 1978-79 of - 0.22% to 55.51% (4.118). Though return on capital is the most important measure of a company's performance, it must be admitted that the use of a single accounting yardstick when comparing the pharmaceutical industry with other industries may not provide an accurate assessment of the true state of the viability of those sectors of industry. Nevertheless, it would be fair to suggest that neither the hope propounded in the Sainsbury Report for a defined "reasonable level of profit on capital" nor the object of PPRS as stated by the Supply Board Working Group Report that:

"each pharmaceutical company's profits ..... measured by return on capital ..... are reasonable"

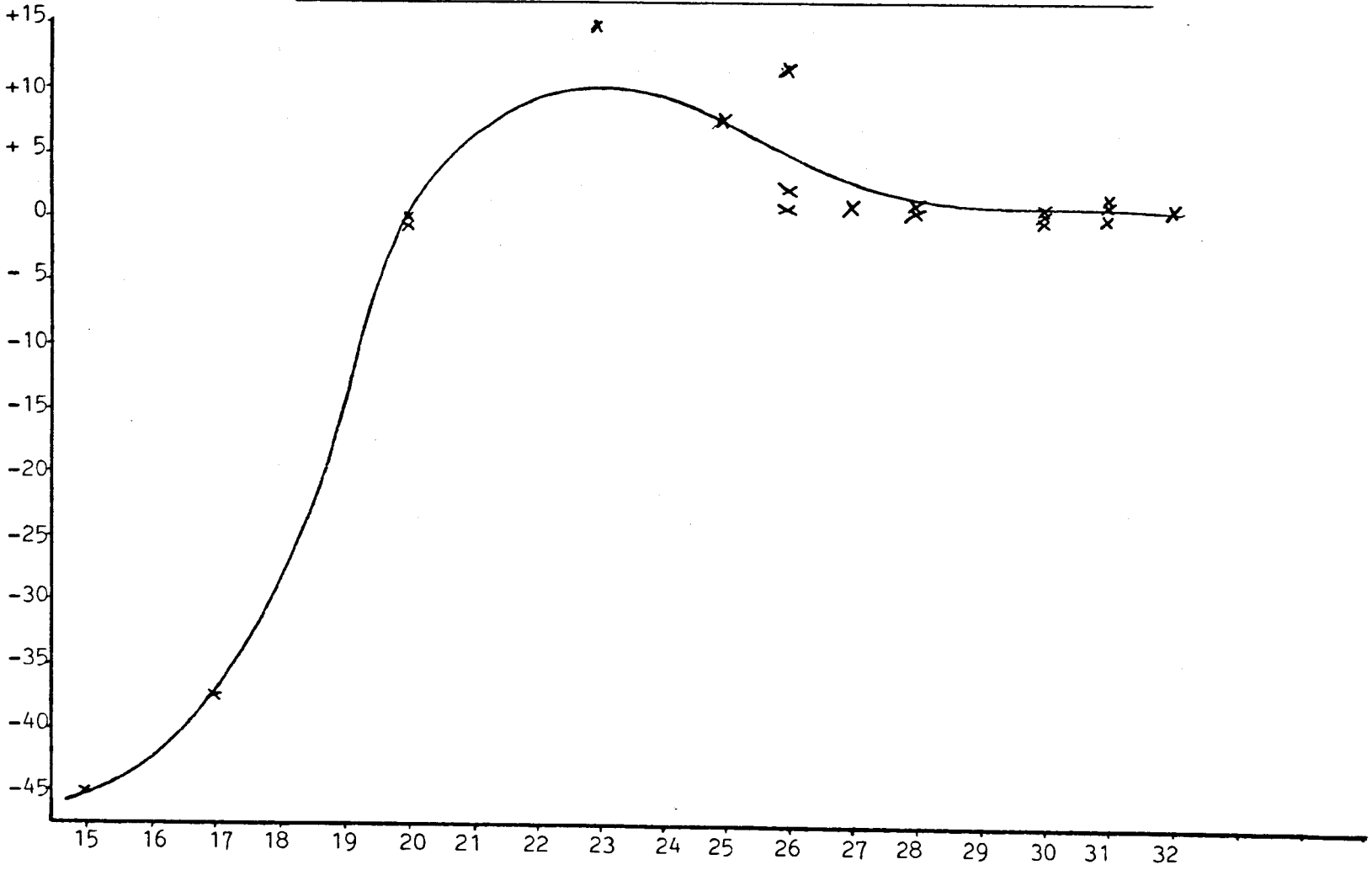
has been satisfied.

With PPRS operating fairly, a direct relationship between savings to the DHSS, as shown in Table 4.1 and industry profitability, as shown in Table 4.2, might be expected. Since profitability was, until 1978, examined retrospectively under PPRS, profitability and savings were plotted against time. A two year time lag was inferred. Savings were plotted against profitability two years previously and the relationship is seen in Figure 4.1. It becomes apparent that for profitabilities of up to 20% increase in profitability was associated with increase in savings to the DHSS, whereas increase in profitability beyond about 20% was associated with no net increased saving to the DHSS.

TABLE 4.2: RETURN ON CAPITAL EMPLOYED FOR PHARMACEUTICAL MANUFACTURERS AND MANUFACTURING INDUSTRY GENERALLY FOR VARIOUS YEARS

YEAR	PHARMACEUTICAL MANUFACTURERS		MANUFACTURING INDUSTRY GENERALLY	
	RETURN ON CAPITAL EMPLOYED %	REFERENCE	RETURN ON CAPITAL EMPLOYED %	REFERENCE
1954	40	4.106	16	4.106
1955	31	4.106	16	4.106
1956	30	4.106	15	4.106
1957	30	4.106	14	4.106
1958	31	4.106	14	4.106
1959	32	4.106	14	4.106
1960	31	4.106	15	4.106
1961	30	4.106	14	4.106
1962	27	4.106	13	4.106
1963	26	4.106	14	4.106
1964	N/A		N/A	
1965	N/A		N/A	
1966	N/A		N/A	
1967	Average 28	4.107, 4.108	12	4.108
1968	28	4.108	13	4.108
1969	26	4.108	13	4.108
1970	Average 20	4.107, 4.108	12	4.108
1971	Average 20	4.107, 4.108	13	4.108
1972	Average 19	4.107, 4.108	15	4.108
1973	17	4.107, 4.56	N/A	
1974	15	4.56	N/A	
1975	15	4.100	N/A	
1976 end Apl:	14	4.109	15	4.115
1976	Average 18	4.110, 4.111	N/A	
1977 end Apl.	Average 21	4.109, 4.112	16	4.115
1978 end Apl.	Average 24	4.109, 4.113	16	4.115
1979 end Apl.	Average 25	4.111 - 4.113	10	4.116
1979	26	4.111	N/A	
1980 end Apl.	19	4.113	9	4.116
1981 end Apl.	14	4.114	21	4.117
1982 end Apl.	15	4.117	18	4.117
1983 end Apl.	17	4.117	20	4.117

FIGURE 4.1: GRAPH SHOWING SAVING AGAINST PROFITABILITY TWO YEARS PREVIOUSLY



Unreasonableness was admitted in deliberations of the Public Accounts Committee in 1983. The Committee's Report stated (4.119):

> "..... we believe that the PPRS has not ensured the reasonableness of drug prices generally. For example, in 1978 the 21 per cent return on capital earned under PPRS was five percentage points above the return for UK industry generally, and in 1979 and 1980 the return under PPRS increased to 22 per cent and 23.3 per cent respectively. On the other hand, as we pointed out in our 16th Report of Session 1981-82, since 1978 profit margins have been declining in industry generally and in our view the average rate for Government non-competitive contracts should have been reduced from 20 per cent to 17 per cent at the most."

Clearly the Schemes have not been regulating profits in the manner envisaged by the Government.

The impact of PPRS on hospital prices

Salmon, in the Report of the Supply Board Working Group, which he chaired, remarked (4.103) that hospital purchasing takes place against the background of PPRS, yet he continued by stating that purchasing authorities (hospitals) can and do obtain considerably lower prices as a result of their negotiations "and it may be that there is scope for more central purchasing." It could be said that since PPRS applies to profits generally, including those accruing from sales to hospitals as well as general practice, any lowering of prices negotiated by hospitals results in the manufacturer optimising his profits by raising his general practice prices accordingly. This view is supported, though in a different context, by the statement of the Comptroller and Auditor General who wrote that "any substantial reduction in the use of branded drugs would lead to some compensating adjustment to the price of other drugs by the firms concerned." (4.120). Prior to 1969 the prices of individual medicines were controlled. If such control was successful then the award of a hospital contract could result in a price lower than that prevailing generally and the manufacturer would be unable to raise his general practice price to compensate.

However, in a situation in which prices of individual medicines are not controlled, as has been the case since 1969, the manufacturer would be expected to recoup any lower profits or losses on hospital sales by raising prices in general practice.

An officer of Supply Division of the DHSS suggested (4.121):

> "Some Health Authority supplies officers have, from time to time, questioned whether their contracting procedures are worthwhile, given the role of the PPRS in determining prices. This is a fair point, ... "

That officer continued by pointing out advantages of contract purchasing and referred to the prices charged for medicines used mainly or only in hospitals and "proposals for very high increases in the prices of such products." He stated:

> "we can and do intervene, frequently successfully, to abate the level of increase."

In a communication dated 12 February 1982 that officer described the relationship between hospital contracts and PPRS as "compatible and complementary."

It is the submission of the author that the advantage of a contract must be examined in isolation from PPRS since, within the broad context of a price regulation scheme as it is organised now, the existence of a contract is not saving the NHS any resources additional to those which may be saved by PPRS.

As mentioned elsewhere in this subdivision of the chapter, under the present Scheme, the DHSS, in its sponsorship role, adopts a less benevolent attitude toward those companies with a small or non-existent research function. Generic manufacturers, with few exceptions, carry out little research yet they play a major role in lowering the prices of drugs on hospital contracts.

Clearly their profits, after the most rigorous scrutiny of the DHSS under PPRS, are still buoyant enough to allow hospitals to buy at prices lower, in some cases considerably lower, than trade prices generally. Perhaps those companies are not among the 58 whose financial returns are scrutinised in depth. It may be reasonable to assume that the research - based companies, permitted a more liberal deal by PPRS, are being allowed to make greater profits than the generic manufacturers. Yet the research - based companies, likely to be preponderant among the 58 scrutinised, are still able to offer drugs on contract to hospitals at prices below trade prices.

It is suggested by the present author that since companies are seeking to optimise profits the lower hospital contract prices result from efforts on the part of manufacturers to acquire spin-off benefits of increased sales to general practice.

This has been remarked upon by the Monopolies Commission Report of 1973 (4.87). It referred to the free supplies of drugs made available to the hospital service and the armed forces by Roche Products:

> "Such free supplies, the Department said, had three effects. First, a potential competitor would be discouraged since he would normally establish his initial sales in the hospital market; secondly, hospital doctors would prescribe Roche Products' branded reference drugs and this precedent would tend to be followed by the patient's general practitioner when the patient returned to his care; and thirdly, hospital staff would tend to regard the company's products as causing the smallest increase in the hospital's drug bill and would not be so readily aware of the cost of treatment for patients returned to the general practitioner's care."

The Report continued (4.122):

> "we also regard it as undesirable that Roche Products should supply these drugs to NHS hospitals and the armed forces free of charge, or at low prices which are unrelated to cost savings ....."

In its recommendations the Report stated (4.123):

> "Roche Products should not differentiate in its selling prices between customers or classes of customers (including DHSS as purchaser for NHS hospitals and the armed forces) except to the extent that such differentiation is justified by normal commercial considerations such as savings in cost arising from bulk supply."

The prime element in the price differentials between the general practice and hospital sectors is the segmentation of the market, the lower price applying where competition is more elastic to price (4.124).

Despite the recommendations of the Monopolies Commission of 1973, there is continuing evidence of prices being offered by suppliers to hospitals which do not reflect the cost savings arising from bulk supply, but which instead suggest efforts to stimulate general practice sales, a combination of penetration and promotional pricing. The Sainsbury Report referred (4.125) to the different considerations regarding controls and restraints on prescribing by the hospital doctor as contrasted with the general medical practitioner.

In describing the efforts to control prescribing costs in general practice the Report noted (4.125):

> "It is impossible to be sure what the effects are of this restraint on the total National Health Services cost of medicines. Even if it were possible to assess the effects on the doctors whose prescribing is scrutinised, it would be quite impossible to make even a rough judgment of the deterrent effect which the possibility of scrutiny must have."

The Report continued (4.126):

> "In the hospital service different considerations obtain. Hospital doctors are made aware that excessive expenditure on drugs and dressings will mean less money available for other medical and general needs, and certain administrative procedures are operated. There is thus every incentive for critical study of trends in expenditure and there are various arrangements for promoting economy in prescribing."

Any shift of expenditure from hospital to general practice is likely to increase total NHS expenditure, as was referred to in a letter to chairmen of Health Authorities from the DHSS in 1980 (4.127). It must be suggested that companies would set their hospital prices at lower levels than their general practice ones irrespective of the presence or absence of a price regulation scheme. The impact of PPRS on hospital prices must therefore be considered marginal.

It is suggested that if price control of drugs is considered necessary, efforts carried out in the general practice setting are fraught with difficulty. Any concentration of present efforts in that direction may be unlikely to achieve the desired results of reducing drug costs and in addition would arouse the resentment of bureaucratic interference among those who feel that the prescriber should have a reasonable degree of freedom to choose the drug of choice for his patient, regardless of price. The conclusion must be drawn that if control of drug expenditure is considered necessary then there is no realistic alternative to governmental constraints on drug prices or on the family practitioner service budget.

The need for such price control of pharmaceuticals should be decided on sound economic and scientific grounds, divorced from political dogma. Once proven necessary the scheme should be seen to operate fairly. It would be rash to draw more specific conclusions on the detailed workings of the VPRS and PPRS in the absence of more detailed public knowledge of its operation, but the mere lack of such information allows the assumption that the Scheme would benefit from more critical analysis. It is suggested that more objectivity in the operation of the PPRS would provide a more efficient system.

The savings attributed to the Scheme appear to follow the trend of the profitability of the industry up to a point only. Whereas "cause and effect" relationship between profitability and PPRS - induced savings cannot be proved, the possibility of such a link

would present itself as a highly attractive proposition. Such a hypothesis, if it could be proved would give encouragement to the opinion that the fewer the government constraints on the profit-making ability of the industry, the greater the likelihood of funds accruing to the government, both from higher tax returns as well as those which are PPRS-induced. Excessive application of such constraints by government would be a self-defeating exercise. An argument could be put forward in favour of fewer restraints on manufacturers by the government.

If it is thought that the taxpayer is benefiting from PPRS, there is doubtful additional benefit derived from hospital contract purchasing of drugs while the Scheme is at present organised. Hospital contracts and PPRS must be judged as conflicting under the Schemes agreed since 1969, not only in a price setting but also on the grounds of hospital contracts encouraging non research-based companies whereas PPRS seeks to support the research-based firms.

There is evidence that manufacturers offer their products at very low prices to hospitals in the hope of encouraging spin-off sales in general practice. Any shift of expenditure from the fixed-budget hospitals sector of the NHS, with its (hopefully) continuing efforts to control its drug bill, to the family practitioner sector, which has an open-ended budget and relatively few efforts being made to control its drug expenditure, would be likely to raise the total NHS bill unless PPRS is operating with utmost efficiency.

The conclusion must be drawn that the subject would benefit from a more detailed study.

The author's findings set out above which resulted from detailed examination of the operation of PPRS were published elsewhere.

4.3 Influence of Patents

The patent system which has been operating in the United Kingdom for more than thirty years stems from the Report of the Swan Committee of 1946 (4.128) the recommendations of which were embodied in the Patents Act 1949 (4.129). The aim of that Act was to stimulate technical progress by patent protection for sixteen years. The Sainsbury Report of 1967 favoured a shortening of the patent life for drugs whereas the Banks Report (4.130) of 1970 recommended an extension to twenty years for all items. That recommendation was legalised in the case of products with a remaining patent life of more than five years in the Patents Act 1977 (4.131). It replaced section 41 of the 1949 Act which section had facilitated the grant of compulsory licenses against pharmaceutical and food innovators. Patents establish property rights in ideas and therefore provide rights to manufacture. The patent confers a monopoly for an invention but the Patents Act curbs abuses of the monopoly situation. When pharmaceutical research is successful in providing a useful addition to the prescriber's range of drugs available the opportunity arises for those research costs to be recouped. There is a real possibility of a competitive drug entering the market at any time and even if this does not occur while patented, the patent life of the newly introduced drug limits the time during which those costs can be recouped. The manufacturer must assume that once the patent life is exceeded the probability of competition occurring from other firms is high. It could be safely assumed that the patent holder will initially set the prices of his products at a high level and as noted by the Monopolies Commission, "these tend to fall during their patent life." (4.132).

Mitchell (4.133) suggests that since for an established drug marginal manufacturing costs:

> "are typically very low, a major success means that revenue becomes largely profit. The normal pricing pattern for a particular drug therefore is a gradual fall.... The fall in price of drugs also may be hastened by the end of patent; or by the entry or threat of a competitor. 'Copying' firms commonly produce mass-selling drugs at less than half the price of a patented or branded version, a circumstance which increases DHSS's bargaining power."

Support for this opinion appears in minutes of evidence before the Public Accounts Committee of 5 March 1964 (4.134) in which it is stated that:

> "when it was shown that the patent of the manufacturer SKF on nitrofurantoin was not valid, the price (for a given quantity) fell from 374 shillings to 50 shillings."

DHSS statistics (4.135) add support to that view by showing that proprietary drugs, that is those marketed under a patented brand name, cost 91.0% of net ingredient costs yet account for 82.3% of prescription numbers whereas unbranded drugs cost 4.7% of costs, although accounting for 15.0% of prescription numbers. Assuming that the quantity of the formulation prescribed is the same for branded or unbranded drugs, the conclusion may be drawn that branded drugs are 3.53 times the price of unbranded ones. That is not a comparison of equivalent branded with unbranded versions of the same drugs but rather a comparison of branded with unbranded drugs generally.

A price comparison of equivalent branded and unbranded versions of the same drugs is given by Fell who remarks (4.136) that "the price difference between generics (or unbranded drugs) and their branded equivalents is less than formerly (10 to 15 years ago)." He continues:

> "Currently, most generics seem to be 60-70% of the price of the branded equivalent; in the past some were as low as 15-20%. The presence in the market of a generic equivalent has ceased to inhibit price rises in branded equivalents. For example, between March 1980 and July 1981, while the price of the most widely used brand of "generic" ampicillin remained constant (at about 70% of the price of Penbritin, the original brand), the price of Penbritin itself rose by 14%. The most widely used generic indomethacin remained constant in price (at about 65% of the price of the original brand Indocid), while the price of Indocid increased by about 10% between March 1980 and March 1981. The price of the most widely used generic propranolol remained constant between March 1980 and July 1981, at about 75% of the price of Inderal, while the price of Inderal increased by about 15%."

In contrast Cooper (4.137), in a publication of the Office of Health Economics, put forward an industry view in writing that prices do not necessarily fall in the absence of patents and that:

> "International experience has been that the absence of patents tends to fragment the market and raise costs."

It must be assumed that Cooper's term "absence of patents" refers to countries which do not grant drug patents rather than a situation, such as in the U.K., in which the patent life has ended.
The Patents Act has had a bearing on hospital drug purchasing. In the late 1950's it became apparent that British drug prices were considerably higher than those in countries abroad such as Italy, which did not grant pharmaceutical patents, and in 1961, it became known that some hospital pharmacists had been breaking the law by buying those drugs at much lower prices from unlicensed manufacturers (4.138). The aim of those pharmacists was to curb the continuing increase in their hospitals' drug bills. The Minister of Health, Mr. Enoch Powell, could either instruct the hospital pharmacists to cease breaking the law by buying from unlicensed sources or he could invoke section 46 of the Patents Act 1949. Section 46 allowed any Government or person authorised by a Government Department to "make, use and exercise" any patented invention for the Crown, the patentee having a right to be compensated financially. The Minister invoked section 46 legalising imports from unlicensed manufacturers for the services of the Crown, that is for hospitals, and he announced his decision on 17 May 1961. Whereas the dispute with the patent holders was over the price charged generally to the NHS, the Patents Act did not authorise the Minister to obtain supplies for general practice even had he wished to do so.
In November 1961, contracts for supply to NHS hospitals of five patented widely used drugs were placed with unlicensed continental sources following the Government decision to invite competitive tenders and apply Section 46 of the Patents Act 1949. Under this section the patentee was entitled to royalties to be agreed between the patentee and the Minister subject to Treasury approval. Failing agreement the Courts would determine the royalties. In selecting the drugs for action under Section 46 the Minister considered the length of time the drug had been available on the market, the quantities involved and the potential scope for saving (4.139). In November 1962, a second series of contracts for the supply of five patented drugs was placed with firms drawing supplies from the Continent (4.140). The publication of the Guild of Public Pharmacists welcomed the decision of the Minister to purchase under Section 46

and suggested that it seemed "likely that the disparity" in price between general practice and hospitals "must not be too great" (4.141). In other words general practice prices would have to fall.

The 1964 Emergency Laws (Re-enactments and Repeals) Act gave the Government the power to control the maximum prices of medical supplies to the NHS.

In 1965 the Minister of Health discontinued the imports following his success in the action brought by Pfizer, one of the companies whose patent had been infringed (4.142). The Ministry was to rely on settlements with U.K. suppliers under the price regulation scheme (4.143). The power granted to the Minister under Section 46 of the 1949 Act was included in section 55 of the 1977 Act. The Minister could therefore obtain supplies of patented drugs from unlicensed sources "for the services of the Crown." This power was seen to be a reserve power only.

The Health Services and Public Health Act 1968 extended "Crown use" powers to buy at lower prices than charged by patentees to the general practice services.

NHS hospitals, which generally stock only one brand of any drug, benefit from the lapse of patent to a greater extent than general practice pharmacies. The reason for this is that several manufacturers of each drug compete with each other for the hospital sales of that drug, where brand loyalty is almost absent, whereas in general practice, whichever brand is prescribed by the doctor, that brand must be issued by the pharmacist. The scope for price competition in hospitals is therefore much greater and the potential savings in the absence of a patent are larger.

The effect of patent expiry on the pharmaceutical market was noted in the Supply Council Report (4.144) which recommended that information on patent expiry dates should be provided to Regions from a central source. The Report also noted (4.145) "the marked effect which the introduction of new products can have on the purchasing patterns of pharmaceuticals."

A Government Green Paper published in December 1983 suggested that there might be a case for patent term extension for pharmaceuticals. The document noted (4.146), however, that evidence from the United States showed that profitability and research investment had not been

seriously prejudiced by limited patent life because a higher price was charged over a shorter period.

The paper continued:

> "In the U.K. the pricing agreements with the National Health Service have the dominant effect."

4.4 Variations in Price Over the Country

Bilateral oligopoly results generally in a variety of prices paid by individual buyers or in individual transactions. Bain (4.147) and Scherer (4.148) explain how oligopolistic suppliers tend to reduce prices so as to achieve a large order, especially when they have excess capacity. Large buyers can exploit this weakness by concentrating their orders into big lumps, dangling the temptation before each seller and encouraging a break from the established price structure. Since the fourteen Regional Health Authorities show a range of population and hence buying power, the primary research of this thesis includes an examination of the hypothesis that there is no evidence that the larger the buyer the cheaper is the drug that he buys. Furthermore there is some evidence, described later, that the various Regions are charged widely different prices for the same drug for no apparent reason.

A major factor in the apparent illogicality of the various Regions paying different prices for the same drug is the confidentiality of the contract system.

Turpin states (4.149):

> "When the competition is taking place, absolute secrecy with respect to tendered prices is of course the rule, but even after the successful tenderer has been awarded the contract, government departments regard themselves as bound by a long standing principle of confidentiality. In 1887 an inquiry in industry overwhelmingly recommended that confidentiality continue to be observed. The reason was that the lower prices quoted by manufacturers to government departments would give rise to complaints from other customers. It was also feared that constant undercutting of prices and deterioration of the quality of goods would follow adoption of a policy of publication of tender prices. Some contractors thought that publication would make it difficult for a department to pass over the lowest tender, even for the best of reasons, without provoking complaints and endless correspondence, and that the likely result would be that tenders would come to be judged exclusively on price. The principle of confidentiality has been adhered to from that time to the present over the greater part of the field of procurement."

The Ministry of Health in 1959 stated that contract prices were confidential and should not be disclosed to any unauthorised person, but local exchange of information between pharmacists should result in advantage being taken of the best prices (4.150). That this did

not happen is seen from an examination of a paper, shown in Table 4.3, presented in 1962 to one Region, which showed intra - and inter-Regional price variations (4.151). Furthermore examination of the results of a survey (4.152) carried out in four Regions in 1981 showed that the passage of nineteen years had not improved communications so as to effect cheaper prices. That survey highlighted marked price differences in the case of generic tablets, the most blatant divergence being the drug costing 23.3 times the price of the equivalent in another Region. It may be fair to assume that had the survey been extended to all fourteen Regions that finding would have been endorsed or amplified.

The basis for the differences in the contract prices highlighted by that survey was suggested as being related to lack of information that particular firms were able to supply contract items and differences in opinion as to suitability of particular firms or acceptability of particular items from a firm (4.152). A removal of the veil of confidentiality with a resultant freer flow of information on prices paid, firms supplying, firm suitability and acceptability of products should, it is suggested by the present author, lead to savings to the Health Service.

The Supply Council Report of 1982 (4.153) made reference to an "examination of prices paid in different Regions (which) revealed some price differences indicating that contracts could achieve significant savings." Indeed contracts can achieve significant savings, but the Supply Council Report surprisingly makes no reference to the disparity in prices between Regions which can be attributed to the confidentiality of the system and the resulting lack of exchange of contract price information between Regions.

The Annual Report of the Ministry of Health for 1964 made reference to drug contracts. It stated (4.154):

> "A record has been compiled of the main drugs and dressings which hospitals are using, the names of suppliers, and the prices being charged. The record covers local as well as central contracts and will enable the Ministry to keep informed of these purchasing activities and to give appropriate advice to hospitals."

TABLE 4.3: DRUGS' PRICE VARIATIONS

No.	Description	Total Annual Quantity	Costing Unit	Contracting Date: Dec. 1st. DIV. I Chester Wirral	May 1st. DIV. II North & East L'pool	Dec. 1st. DIV. III South L'pool United Hosp.	April 1st. DIV. IV Ormskirk Warrington.	Jan. 1st. M/CHESTER REGION
				s. d.	s. d.	s. d.	s. d.	s. d.
8	Arachis Oil B.P.		Gall	12. 1 3/5	12. 6.	14. 7½.	12. 6.	13. 3.
23	Cocaine Hyd. B.P.		25 G	77. 1½.	81. 9.	79. 0.	76. 9.	78. 3.
32	Formaldehyde No. 40%.		Litre	1. 4.	1. 4.	1. 6.	1. 1.	1. 3.
33	Ginger Strong Tincture		Litre	12.10.	12. 7.	14. 4.	11. 6.	12. 6.
36	Honey		Kilo	4. 0.	4. 6.	6. 0.	2. 7.	3. 0.
41	Ipecac Tincture of		Litre	17. 6.	17. 6.	17. 6.	11. 4½.	12. 0.
43	Kaolin Poultice 2lb.		12	36. 0.	36. 0.	30. 6.	36. 0.	36. 0.
45	Lignocaine Hyd.		25 G	4. 1½.	9. 0.	13. 6½.	-	8. 4.
58	Peppermint Oil		Litre	52. 0.	59. 4.	65. 0.	57. 6.	55. 0.
59	Phenol		Kilo	7. 2.	6.10.	9. 6.	-	7. 0.
67	Sodium Chloride		Kilo	-. 4½.	-. 3/10	-. 8.	-. 5.	-. 9.
12	Benzoin Compd. Tinct. Meth.		Litre	9. 0.	6. 3.	9. 4.	8. 9.	8. 9.
	TABLETS.							
2	Amylobarb Sodium gr. 3.		1,000	21. 2.	21. 2.	43. 0.	21. 0.	22. 7.
11	Benzhgxol Tab. 5mgm.		1,000	70. 0.	114. 0.	114. 0.	-	100. 0.
16	Dexamphetamine 5mgm.		1,000	4. 0.	7. 2.	3. 9.	3. 9.	3. 9.
17	Glycerin Suppos. 60 mgm.		114	9. 0.	7. 0.	-	9. 0.	9. 0.
19	Methadone 5 mgm.		1,000	15. 6.	16. 6.	23. 4.	-	13. 9.
25	Prednisone 5 mgm.		1,000	57. 0.	79. 4.	53. 0.	-	53. 0.
26	Prednisolone 5 mgm.		1,000	61. 0.	73. 2.	59. 0.	76.10.	57. 0.
28	Quinalbarb Sod. gr. 1½.		1,000	16.10.	20. 0.	37. 0.	16. 8.	16. 7.

WILL THE PHARMACIST CHAIRMAN OF EACH CONTRACTING COMMITTEE PLEASE FILL IN THE TOTAL ANNUAL QUANTITY IN THE COLUMN PROVIDED, AND BE PREPARED TO COMMENT ON THE PRICES PAID BY HIS DIVISION.

JER/BJ.
28.8.62.

In 1965, the Committee of Public Accounts discussed the subject (4.155) and the Permanent Secretary to the Ministry of Health acknowledged the presence of:

> "a central record, which is now basically completed, and it covers most drugs purchased by hospital authorities under contract, and of course we are now keeping it up to date. And these authorities have been informed of cases where in similar circumstances they seem to be paying different prices for certain drugs from other authorities, so that they can take steps to get their prices, when their contract came up for renewal, into line; and they were encouraged to consult us as to any doubt about the reliability of any sources of supply, and by reference to the central record we can give them advice and guidance on what is happening elsewhere in the country."

The Permanent Secretary in further evidence (4.155) repeated that the Ministry had:

> "returns of the drugs and the prices paid under various contracts, and this information is made available to the Regional Boards and other authorities in order that they may see what are the best prices at which these drugs can be bought. If any area or Region is seriously out of step with the prices which can be obtained elsewhere then we inform them of what prices can be obtained elsewhere and we expect them to seek contracts on the same basis. There has not been any case where this has caused any difficulties."

The making available by the Ministry of contract prices to other hospitals was noted by the Sainsbury Report (4.156). According to the Ministry, confidentiality of prices did not apply to those who needed to know within the health service. Yet there is no evidence of the Ministry making such price information available. The author sought a statement from the DHSS on this matter and the reply was that such information is not and had never been made available. This contradicts the statement of the Permanent Secretary to the Ministry of Health of 1965.

In 1969, the government made an exception to the rule on confidentiality of contract prices in the case of building and civil engineering work (4.157). Turpin (4.158) felt that the change was welcome as likely to encourage fair dealing and realistic competitiveness without leading to over-emphasis on price. In 1974, the subject was discussed at the regular meetings between pharmacists

from each region and officers of the DHSS. A view expressed then was that once contracts had been awarded absence of confidentiality would help competition (4.159).

It was stated that South Africa, Australia and New Zealand published details of hospital contracts in a gazette. The spokesman of the DHSS stated in response that "confidential" meant that information should be passed only to those inside the NHS who need to know for the purpose of their jobs. This position was repeated in 1977 when the DHSS responded to a letter from Hyman, a distinguished academic and economist who had carried out considerable research into health service procurement, stating that contract prices paid by Authorities and listed in contract documents were "confidential" (4.160).

Hyman felt that the buyer must have knowledge of prices being quoted elsewhere, within his area and country and in other countries (4.161). The United States General Accounting Office in a report in 1979 stressed the need for hospitals to share information with openness protecting against favouritism and profiteering. It stated that hospitals should share information on prices of common supplies and by doing this, among other things, group purchasing's great potential for reducing costs could be realised (4.162).

This view of the GAO was opposite to that of Lee and Dobler (4.163) who bemoaned the fact that hospitals continuously try to compare their prices and suggested that this penalises the efficient while it seldom helped the inefficient. If a hospital that is paying a high price becomes aware of a lower price paid elsewhere, it will pressure the vendor for the lower price. There is little likelihood of it getting it but instead the vendor will equalise the prices and so the hospital that is buying well loses. They suggested that this is a reason for not revealing price information.

Evidence in the United Kingdom suggests that the inter-Regional disparity in prices sometimes seen has little justification and pressure applied by the buyer for lower prices is likely to succeed. The seemingly impervious barrier of confidentiality regarding inter-Regional price variations developed a chink in 1982 when, coincidental with publication of the results of the survey showing the price disparities (4.152), Regional Pharmaceutical Officers reported (4.164) that they had agreed to exchange information on companies awarded drug contracts, so assisting savings on drug expenditure.

The prices set for drugs follow the pattern set for other items of trade. Mitchell, a distinguished economist, stated (4.165) that the supplier does not charge the various customers the same price for each product. Chapman provides evidence (4.166) that blood pack suppliers charge the various Regions differing prices, with price being in no way related to quantity.

The same point was made by Housley (2.51) but was contradicted by Williamson (3.70) and Bain who suggested that small buyers are likely to pay prices set by the sellers with individual bargaining playing no important role. He continued (4.147):

> "The usual overall result is that a wide variety of different net prices are charged to different buyers or in different transactions, with a general tendency being for small buyers to pay more than large buyers."

The primary research attempts to resolve the argument as it applies to Health Authority drug purchases.

References

4.1 Webster, F.E. Jr. and Wind, Y. Op. cit. p.122.

4.2 Turpin, C. Op. cit. p.167.

4.3 Salmon, B.L. Op. cit. para. 117.

4.4 Opit, L.J. and Farmer, R.D.T. Cost of dispensing in the pharmaceutical services. Lancet, Vol. 1, No. 7849, Feb. 1974, pp. 160-2.

4.5 Salmon, B.L. Op. cit. para. 149.

4.6 Minutes of Mersey RHA Regional Hosp. Pharm. Committee. 5 February 1976.

4.7 Salmon, B.L. Op. cit. para. 144.

4.8 Office of Health Economics. Hospital Purchasing. Op. cit. p.15.

4.9 Salmon, B.L. Op. cit. para. 6.11.

4.10 Wooldridge, M.G. Prime vendor benefits. Hospital Administration in Canada. Vol. 19, No. 1, Jan. 1977, pp. 42-5.

4.11 Hassan, W.E. Hospital Pharmacy. London. Henry Kimpton. 1967. p.117.

4.12 Pollard, T. The growth and development of a group purchasing program. Hospitals (J.A.H.A.), Vol. 51, No. 9, May 1977, pp. 89-93.

4.13 Hyman, S. Op. cit. (1979) p.207.

4.14 Ibid. p.232.

4.15 Lee, G.F., Bair, J.N. and Piz, J.W. Alternative to the Traditional Discount Method of Wholesaler Purchasing. Am. J. Hosp. Pharm., Vol. 39, No. 7, Jul. 1982. pp. 1192-4.

4.16 Rubin, H. and Keller, D.D. Improving a Pharmaceutical Purchasing and Inventory Control System. Am. J. Hosp. Pharm., Vol. 40, No. 1, Jan. 1983, p.68.

4.17 Van Der Linde, L.P. System to Maximize Inventory Performance in a Small Hospital. Am. J. Hosp. Pharm., Vol. 40, No. 1, Jan. 1983, p.72.

4.18 Brown, B.T. Generic substitution. Pharm. J., Vol. 229, No. 6205, Dec. 1982, p.677.

4.19 Abramowitz, P.W. Controlling financial variables - purchasing, inventory control, and waste reduction. Am. J. Hosp. Pharm., Vol. 41, No. 2, Feb. 1984, pp. 309-17.

4.20 Minutes of the Committee of Public Accounts 9 March 1965. Parl. Papers 1964-5. Vol. 5. HMSO. 1965. pp. 168-9.

4.21 Anon. Some Thoughts on Hospital Drug Contracts. Public Pharmacist, Vol. 19, No. 5, Oct. 1962, pp. 278-9.

4.22 Roberts, J.G. Tenth Annual Report of the Liverpool Regional Hospital Pharmacists' Committee. 1969.

4.23 Farrington, B. Op. cit. p. 308.

4.24 Ibid. p.303.

4.25 Ibid. p.312.

4.26 Ibid. p.245.

4.27 Ibid. p.243.

4.28 Hyman, S. Op. cit. (1979) p.217.

4.29 Salmon, B.L. Op. cit. para. 234.

4.30 Ibid. p.78.

4.31 Edwards, J. The cost of contracting. Hospital and Health Services Review, Vol. 70, No. 10, Oct. 1974, pp. 358-9.

4.32 Pharmaceutical Supplies Subcommittee. Op. cit. p.6.

4.33 Greenleaf, J.C. Op. cit. paras. 5.4 and 5.6.

4.34 Ibid. paras. 5.1, 5.2, 5.8 and 7.

4.35 Hyman, S. Op. cit. (1979) p.24.

4.36 Eleventh report from the Committee of Public Accounts 1979-80. HC 498. HMSO. 1980. paras. 16-17.

4.37 Anon. Regional drug contracts criticised. Pharm. J., Vol. 231, No. 6249, Oct. 1983, p.470.

4.38 Anon. Drug bill "only 2 per cent of hospital costs." Pharm. J., Vol. 231, No. 6249, Oct. 1983, p.470.

4.39 Sainsbury, Lord. Op. cit. pp. 26-7.

4.40 Parliamentary Debates (Hansard) Session 1953-5. HMSO. Vol. 527. Col. 889.

4.41 ABPI. Annual Report 1953-4. London. The Association of the British Pharmaceutical Industry. 1954. p.13.

4.42 Anon. DHSS Statement. Cost of drugs in the NHS. Pharm. J., Vol. 227, No. 6147, Oct. 1981, p.479.

4.43 Minutes of evidence before Committee of Public Accounts. Session 1979-80. HC 764. HMSO. 1980. Appendix II p.52.

4.44 Report of the Ministry of Health for the year ended 31 December 1959. Cmnd. 1086. HMSO. 1960. pp. 114 and 167.

4.45 Teeling-Smith, G. Economics and Innovation in the Pharmaceutical Industry. London. OHE. 1969. p.88.

4.46 Treasury Minute 3 December 1963 on the Third report from the Committee of Public Accounts session 1963-4. HMSO. 1964. p.6, paras. 34-55.

4.47 Sainsbury, Lord. Op. cit. pp. 210-225.

4.48 Annual Report of the Ministry of Health for the year 1964. Cmnd. 2688. HMSO. 1965. p.12.

4.49 Sainsbury, Lord. Op. cit. pp. 210-213.

4.50 Ibid. p. iv.

4.51 Ibid. p. 53.

4.52 ABPI. The pharmaceutical industry and the nation's health. Op. cit. (1982) p.21.

4.53 Annual Report of the DHSS for 1972. Cmnd. 5352. HMSO. 1973. p.12.

4.54 The Monopolies Commission. A Report on the Supply of Chlordiazepoxide and Diazepam. HC 197. HMSO. 1973. p.7.

4.55 Annual Report of the DHSS for 1973. Cmnd. 5700. HMSO. 1974. p.20.

4.56 Annual Report of the DHSS for 1975. Cmnd. 6565. HMSO. 1976. p.33.

4.57 Annual Report of the Ministry of Health for the year 1966. Cmnd. 3326. HMSO. 1967. p.14.

4.58 Final Report of the Committee on Cost of Prescribing. (Hinchcliffe Report) HMSO. 1959. para. 222.

4.59 Annual Report of the Ministry of Health for the year 1967. Cmnd. 3702. HMSO. 1968. p.13.

4.60 Sainsbury, Lord. Op. cit. p.30.

4.61 Annual Report of the DHSS for 1968. Cmnd. 4100. HMSO. 1969. p.7.

4.62 Anon. Government says "no" to substitution. Pharm. J., Vol. 231, No. 6257. Dec. 1983. p.726.

4.63 Minutes of evidence taken before the Committee of Public Accounts. 25th Report. Session 1979-80. 12 May 1980. HC 764. HMSO. 1980. p.9. para. 4154 and p.53. paras. 11, 12 and 14.

4.64 Ibid. p.15. para.4177.

4.65 Sainsbury, Lord. Op. cit. pp. 52-53.

4.66 A Report on the Supply of Chlordiazepoxide and Diazepam. Op. cit. p.60.

4.67 Minutes of evidence taken before Committee of Public Accounts. 12 May 1980. Op. cit. p.53. paras. 11 and 12.

4.68 Anon. DHSS to continue as sponsor. Pharm. J., Vol. 231, No. 6239, Aug. 1983, p.174.

4.69 Hartley, K. and Tisdell, C. Micro-Economic Policy. Chichester. John Wiley. 1981. p.350.

4.70 Tenth report from the Committee of Public Accounts session 1982-83. HC 356. HMSO. 1983. paras. 11 and 21.

4.71 Anon. Happy families in the pharmaceutical industry. Drug and Therapeutics Bulletin, Vol. 21, Nos. 20 and 25, Oct. and Dec. 1983, pp. 77 and 100.

4.72 Levin, R. Marketing Pharmaceuticals in the 1980's. I. Pharm. M. Journal, Vol. 2, No. 4, Winter 1980/1. p.14.

4.73 Tenth report from the Committee of Public Accounts session 1982-3 Op. cit. para. 6.

4.74 Ibid. para. 19.

4.75 Emergency Laws (Re-enactments and Repeals) Act 1964. Chapter 60. Section 5. Subsection 1. HMSO.

4.76 Sainsbury, Lord. Op. cit. p.32-3.

4.77 Annual Report of the DHSS for 1970. Cmnd. 4714. HMSO. 1971. para. 3.31.

4.78 Health Services and Public Health Act 1968. Chapter 46. Section 59. HMSO.

4.79 Wade, O.L. Problems of Drug Prescribing in the National Health Service. In Providing for the health services. Edited by Black, D. and Thomas, G.P. London. Croom Helm. 1978. p.120.

4.80 Teeling-Smith, G. Op. cit. (1969) p.100.

4.81 Anon. Price regulation scheme erroneously based, says OHE report. Pharm. J., Vol. 215, No. 5834. Sept. 1975, p.210.

4.82 Teeling-Smith, G. Why Britain is still in the "big league." Pharm. J. Vol. 228, No. 6162, Feb. 1982, p.182.

4.83 Final Report of the Committee on Cost of Prescribing (Hinchcliffe Report). Op. cit. paras. 232, 259.

4.84 Sainsbury, Lord. Op. cit. pp. 15-16.

4.85 Ibid. p.47.

4.86 Tenth report from the Committee of Public Accounts session 1982-3. Op. cit. para. 1.

4.87 A Report on the Supply of Chlordiazepoxide and Diazepam. Op. cit. p.32.

4.88 Happold, F.H. Medicine at Risk. London. Queen Anne Press. 1967. p.162.

4.89 Reekie, W.D. Barriers to Entry and Competition. In Economics and Innovation in the Pharmaceutical Industry Edited by Teeling-Smith, G. London. OHE. 1969. p.12.

4.90 Anon. Why pharmacists dont receive a free Mims. Pharm. J., Vol. 227, No. 6154. Dec. 1981, p.736.

4.91 Cooper, M.H. Prices and Profits in the Pharmaceutical Industry. Oxford. Pergamon. 1966. p.15.

4.92 Report of the Ministry of Health 1961. Cmnd. 1754. HMSO. 1962. p.58.

4.93 Report of the Ministry of Health 1962. Cmnd. 2062. HMSO. 1963. p.54.

4.94 Sainsbury, Lord. Op. cit. p.32.

4.95 Annual Report of the Ministry of Health for the year 1965. Cmnd. 3039. HMSO. 1966. p.16.

4.96 Annual Report of the DHSS for 1969. Cmnd. 4462. HMSO. 1970. p.9.

4.97 Annual Report of the DHSS for 1970. Cmnd. 4714. HMSO. 1971. p.11.

4.98 Annual Report of the DHSS for 1971. Cmnd. 5019. HMSO. 1972. p.10.

4.99 Annual Report of the DHSS for 1974. Cmnd. 6150. HMSO. 1975. p.48.

4.100 Annual Report of the DHSS for 1976. Cmnd. 6931. HMSO. 1977. p.22.

4.101 Parliamentary Debates (Hansard) Session 1982-3. HMSO. Vol. 35. Col. 1152.

4.102 Sainsbury, Lord. Op. cit. p. 52.

4.103 Salmon, B.L. Op. cit. paras. 116-7.

4.104 Report of the C & AG Appropriation Accounts (volume 8: classes XI and XII) 1981-2. HC 76. HMSO. 1983. pp. xvi and xx.

4.105 Griffiths, G. He profits most who serves best - in drugs at least. The Health Services, No. 42, 11 February 1983, p.11.

4.106 Cooper, M.H. Op. cit. p.30 (Table 5).

4.107 Annual Report of the DHSS for 1974. Op. cit. p.49.

4.108 Polanyi, G.and P. Op. cit. p.6.

4.109 ICC.Industrial Performance Analysis. Fifth edition. London. ICC. 1979. p.32.

4.110 Taylor, P. Industry's flexible partnership with NHS. Financial Times Survey. Financial Times, No. 28144, 16 April 1980, Section III, p.II.

4.111 Anon. A survey by intercompany comparisons states that rates of growth within the pharmaceutical industry are slowing down. The Times, No. 60689. 29 July 1980, p.17.

4.112 ICC Industrial Performance Analysis. Sixth edition. London. ICC. 1981. p.13.

4.113 ICC information via Prestel.

4.114 ICC Pharmaceutical Manufacturers. Tenth edition. London. ICC. 1982.

4.115 ICC Industrial Performance Analysis. Fifth edition. London. ICC. 1979. p.xv.

4.116 ICC Industrial Performance Analysis. Seventh edition. London. ICC. 1982. p.xxi.

4.117 ICC Industrial Performance Analysis. Ninth edition. London. ICC. 1984. pp. xxi and 16.

4.118 Keynote.Pharmaceuticals. Second edition. London. Keynote. 1980. para. 6.

4.119 Tenth report from the Committee of Public Accounts session 1982-83. Op. cit. para. 18.

4.120 Appropriation accounts. 1978-9 Vol. 3. Class XI. HC 139. HMSO. 1979. para. 56.

4.121 McLean, R.D. Personal Communication. 25 January 1982.

4.122 A Report on the Supply of Chlordiazepoxide and Diazepam. Op. cit. p.64.

4.123 Ibid. p.70.

4.124 Egan, J.W., Higinbotham, H.N. and Weston, J.F. Economics of the Pharmaceutical Industry. New York. Praeger 1982. p.50.

4.125 Sainsbury, Lord. Op. cit. p.22.

4.126 Ibid. p.24.

4.127 Nairne, P. Prescribing in hospitals. Letter to chairmen of health authorities. DHSS,11 April 1980.

4.128 Second Interim Report on the Patents and Designs Act 1946. Cmd. 6789. HMSO.

4.129 Patents Act 1949. 12, 13 and 14. Geo 6, c. 87. HMSO.

4.130 The British Patent System. Report of the Committee to Examine the Patent System and Patent Law. Cmnd. 4407. HMSO. 1970.

4.131 Patents Act 1977. c. 37. HMSO.

4.132 A Report on the Supply of Chlordiazepoxide and Diazepam. Op. cit. para. 179.

4.133 Mitchell, J. Price Determination and Prices Policy. London. Allen and Unwin. 1978. Economics and Society Series: No. 5. pp. 91-2.

4.134 Treasury Minute of the Third report of the Committee of Public Accounts session 1962-3. HMSO. 1964.

4.135 Health and Personal Social Services Statistics for England 1978. HMSO. p.109.

4.136 Fell, C.J. How generics might reduce the drug bill. Pharm. J., Vol. 227, No. 6144, Oct. 1981, p.379.

4.137 Cooper, M.H. Patents and Innovation. In Innovation and the Balance of Payments. ed. Teeling-Smith, G. London. OHE. 1967. pp. 44 and 48.

4.138 Teeling-Smith, G. Op. cit. (1969) p.89.

4.139 Report of the Ministry of Health 1961. Op. cit. p.27.

4.140 Report of the Ministry of Health 1962. Op. cit. p.32.

4.141 Anon. Guild Topics. Public Pharmacist, Vol. 18, No. 4, Aug. 1961, p.181.

4.142 Robinson, F.A. and Amies, F.A. Chemists and the Law. London. Spon. 1967. p.202.

4.143 Annual Report of the Ministry of Health for the year 1965. Op. cit. p.45.

4.144 Greenleaf, J.C. Op. cit. para. 5.7.

4.145 Ibid. para. 5.5.

4.146 Intellectual property rights and innovation. Cmnd. 9117. HMSO. 1983.

4.147 Bain, J.S. Op. cit. p.369.

4.148 Scherer, F.M. Industrial Market Structure and Economic Performance. Chicago. Rand McNally. 1971. p.242.

4.149 Turpin, C. Op. cit. p.159.

4.150 Anon. Hospital Pharmacists Consultative Committee. Public Pharmacist, Vol. 16, No. 4, Nov. 1959, p.248.

4.151 Minutes of Liverpool Regional Hospital Pharmacists' Committee. 5 September 1962.

4.152 Pharmaceutical Supplies Subcommittee. Op. cit. p.7 and Appendix A.

4.153 Greenleaf, J.C. Op. cit. paras. 3 and 5.

4.154 Annual Report of the Ministry of Health for the year 1964. Op. cit. p.40.

4.155 Minutes of the Committee of Public Accounts. 9 March 1965. HMSO. 1965. pp. 168-9.

4.156 Sainsbury, Lord. Op. cit. p. 19. para. 58.

4.157 Parliamentary Debates (Hansard) Session 1968-9. HMSO. Vol. 787. Col. 179.

4.158 Turpin, C. Op. cit. p.159.

4.159 Minutes of Pharm. Tech.and Supplies Subcommittee. 22 March 1974. Item 8.

4.160 Hyman, S. Op. cit. (1979) p.33.

4.161 Ibid. p.24.

4.162 GAO Report. Op. cit. p.1172-3.

4.163 Lee, L. and Dobler, D.W. Purchasing and Materials Management. Third edition. New York. McGraw-Hill 1977. p.533.

4.164 Anon. Contract information to be exchanged. Pharm. J., Vol. 228, No. 6177, May 1982, p.605.

4.165 Mitchell, J. Op. cit. p.93.

4.166 Chapman, E. An examination of the purchasing of blood packs by the Yorkshire Regional Health Authority. St Helens. N.W. Regional Management Centre. 1978. p.20A.

SUMMARY OF SECONDARY DATA

Emerging from the secondary data is a picture of an oligopsonistic buyer, the NHS, purchasing from oligopolistic suppliers.

The buyer's objectives theoretically merge with those of his employing authority and those of the government to which he pays his taxes. The buyer confronts a skilled seller who views the hospital sector as being merely a small, but nevertheless strategically influential, portion of the market.

Contract buying imposes a centralized structure upon the framework, with individual pharmacies and local health authorities giving up their independence to more remote supplies departments of RHA's. Furthermore there is a reliance on the expertise of two distinct,potentially rival, disciplines, the pharmacist and the supplies officer, to achieve a synthesis of buying and technical skills, yet neither is in a position of authority to enable quick rational decisions to be made. Instead a committee structure is required to satisfy public accountability considerations. In essence it is a risk reducing mechanism.

Further deliberation upon the market led to the opinion that the buyer is theoretically virtually monopsonistic but the independent actions of RHA's brings about the possibility of competition between them, resulting in oligopsony tending toward atomism. The consequent effect of that bilateral oligopoly on price is uncertain.

Each Health Authority is legally independent but the Secretary of State has considerable powers over them, so that independence is more theoretical than real. English Authorities spend annually £200 million on drugs, which makes them the most expensive commodity. However in the context of the total NHS market, hospitals consume a mere fifth. It is estimated that some 60% of that hospital expenditure is by contractual purchase.

Contract organisation is governed by Standing Orders which delineate the method of operation in the hope of satisfying public accountability requirements. Competitive tender is the stipulated practice, and negotiation of price is absent from the proceedings. The process is a long drawn-out affair taking some seven months from start to finish.

Despite its title no contract generally exists since there is no commitment to buy fixed quantities. It is really, therefore, a collection of standing offers, with each RHA deciding for itself on starting dates, time scales, scope and duration.

Purchasing by the NHS is considerably circumscribed. More than sixty documents exerting an impact on the scheme have been issued in the 35 years since the inception of the NHS. Examination of those missives shows that political influences have resulted in changes of emphasis in purchasing, while passage of time has resulted in some abatement of the initial hostility between the two disciplines involved. The recent establishment of the NHS Supply Council has given rise to hopes of more efficient NHS purchasing than hitherto. One of the main causes of inefficiency is a dearth of reliable data. No studies documenting the optimal administrative level of purchasing exist. Likewise the scope, duration and usefulness of estimates have not been researched.

Prices could be lowered by actions on the part of buyers and suppliers. A move away from tendering to negotiation or prime vendor buying might reduce the drug bill and, whereas there is no evidence from the United Kingdom, data from the United States suggests that such a change be investigated. The administrative costs of contracts are thought considerable but as yet no reliable analysis has been performed.

Examination of the method by which the government controls, or seeks to control, drug prices led to a critical review of the schemes entitled VPRS and PPRS. Hospital contracts and PPRS negate each other both in terms of global prices and stimuli to research-based industrial concerns. Effect of patent life on price appears at first sight to be notable, but in the context of PPRS must be thought of minor significance.

Considerable inter-Regional price variation abounds. The DHSS collects such data but does not disseminate it. Each RHA acts without knowledge of hospital market prices, but in reality even if RHA's were aware of such price differentials, there is little that could be achieved to remedy them given the present tendering system. The occurrence of such variations implies that the National Health Service exists in name only, and they present the onlooker with the impression of an inefficient organisation.

Consideration of the secondary data led to the desire for a model to explain the operation of the NHS contract drug buying system. The stated or implied system is portrayed in Table 4.4.

TABLE 4.4: STATED OR IMPLIED MODEL OF CONTRACT DRUG PURCHASING SYSTEM

ASPECT		STATED OR IMPLIED FEATURES
Objective	1	Drugs of adequate quality are bought
Reason	1	The resources of Health Authorities are judiciously spent
	2	By extension the resources of the NHS are spent well
	3	The resources of society are spent well and the efficiency and viability of the pharmaceutical industry are ensured.
	4	The operation is cost effective, that is the savings of the scheme are not outweighed by administrative costs
	5	Savings would be the maximum attainable
	6	Savings made by the managed sector of the NHS should not result in increased costs to the family practitioner sector
	7	Prices charged are related to recognised demographic and organisational variables so that a model can be built up defining the means of minimising prices
	8	All RHA's are aware of prices being charged to the other RHA's and can therefore buy from the cheapest source
	9	Public Accountability is satisfied
Method	1	An ideal framework for the organisation exists, defining the number of drugs to be included, the threshold value for purchases, usefulness of estimates' collation, and complexity of documentation
	2	System is beneficial to both NHS and suppliers both being reasonably satisfied with its operation
	3	Scheme guarantees supplies to the NHS at a fixed price
	4	Scheme guarantees business to the supplier with quantities fixed
People	1	To ensure maximum efficiency, minimal conflict and speedy decision making, one expert person organises the contract
	2	There are in existence full data of the human energy expended in organising the contract so as to permit full costing
Place	1	The contract is organised at that administrative level which is consistent with responsiveness to local needs, using manpower effectively and resulting in minimal duplication of effort
	2	The scheme ensures local needs are satisfied
Time	1	The scheme ensures speedy supply
	2	The duration of contract ensures maximum benefit to both parties, NHS and supplier, at minimum cost
	3	An ideal framework exists for starting dates and time scales

SECTION TWO
DERIVED TESTS

CHAPTER 5

HYPOTHESES

Collation and appraisal of the secondary data enables the advancement of a series of hypotheses which fall into two broad categories, those pertaining to price and those pertaining to organisation.

Price

It is hypothesised that:-

1 prices of contract drugs are significantly lower than trade prices,

1 (a) the variation in price will be greater in multi-source supply situations compared with single (monopoly) supply situations and in both cases lower than trade prices,

2 in relation to the demographic/industrial/attitudinal variables tested there is a random distribution of prices,

2 (a) prices of contracted drugs show no significant relationship to the following demographic/industrial/attitudinal variables:-

demographic

(i) physical size of area served by the Health Authorities,

(ii) population served by the Health Authorities,

(iii) population density of Health Authorities,

(iv) number of hospital pharmacists employed within the Health Authorities,

(v) number of hospital pharmacies catering for the needs of the Health Authorities,

(vi) number of buying points involved,

(vii) number of delivery points served,

(viii) density of delivery points,

industrial

(ix) number of pharmaceutical manufacturers operating within the RHA boundaries,

(x) strength of local pharmaceutical industry, as represented by the number of pharmaceutical industry employees within the RHA boundaries,

attitudinal

(xi) duration of contracts,

(xii) price perception by senior NHS personnel within the RHA's,

(xiii) degree of divergence of opinions held by the senior pharmacist and the supplies officer involved in contract organisation within the RHA,

(xiv) degree of popularity among NHS staff of restrictions to allow price reductions,

demographic/industrial

(xv) price paid by diverse RHA's,

industrial/attitudinal

(xvi) those factors perceived by industrialists as being major price determinants,

3 there is a direct relationship between the spread of contract prices and the number of sources of supply.

Explanatory Note:

The number of firms supplying drugs to English hospitals ranges from one upwards. The relationship between the degree of competition and the standard deviation of prices nationally would illustrate the market conduct applying.

Organisation

It is hypothesised that:-

4 for both buyers and suppliers there is no relationship between perceived time spent on price discussion and the considered adequacy of that time,

5 there is an inverse relationship between the degree of centralised political control, as represented by political party in power, and the emphasis given to locally organised drug contracts,

6 the weighting of criteria considered important in purchase of drugs has altered over time,

6 (a) the importance allotted to certain purchase criteria is a function of the relationship between the pharmacists and supplies officers involved in the purchasing process.

A fundamental concern in an examination of any system is its degree of effectiveness and efficiency. Value for money is very important in hospital drug buying, with the cost of drug purchases, the efficiency of the buying process and the administrative overhead costs being topics of public interest. The hypotheses presented should help quantify the operation's success.

In addition to those hypotheses promulgated above other hypotheses were contemplated but were rejected on the grounds of absence of suitable means of testing. Those discarded were:-

I There is an inverse relationship between purchaser's rigidity in conditions of the drug contract and the price charged. An attempt was made to measure the specificity of demands made by NHS buyers and to relate that to price paid. Since no method of measuring such demand specificity could be determined no test could be performed.

II The weighting of purchase criteria is directly related to the balance of influence exercised by pharmacist and supplies officer in the purchasing process. The test could not be performed since no suitable method of measuring the influence of each discipline within RHA's could be demonstrated.

Had sufficient price data from companies been available an attempt would have been made to relate price to the ownership of companies, absolute value of hospital sales, the relative importance to companies of hospital sales, the patent status of companies' products and the pattern of distribution of firms.

Attempts will be made to validate or disprove hypotheses 1 to 6 (a) by the primary research findings. In order to achieve that goal prices for a range of drugs would be compared for as many RHA's as possible. Efforts will be made to try to ascertain the demographic characteristics of the RHA's as well as measures of pharmaceutical manufacturing activity within their boundaries, and, by census, compare the viewpoints of the two senior buying disciplines from each RHA, one a pharmacist the other a supplies officer. So as to ensure comprehensiveness and objectivity, the views of industrialists will be sought and the census results analysed with reference to the derived hypotheses.

SECTION THREE

PROCEDURE

CHAPTER 6

METHODOLOGY

Contract drug purchasing by NHS hospitals presented itself as a topic immobilised by time and hallowed by ignorance. It was considered by the author as a suitable candidate for research although it was appreciated that there was a need to overcome two major obstacles, namely, the aura of secrecy, euphemistically termed confidentiality, surrounding the prices paid, and, stemming to some degree from that, the absence of academically sound knowledge of its workings. Those factors served to encourage the pursuit of the research in that the need was pressing but the possible achievements startling.

The research need had been identified. The method to be adopted followed traditional patterns. Initially a literature search, including computer assisted retrievals, was conducted and any papers or references identified, which might have a bearing on the subject, were obtained. The literature was read and extracted and this process was maintained throughout the research programme.

Parallel with the literature search personal interviews on an informal basis were held with sales and marketing personnel of pharmaceutical manufacturers as well as senior NHS staff involved in the medicines buying process. Such staff were seen regularly by the researcher as a normal feature of his occupation as pharmacist in charge of two busy hospital pharmacies. Those discussions continued for the duration of the research.

The thoughts distilled from both the literature and the conversations developed into outline hypotheses and it became apparent that censuses of staff on both sides of the buying-selling interface would be necessary. As described below questions appropriate to each group were collated and formed the basis of test questionnaires which were completed and assessed. As a result the hypotheses were clarified and formulated so as to be tested in the subsequent research programme.

The first census pursued was that of the NHS staff, and that of the industrialists followed some three months later. The time lapse was a deliberate tactic designed to ensure that NHS staff would not be influenced by knowledge of an industry census or the specific questions raised in it. Knowledge by industry staff of a census of NHS staff would be of minimal concern to them and so considered as unlikely to taint their objective views. Contemporaneously demographic and

organisational data on the English Regional Health Authorities were acquired together with contract prices for most RHA's. An integrative analysis of the research data was performed, related to the secondary findings and conclusions drawn. This thesis represents those research efforts. The objectives and methodologies of the two censuses are presented separately to facilitate clarity.

Census of Regional Supplies Officers and Regional Pharmaceutical Officers on Drug Contracts

Objectives

Drug contracting is organised in Regions in differing ways within the constraints placed upon them by DHSS. This should allow local needs to be satisfied and allow innovations to occur, such as variations in organisation between different Regions. It is axiomatic that suppliers offer goods at a price which will be low enough to be competitive against others being offered yet high enough to enable a profit to be made. An efficiently organised system of contracting should encourage maximum innovatory activity of both purchaser and supplier allowing the maximum competition and also providing scope for suppliers to make sufficient profit to encourage them to want the business. An attempt was made by census to determine what, if any, factors within the various Regions gave rise to greater efficiency. It was thought that the following may have an effect on efficiency:-

(1) degree of price discussion with suppliers which takes place
(2) identification of organisational improvements which have occurred over the years
(3) knowledge of prices being charged in other Regions
(4) subjective assessment of usefulness of contract
(5) the degree of working/friendly relationships which exist with suppliers
(6) the degree of working/friendly relationships which exist between supplies officers and pharmacists
(7) degree of forward-thinking and forward-planning
(8) number of delivery points
(9) number of buying points
(10) frequency of revision or degree of stability of contract.

The historical background to and the present organisation of the drug contract were critically examined and it was hoped that the census would help to predict the ideal future organisation of the contract service so that suggestions could be recommended which would provide the necessary future structure.

Methodology

A list of questions was designed to form a framework for a personal interview to be carried out by a member of a market research unit. The market researcher used a semi-structured questionnaire, similar to that issued subsequently for the postal census, consisting of questions based on the information gleaned from an analysis of secondary sources, many useful conversations with (a) supplies officers and pharmacists considerably experienced in drug contract organisation, and (b) many marketing and hospital sales directors, managers and representatives employed in the pharmaceutical industry. The author was told that 25-30 people could be surveyed with 15-20 questions. Those carrying out the survey had undergone training to ask questions in an unbiased manner. It was hoped that answers would be more detailed than the minimum laid down. The respondents would be one pharmacist and one supplies officer in each Region, in other words, Regional Pharmaceutical and Supplies Officers or their delegated representatives. By that term "delegated" is meant those whom the Regional Officer authorises to organise the drug contract. Often within a Region, one district's pharmacist or supplies officer has the responsibility for organising the drug contract for the whole Region.

A letter outlining the objectives of the project and inviting participation was sent to every R.S.O. and R.Ph.O. in England, a total of 28.

The experiences gained by the market research survey, though limited, were nevertheless very useful in rephrasing some questions to make them unambiguous or more searching. Additionally ideas were presented for the inclusion of further questions not previously considered. The subjects covered were the authority level at which contracts were organised, the personnel involved 5 years ago, now, 5 years from now and ideally, the stages in the contracting procedure, changes in system during the last five years, duration of contracts, attitudes to the present organisation, disadvantages, advantages and beneficiaries of present arrangements, suggested improvements, prices paid for drugs, time spent on price negotiation, attitude towards retendering and acceptable conditions which would lower prices. Constraints of time and finance prevented the researcher personally surveying the relevant personnel so it was hoped that a mailed questionnaire would attract a reasonable response rate.

Considerable attention was given to factors likely to improve response rate and these are referred to in connection with the industry survey. Consequently, in October 1982, a further letter, reproduced in Appendix 2, signed by the two supervisors of the research study and the Mersey R.Ph.O., was sent to the 28 officers stating the objectives and seeking co-operation.

To forestall suggestions of possible collusion in replies between any Region's R.S.O. and R.Ph.O. a one week interval was left between mailings. At that time an offer was made that the author would personally pose the questions, if preferred. It was hoped that some would reply positively to that offer so that some additional information might be gleaned.

Each questionnaire was coded prior to issue to enable detailed analysis to be performed consistent with the guarantee of anonymity provided to the respondents.

The questionnaire is reproduced in Appendix 2.

Some of the questions may appear similar but they contained elements which required different emphasis and so to avoid duplication of results by respondents those questions were deliberately listed out of natural sequence.

Of the questions posed nine were open and, of the remainder, 89 choices out of 219 options were possible. In addition the closed questions allowed space for at least 13 subsidiary comments to be added.

The results were collated and analysed. The statistical significance of differences between responses from the two disciplines, pharmacist and supplies officer, was sought. Chi-squared values would provide such information and were therefore considered but necessarily rejected on the grounds of the relatively small sample size which would render invalid any firm conclusions.

Responses

5 Officers agreed to assist in the personal interview aspect at the preliminary stage of this research. They represented 3 R.H.A.'s, 3 being supplies officers and 2 being pharmacists. They were interviewed by appointment between the end of May and end of July 1981. Since the questions posed were subsequently modified in the light of experience and included in the postal survey, the results are not given separately so as to avoid duplication. The obvious advantage of a personal census is that a more detailed response can be provided. Such additional information is recorded.

The reasons for the poor response to the market research approach may be speculated on. Some potential respondents viewed with caution, if not hostility, the involvement of a non-NHS employee, the market researcher, and the motives of that individual were questioned. Some sheltered beneath the excuse of "confidentiality" of contract information, lack of time or inability to help market researchers. Others refused without the courtesy of a reason.

The lack of success with the market research effort was overturned by the 93% response to the postal questionnaire followed by a reminder telephone call a few weeks later. Representing equal numbers of each discipline, 26 of the 28 responded positively, one of them agreeing to answer questions posed verbally. Responses were received from all RHA's. Of the respondents 21 requested a copy of the collated results. This response rate compared favourably with that achieved in other postal surveys. It is thought that the endorsement of the co-signatories of the covering letter, together with mention of the interest in the achieved results on the part of the Supply Council helped raise the response level.

A further inducement may have been the offer of availability of summarised results, as suggested by the resulting high request rate. In view of the high response rate the results must be thought reliable and reasonably accurate. The results are not presented in the order of the questions of the survey form but under subject headings in Chapter 8. In conformity with the guarantee of confidentiality offered to respondents no individual respondent or Regional Health Authority is identified.

Census of Pharmaceutical Suppliers on Contract Drug Supplies to Health Authorities

Objectives

Deliberation upon the drug purchase scene demands equal attention to and consideration of the opinions of suppliers and buyers engaged in the operation.

It became apparent that many of the topics of concern to buyers were of equal concern to pharmaceutical companies, and determination of those sentiments held by industry personnel would help to confirm or refute those provided by the NHS Staff. In addition there were topics on which only the suppliers could furnish realistic and reliable data. Some subjects, however, were considered irrelevant or of little concern to industry.

Those themes considered applicable to suppliers as well as to buyers were:-

(a) the organisational ones concerned with changes in the last 5 years and duration of contract,

(b) the attitudes including satisfaction with, disadvantages, advantages, beneficiaries of and improvements proffered for contracts, and

(c) pricing and tendering aspects embracing comparison of prices charged to the various RHA's, volume of discussion on prices, retender conditions, maximum allowable price increases, and restrictions to reduce prices.

Aspects solely of concern to suppliers or factors on which NHS staff could not be expected to display insight or unbiased knowledge were:-

(a) the organisational topic of variation between RHA's.,

(b) the attitude implicit in interest displayed towards tendering and importance attached to hospital sales,

(c) pricing and tendering aspects consisting of methods of price calculation, the accuracy and usefulness of estimates and the time scales for contract communications,

(d) factors specific to patented drugs, and

(e) features, additional to those catered for under attitudes - disadvantages and advantages, concerned with deliveries.

Subjects of prime concern to, or those on which detailed knowledge was held by, buyers alone, and on which the suppliers could make little contribution were:-

(a) the organisational topics of administrative level of contract arrangements, the stages in contract award procedure and NHS personnel involved in exerting an influence upon contract execution.

Whereas the latter theme was not considered worthy of pursuit with suppliers the former subjects were thought suitable candidates for inclusion in a survey of industry staff.

It was intended that detailed information and opinions would be provided on those topics and that the results achieved when considered in harness with those resulting from the survey of NHS officers would build up a comprehensive picture of the past, present and future arrangements of the contract operation as well as a clear definition of its failings and potential improvements.

In addition by categorisation of the respondents it was hoped to build up a profile of opinions likely to be held by companies of various characteristics and,therefore, to predict the behaviour under different conditions.

The aim of the exercise was to provide the first definitive exploration of the pharmaceutical industry-NHS managed sector supply-purchase interface and a demonstration of that industry's attitudes on and responses to NHS drug contracts.

Methodology

Analysis of the secondary data had highlighted the relevant points in the contract operation worthy of primary examination and the resulting thoughts were considered for consolidation into a questionnaire. This was an ongoing process modified as a result of many discussions with marketing and sales directors, managers and representatives, Regional Pharmaceutical and Supplies Officers, senior NHS personnel and officers of the NHS Supply Council. The discussions had proved most useful but whereas it would have been desirable, constraints of time and resources militated against a personal interview of each company in the industry. A postal census was thus planned and it was felt that only a structured questionnaire would lend itself to strict comparisons between companies and the time saving as well as possible greater accuracy of computer analysis and tabulation of results. Facilities for such work were available. In addition, so as to glean further unprompted information several open questions were included, a further benefit of which would be their role as a release valve for strongly held views not otherwise catered for.

The wording of the questions having been finalised, attention was given to their sequential order. A deliberate effort was made to place simple questions at the start of the questionnaire so as to encourage its completion. The questions would appear therefore out of natural subject sequence. Further reflection on this confirmed the wisdom of order subversion because several of the questions were similar and close proximity of them within a document was considered likely to impede realistic responses being provided.

It was thought that certain features present within the pharmaceutical industry could influence the responses given. It was hypothesised that 5 characteristics might have an influence on the opinions generated towards the contract system, those factors being the country of origin of the company, the absolute value of U.K. hospital

sales, the relative value of U.K. hospital sales, the products sold and the method of distribution. The country of origin could be (1) United States, (2) United Kingdom, or (3) Europe. The absolute value of U.K. hospital sales ranged from over £15 million downwards (1982 prices). The relative value of hospital sales could be determined from the proportion of sales to hospitals and the community. Since 20% of total U.K. NHS drug sales occur in hospitals, a company showing less than 12.5% of sales to hospitals was deemed to supply preferentially to community pharmacy, whereas those displaying more than 25% of sales to hospitals were above the national average for hospital transactions and therefore were considered to accord hospital sales relatively more importance than does the average company.

The products could be proprietary (branded) drugs or non-proprietary (generic) drugs. The method of distribution could be direct servicing, wholesaler delivery or mixed. Companies with up to one third of sales direct were considered to deliver via wholesaler while those with more than two thirds of sales serviced direct were classed as dealing direct.

The co-operation of a market research organisation was enlisted and this enabled all those factors except products to be quantified accurately. Unfortunately, a subjective assessment for the products of the companies was necessary but, given my professional experience, it was thought that a realistic opinion could be manifested. An additional problem was that data on all pharmaceutical companies were not available. Those for which sales information was provided recorded hospital sales of value £239 million out of a total estimated U.K. hospital market of £262 million at 1982 prices. It was considered that the provided list of companies, while not comprehensive, was reasonably representative of the industry as a whole, showing U.K. hospital sales ranging from £0.03 million to over £17 million in 1982, displaying a range of 1 to 567 currency units, and total U.K. sales from £0.05 million to £78 million, a range of 1 to 1560 currency units.

Each questionnaire was uniquely coded before issue to allow detailed analysis of the results consistent with the guarantee of anonymity given to respondents. This was considered essential to full exploitation of the data generated but was objected to by two respondents who sought, albeit unsuccessfully, to erase the device.

A high response rate was considered essential so that a sound database could be created and realistic conclusions drawn.
It is known that various factors improve the response rate to questionnaires. These include the wording of the covering letter, inducements to respond, inclusion of stamped self-addressed envelopes, quality of reproduction of the questionnaire document, timing of issue, and person to whom addressed (6.1).
Considerable thought was given to the wording of the questionnaire to ensure that no misunderstanding, misinterpretation or ambiguity existed. The first stage was the drafting and issue of a typed version to five companies, the marketing or sales managers/directors of which were personally known to me. The potential respondents were asked to consider the questions and submit any comments on them. In addition a copy was submitted to ABPI, the organisation representing the interests of the pharmaceutical industry as a whole, with the information that it was proposed to submit it, once revised as a result of comments received from those to whom a draft copy had been sent, to a large number of pharmaceutical companies. The ABPI was asked to forward any objections. As a result of the trial run a few questions were rephrased. The ABPI raised no objections, suggested some minor word changes, but predictably wished to leave the decision on whether or not to respond to the individual companies. Significantly the ABPI requested that a copy of the results of the proposed survey should be sent to it.
It was thought that the offer of any inducement to respond would be considered ethically questionable as well as being possibly counter-productive in achieving the desired objectives and so was discounted. However, the offer of a summary of the results was made as it was thought likely to improve upon the project's success.
Self-addressed stamped envelopes were included with the questionnaire. The questionnaire document and covering letter were printed and are reproduced in Appendix 3. This improved the appearance of the document giving it a professional air and no doubt facilitated its success.
The timing of the issue was carefully considered. Many of the questions were similar to those posed to the NHS officers and at the time of issue of the questionnaire to the NHS staff they were not aware that the views of the industry were to be elicited.

Had they known that information it is possible that some might have felt threatened by potential criticisms of the system and, by implication, themselves expressed by the industrialists and may have withheld their co-operation. It was thought judicious,therefore, to await the return of the NHS questionnaires before embarking upon this portion of the project. It was posted during the first weekend in February 1983 some three months after the NHS questionnaire had been distributed, shortly after the last buyers' completed form was returned. It was hoped that the envelopes would be delivered on the Tuesday or Wednesday when postal deliveries tend to be lighter and hopefully an envelope is then more likely to receive speedy attention. The addressee was thought to be a significant factor in the potential success or otherwise of the exercise, both from consideration of the status of the person and his/her name. It was of utmost importance that the questionnaire should be completed by the person who had most interest in and dealings with hospital drug contract sales.

At a very early stage in the research it was discovered that there was considerable variation in the inter-relationships and organisation of pharmaceutical companies. It was known that several companies possessed associates and it was thought counter-productive to issue two separate questionnaires to companies in which they would be completed by the one individual. Inquiries were therefore initiated and,as a result,an original list of 112 firms for which data were available was reduced to 100. For those companies which shared sales divisions and which therefore were to be sent one questionnaire only, the data for them were combined to provide a composite picture to parallel the composite questionnaire response. Furthermore,the status and job title of the most apt individual for this purpose differed. Since at that early stage a questionnaire was contemplated a file of names and titles of appropriate staff was built up. By this means as well as the use of directories and, in a few cases, telephone calls,a list of relevant staff was composed. Considerable efforts were expended to determine the names of the individuals on the assumption that a personally named and addressed letter and envelope would effect a higher response rate.

The questionnaire format was discussed with staff of the Liverpool Polytechnic Computer Services Department. They also provided an objective opinion of the questions which resulted in some rewording of questions. It was printed with computer codes to allow analysis

and retrieval by such means of the information gleaned, and the responses were awaited.

Follow up telephone calls were made to a few companies to speed up the returns. Additionally all letters received which gave reasons for a company's inability to respond, nine in all, were investigated and the senders contacted in the hope of allaying their fears or convincing them of the usefulness of the project and the importance of their contribution. In each case the efforts were met with success.

Of the questions listed, six allowed individually furnished and formulated unprompted comments while the closed questions provided for at least 8 further statements. The bulk of the questionnaire consisted of closed questions providing 97 choices out of 260 options. As a check on consistency of replies some questions were included, the answers to which were already available from non-company sources. That objective information was to be compared with the subjective information reported to test the validity of the responses.

The last return arrived some 3½ months following despatch. The necessary computer codes were appended to each document and the results were analysed using cross tabulations and chi-square tests of statistical significance as described in the "Statistical Package for Social Sciences" (6.2).

It is convention in social sciences to accept as statistically significant relationships which have a probability of occurring by chance 5% of the time or less, that is in 5 out of 100 samples. This would be denoted by a significance figure of 0.05. In the analyses performed any significance of 0.05 or less is reported. An alternative method of designating this result is the statement that one can be 95% confident that the result did not occur by chance.

A significance of 0.01 or less is highly significant and one can be 99% confident that the result did not arise by chance.

To comply with convention a zero response is denoted by - and positive response of less than 1% is denoted by *.

Responses

Of the 100 questionnaires issued 84 (84%) responded. This compares favourably with similar postal surveys conducted elsewhere, though is a lower rate than achieved by the NHS staff questionnaire. Nevertheless, in view of the depth of some questions and the concern expressed in several quarters that commercially valuable information was being

sought, an 84% response must be considered satisfactory.
A large proportion, 69,of the 84,or 82%,expressed the desire to accept the offer made in the questionnaire of a summary of the research results. That offer was thought to have influenced some people to respond.
3 of the 84 were returned with the information that they were to represent in each case two individual portions of one holding company. Although they provided separate marketing and sales divisions they wished to combine their responses. In such cases the data for those companies were combined to parallel the combined response. In essence, therefore, an 87% positive response was seen.
When the responders were compared with the non-responders no notable differences in characteristics described earlier were found and the responders must,therefore, be considered as being reasonably representative of the sample as a whole. Hospital sales for 1982 attributable to non-responders were under £16 million,whereas those for responders were more than £223 million, again pointing to the adequate representativeness of the responses recorded.
Given the limitations of a postal questionnaire it was felt that the high response rate coupled with the positive responses to the check questions (noted individually) helped the researcher to consider the results reliable and reasonably accurate.
The results are presented in Chapter 9 under subject headings, not in order of questions in the survey document. To maintain confidence the identity of individual replies is not recorded. Relevant differences in replies according to the firms' characteristics are referred to. Absence of such reference implies that no notable differences were determined.

References

6.1 Oppenheim, A.N. Questionnaire Design and Attitude Measurement. London. Heinemann. 1979.

6.2 Nie, N.H., Hull, C.H., Jenkins, J.G., Steinbrenner, K. and Bent, D.H. Statistical Package for Social Sciences. Second edition. New York. McGraw Hill. 1975.

SECTION FOUR
PRIMARY DATA

CHAPTER 7

R.H.A. PROFILES AND PRICE ANALYSES

FACTORS INFLUENCING CONTRACT PRICE

The fourteen Regional Health Authorities in England are the successors to the fourteen Regional Hospital Boards. The delineation of their boundaries was designed to encompass a geographical area and population of such dimensions as to be manageable rather than identical. As portrayed in Table 7.1 the geographical area of the largest is 5.9 times that of the smallest, and in the most populous region reside 2.7 times that of the least populous. The demographic picture is completed by examination of the population density which shows the densest Region having 7.0 times the concentration of the least closely packed.

Clearly the RHA's differ in their catchment areas and populations served. The pattern is reflected in the diversity of pharmaceutical or buying characteristics demonstrated by the Regions. Those features are illustrated in Table 7.1. The most populous Region, West Midlands, possesses the largest number of hospital pharmacies, 73, and the least populous, East Anglian, has the smallest number, 22. The RHA best endowed with hospital pharmacists is Trent with 237, the least East Anglian with 73. Associated with the hospital pharmacies, the number of buying points shows a range from 17 to 63. There is no equal distribution of drug companies throughout the country. Some Regions are well represented by pharmaceutical manufacturers in their midst, whereas others are almost denuded. Thus six Regions share 118 companies while one Region possesses a solitary firm. Within one Region 8.2 thousand people are employed in pharmaceutical companies whereas another shows 0.2 thousand. Logically it would be expected that those Regions well endowed with pharmaceutical facilities would benefit from low delivery distances and resulting costs.

Delivery costs must therefore be expected to show a wide variation from Region to Region.

Contract duration shows six having opted for one year, seven for two years, and one ongoing.

The extent of divergence of views on contracts would be obtainable from Table 8.10.

An examination of the demographic, pharmaceutical and buying data of the RHA's would furnish those characteristics most likely to

TABLE 7.1: DEMOGRAPHIC AND ORGANISATIONAL CHARACTERISTICS OF R.H.A.'s

R.H.A. Characteristics (Reference)	East Anglian	Mersey	N.W.	North'n	Oxford	S.W.	Trent	Wessex	West Mids	Yorks	N.W. Thames	N.E. Thames	S.E. Thames	S.W. Thames
Area (hectares) X 10^6 (7.1)	1.26	0.30	0.44	1.55	0.81	1.77	1.48	1.03	1.30	1.39	0.33	0.41	0.59	0.40
Population millions (7.2)	1.9	2.4	4.0	3.1	2.4	3.1	4.6	2.8	5.2	3.6	3.5	3.7	3.6	2.9
Population density Persons per hectare	1.51	8.00	9.09	2.00	2.96	1.75	3.11	2.72	4.00	2.59	10.61	9.02	6.10	7.25
Hosp.Pharmacists (7.3)	73	154	173	137	85	144	237	117	229	210	228	194	202	172
Hosp.pharmacies (7.4)	22	32	56	42	28	43	45	41	73	51	50	60	66	45
Hosp.Buying Points (7.5)	17	22	37	42	22	44	42	20	58	30	53	48	63	41
Hosp. Delivery Points (7.5)	17	27	38	42	24	46	42	26	58	38	53	48	63	41
Hosp.Pharmacy Delivery Points per million hectares	13.5	90	86.4	27.1	29.6	26.0	28.4	25.2	44.6	27.3	160.6	117.1	106.8	107.5
No.of pharm. employers (7.6) Total * = 118	4	21		1	*	6	4	*	2	14	*	*	*	*
No. of pharm. employees (thou's) (7.7) Total ** = 39.1	1.6	10.5		5.4	**	3.2	8.2	**	0.2	4.6	**	**	**	**
Years duration of contract	On-going	2	2	1	2	1	1	2	2	1	1	1	2	2

generate lower prices for drugs acquired. Ideally a weighting could be assigned to each factor, but such must remain to be speculated upon. It is suggested that the following are likely to be associated with lower prices, though it must be emphasised that one factor alone is unlikely to exert an overriding influence:-

Demography of Region

compact area

large population

high density of population

Characteristics of buyers

large number of hospital pharmacies and pharmacists

large number of hospital buying points

small number of hospital delivery points

high density of hospital pharmacy delivery points

high degree of convergence of views on contract on the part of senior staff

Characteristics of sellers

large number of pharmaceutical employers (industry)

large number of pharmaceutical employees (industry)

The buying process

long duration of contract

The prices of a range of standard drugs chosen arbitrarily were sought. Some RHA's refused to supply such information on confidentiality grounds whereas others responded favourably. Clearly interpretation of DHSS guidance was subject to the whims of individuals. The NHS Supply Council was most helpful in ascertaining the position in many RHA's. The price and supplier findings are demonstrated in Table 7.2. In accordance with the guarantee of confidentiality of prices given to respondents the identity of the Regions, the drugs, suppliers and prices are disguised. The number of drugs whose price has been quoted is necessarily limited because the range of items of equivalent pack sizes for which contracts are awarded shows inter-Regional variation, markedly restricting those common to all. For example some Regions buy small packs in ready-to-issue size while others buy in bulk and repackage the drugs prior to issue.

Whereas a larger sample of drugs could have been analysed for a smaller proportion of the RHA's, it was considered statistically more reliable to analyse data from a wider range of Regions but thereby reducing the number of drugs tested in the process.

TABLE 7.2: PRICE CHARGED AND SUPPLIER FOR EACH RHA.

DRUG	SUPPLIER	REGION ARBITRARILY NUMBERED.													STANDARD DEVIATION s
		1	2	3	4	5	6	7	8	9	10	11	12	13	
ALPHA	A	81.3	81.3								110.8				14.89
	B			103.4	96.0	103.4	103.4	92.3	103.4	140.4		96.0	96.0	92.3	
BETA	C	77.3			83.9		70.6			88.3					41.80
	D		55.2	94.9											
	E					106.0			167.8						
	F										90.5	72.8		94.9	
	G												198.7		
GAMMA	H	98.6	98.6	90.0	98.6		80.0	98.6	115.7	112.9	97.1	77.1	115.7		13.46
	I					117.1									
DELTA	F										44.8				24.21
	J	84.4	106.7	106.7	91.2		106.7	106.7	122.2	84.4		106.7		139.4	
EPSILON	A			97.0			115.2								99.16
	I							383.4							
	K	71.9			69.6	71.9						114.1			
	L								36.5	87.9					
	M										25.1		27.4		
ZETA	K								106.2						6.31
	N	92.7	106.2	99.0	106.2	92.7				106.2	106.2				
	O						92.7								
	P							92.7				92.7		106.2	
ETA	Q	99.2	110.7	99.2	99.2	99.2	99.2		110.7	110.7	57.3			114.5	16.19
THETA	A												26.5		45.33
	E	104.3			104.3						98.4				
	M									31.8					
	R		130.9	122.0		122.0		122.0	65.4			182.2			
IOTA	B		93.1	103.4		103.4	103.4	103.4				103.4	103.4		4.36
	S	93.1			93.1										
KAPPA	H	109.7		98.7	96.0	98.7	90.5	98.7	94.6	102.8		101.5	102.8		5.33
	T		102.8								109.7				
	J													93.2	
AVERAGE		91.3	98.3	101.4	93.8	101.6	95.7	137.2	102.5	96.2	81.1	105.2	95.8	106.8	12.87

NOTE: For each drug all prices were related to the mean price 100.

Contract price relative to demographic and organisational variables within RHA's.

Statistical comparison of average drug price, as shown in Table 7.2, and the demographic and organisational variables, depicted in Table 7.1, was performed. Scatter diagrams were produced and correlation coefficients calculated using the "Statistical Package for Social Sciences" (6.2). They are displayed in Table 7.3.

The price of contract drugs bought by the Regional Health Authorities is directly related to geographical area, number of hospital pharmacies, hospital delivery points, hospital pharmacy delivery point concentration, industry employers, industry employees, and contract duration.

Contract drug price is inversely related to population, population density, number of hospital pharmacists, hospital buying points and degree of divergence of opinion between supplies officers and pharmacists.

In interpreting the findings caution must be exercised since none of the characteristics provides a statistically significant result. Nevertheless some general inferences can be derived. In the absence of practical data it would have been predicted that had the characteristics been the sole variables price would be directly related to geographical area and the number of delivery points reflecting delivery costs, as well as the degree of divergence of opinion between the senior officers who must co-operate in the contract organisation. The predicted negative correlations would be between price and population representing drug uptake, population density, number of hospital pharmacists, number of hospital pharmacies, buying points, delivery point concentration, industry employers, industry employees and contract duration, reflecting quantity discounts and delivery costs.

In the light of the primary research findings the predicted opinions are substantiated in the case of area, population, population density, number of hospital pharmacists, number of buying points and number of delivery points.

The characteristics which provided an unpredicted result were number of hospital pharmacies, delivery point concentration, strength of the local pharmaceutical industry, as represented by the number of employers and employees, contract duration and divergence of opinions between senior NHS staff.

It must be concluded that when they determine drug prices,

TABLE 7.3: CORRELATION COEFFICIENT FOR PRICE AGAINST DEMOGRAPHIC AND ORGANISATIONAL VARIABLES OF REGIONAL HEALTH AUTHORITIES.

R.H.A. CHARACTERISTIC	PRICE CORRELATION COEFFICIENT r	SIGNIFICANCE p
Geographical Area	0.016	0.960
Population	- 0.046	0.882
Population density	- 0.050	0.870
Hospital pharmacists	- 0.030	0.923
Hospital pharmacies	0.145	0.636
Hospital buying points	- 0.031	0.920
Hospital delivery points	0.017	0.955
Hospital pharmacy delivery points per area	0.014	0.964
Pharmaceutical industry employers	0.318	0.290
Pharmaceutical industry employees	0.182	0.553
Contract duration	0.029	0.926
Divergence of opinion between supplies officer and pharmacist	- 0.445	0.170

NOTE: Correlation coefficient is the measure of association between two variables. It is 0 if the variables are not associated and it has a maximum value of 1 if the points in the scatter diagram lie exactly on a straight line. It is negative if high values of one variable tend to be associated with low values of the other variable. It is positive if the two variables are high or low together.

Significance is the measure of probability of the result occurring by chance. Thus a significance of 0.01 or less is highly significant and one can be 99% confident that the result did not arise by chance.

-industrialists do not place the predicted degree of emphasis on the number of hospital pharmacies served, delivery costs or duration of contract. There is some evidence to suggest that the possibility of losing a contract after a year encourages companies to offer lower prices from the outset. Whereas it might be supposed that the greater the divergence of views between senior NHS officers the higher the price paid, no such assumption can be promulgated since a negative correlation has been shown to exist. Of all the RHA variables tested the one which comes nearest to statistical significance for correlation relative to price is the divergence score ($r = -0.445$, $p = 0.170$). On that basis it could be said that consensus is not consistent with low price.

Hypotheses 2(a) (i) to (xi) and 2(a) (xiii) were validated by the research findings.

Contract price relative to individual drugs.

Table 7.2 depicts the prices charged for a range of products. In almost all cases companies charge the various RHA's different prices for their products.

Drug Alpha is a diuretic manufactured by a small number of companies. There is a moderate inter-Regional price variation showing a standard deviation of 14.89 with the contracts being shared nationally by two suppliers.

Beta is an analgesic manufactured by several firms and this competition is reflected in the five companies sharing the market and is reflected in the prices charged. There is high inter-Regional price variation with a standard deviation of 41.80.

Gamma is a central nervous system depressant drug produced by a few firms, two of which share the hospital market. Price analysis shows a moderate spread, with a standard deviation of 13.46.

Delta, a nutritional product, shows similar characteristics to Gamma with a standard deviation of price 24.21.

Epsilon, an anti-infective agent, shows a large number of suppliers, yet a high inter-Regional price variation (standard deviation of 99.16). Region 7 is paying 15.3 times the price paid by Region 10.

Zeta, an antidepressant, is supplied by four companies whose prices show a small standard deviation, 6.31. Two companies N and P are charging the highest and lowest price, providing a hint of collusion to establish market sharing. Eta, a tranquilliser, though produced by several firms, is sold on contract by one firm to all those RHA's which awarded a contract. It shows a moderate price standard

deviation 16.19. That supplier is charging one RHA twice as much as another.

Theta, a drug affecting the cardiovascular system, is provided by four suppliers who share the market. There is a high level of inter-Regional price variation, with standard deviation of 45.33.

Iota, an anti-infective agent, though produced by several firms, is sold to RHA's on contract by two firms only. The drug prices depicted point to a low level of inter-Regional variation, with a standard deviation of 4.36.

Kappa, a nutritional material produced by several manufacturers, is sold by three companies only, and the prices charged show a small inter-Regional price variation, with a standard deviation of 5.33.

Contract price relative to individual companies.

As illustrated in Table 7.2 firms are selective in the items they produce and the oligopoly referred to in the secondary material is confirmed by the primary findings.

Furthermore, as illustrated in Table 7.4 four of the companies listed, B,N,P, and Q sell drugs at the highest and lowest price. Clearly some manufacturers do not view the market globally, but instead price each individual product in accordance with their perceived view of the price attainable. Support for this assumption is provided by the information, depicted in Table 7.4, that shows that 6 of the highest price drugs are the former patented versions provided by companies specialising in proprietary production, and a further one is produced by the former patent holder, albeit specialising in non-proprietary products. In contrast 5 of the highest price drugs are produced by generic manufacturers which did not formerly hold the patent. Of 14 lowest prices only three are former patented brands, and all but two represent products of generic manufacturers.

A 2 x 2 contingency table was constructed (Table 7.5) to depict the number of highest and lowest prices from generic and proprietary firms.

TABLE 7.4: SUPPLIERS AND VARIATION IN PRICES.

SUPPLIER	MAIN PRODUCT RANGE	NUMBER OF HIGHEST PRICE DRUGS	NUMBER OF LOWEST PRICE DRUGS
A	Generic	-	2
B	Proprietary	2*	1*
C	Wholesaler	-	-
D	Mixed	-	1
E	Generic	-	1
F	Generic	-	1
G	Generic	1	-
H	Generic	-	2
I	Proprietary	2*	-
J	Proprietary	1*	-
K	Generic	1	-
L	Generic	-	-
M	Generic	-	1
N	Generic	1*	1*
O	Wholesaler	-	1
P	Proprietary	1*	1*
Q	Generic	1	1
R	Mixed	1	-
S	Generic	-	1
T	Generic	1	-
U	Generic	-	-

* Former patented brand(s) sold on contract.

TABLE 7.5: CATEGORIES OF SUPPLIERS AND PRICES CHARGED

	NUMBER OF DRUGS		
Category of Manufacturer	Highest Price	Lowest Price	Total
Generic (n = 13)	5	10	15
Proprietary (n = 4)	6	2	8
TOTAL	11	12	23

A chi-square test was performed on the data. The value attained was 3.63 and p was < 0.1. Though the two categories of manufacturer provided contrasting numbers of highest and lowest price drugs, they were not statistically significant.

Further statistical analyses on the basis of country of origin, absolute value of hospital sales, relative value of hospital sales and delivery method were precluded because of limited data availability. For those firms represented in Table 7.4 for which sales profiles could be established, 3 companies were United States based and they provided 3 highest and 1 lowest price drug, whereas the 10 UK firms sold 5 highest price and 6 lowest price drugs, and the 3 European firms sold 3 of the highest and 3 of the lowest price drugs. For 5 large hospital sales firms 6 highest and 3 lowest prices were seen, whereas the 2 medium firms showed 2 highest and 1 lowest, and the 2 small firms no highest price drugs but 2 lowest price drugs. When classified according to relative importance of hospital sales, the 3 hospital suppliers sold 4 highest and 2 lowest price drugs, the 4 average firms sold 3 of each and the 1 community firm 1 highest and no lowest price drug.

When classified according to delivery route, the 7 direct firms represented showed 7 highest and 4 lowest prices, the 1 mixed delivery firm showed 1 highest and 1 lowest price drug, and the 1 wholesaler delivery firm showed no highest but 1 lowest price drug.

Few definite conclusions can be put forward on the basis of the restricted data but the generic/proprietary characteristic analysis allows a conclusion to be drawn.

Considerable brand loyalty exists, resulting from a limited desire by generic firms to extend their product ranges, or a desire on the part

of NHS staff to rely on the quality of the product as propagated by the original patent holder.

Nevertheless it must be concluded that generic companies appear to play a considerable and disproportionate role in lowering prices to the managed sector of the NHS.

It must be thought that national market forces exert little influence on price determination by companies supplying Regional Health Authorities.

Contract price relative to the number of contracting firms

The relationship between number of firms contracting nationally and standard deviation of prices paid by the various RHA's is illustrated in Table 7.2 and collated in Table 7.6. It was examined statistically and a relatively high positive correlation was determined, r being 0.659. That relationship was found to be significant, p having a value of 0.038. Hypothesis 3 was validated by the research findings. Such a finding was not unpredicted. It would have been expected that the greater the number of suppliers the keener the competition would be, that competition being reflected in the divergence of price patterns. There is apparently a close association between the number of suppliers nationally and price standard deviation which suggests that normal market considerations manifest themselves in the NHS drug contract purchasing sphere. The NHS buying the bulk of the output of the industry has been regarded as an oligopsonistic purchaser tending toward monopsony. However, in view of the variation in prices between RHA's that opinion must be revised. It is apparent that each RHA acts independently and the buyer characteristic must be considered as tending toward atomism. Furthermore the research findings demolish any suggestion of price collusion between suppliers.

Contract price and number of tenders submitted

The contracts awarded nationally reflect the countrywide variation in price and the scope and intensity of the NHS drug purchasing agreements. It was hypothesised that the local tender offers would parallel those offer prices accepted nationally, and increase in standard deviation or prices would be associated with increase in number of competitor companies. In order to test the hypothesis a random selection of about 1 in 16 of offers submitted to one RHA were collated and analysed. By random selection a fully representative picture not only of prices but also of number of competitors was established so that realistic conclusions could be drawn.

All prices as depicted in Table 7.7 were transformed to a mean of 100

TABLE 7.6: STANDARD DEVIATION OF PRICES FOR VARIOUS NUMBERS OF CONTRACTORS

Number of Contractors	Standard Deviation of price	Mean Standard Deviation
1	16.19	16.19
2	14.89,13.46,24.21,4.36	14.23
3	5.33	5.33
4	6.31, 45.33	25.82
5	41.80, 99.16	70.48

TABLE 7.7: PRICES AND STANDARD DEVIATION OF PRICES FOR VARIOUS NUMBERS OF TENDERING COMPANIES.

No. of tendering drug companies	Drug	Price (adjusted to provide a mean of 100)	Standard deviation of price S	Mean standard deviation of price
1	A	100	-	
2	B	96, 104	5.66	
	C	90.02,109.98	14.11	
	D	98.46,101.54	2.18	13.77
	E	130.85,69.15	43.63	
	F	97.70,102.30	3.25	
3	G	141.11,11.67,147.22	76.56	
	H	99.51,88.22,112.27	12.03	
	I	99.80,98.03,102.17	2.08	
	J	134.69,34.11,131.20	57.09	29.42
	K	157.84,91.99,50.17	54.28	
	L	148.88,78.26,72.86	42.42	
	M	96.63,106.14,97.22	5.23	
	N	94.87,94.87,110.26	8.89	
	O	98.65,94.59,106.76	6.20	
4	P	66.13,115.03,142.69 76.15	35.42	
	Q	44.76,113.07,117.79, 124.38	37.12	
	R	98.45,99.63,111.16, 90.76	8.42	45.65
	S	48.28,285.52,35.86, 30.34	123.91	
	T	80.00,133.33,97.78 88.89	23.38	
5	U	115.96,77.31,75.16, 126.34,105.23	22.96	
	V	133.00,71.43,71.43, 61.58,162.56	45.03	34.00
6	W	161.88,63.34,66.86, 49.27,100.29,158.36	49.50	49.50

for each drug both to facilitate statistical comparison as well as to disguise confidential price offers. The standard deviations of prices were calculated. The means of those for the various numbers of tenderers were computed and are shown in Table 7.7.

The correlation coefficient for all the standard deviations against number of tendering companies was calculated. The correlation coefficient, r, had a value of 0.332 with a significance of 0.131. There was thus a positive correlation between price standard deviation and number of tendering firms though the correlation was shown not to be significant.

The conclusions are:-

Two drugs N and V out of 23 show two companies quoting identical prices. There is therefore evidence of price alignment.

Oligopoly is demonstrated by the relatively small number of companies who tender for each item, the range being from 1 to 6 with three being the most prevalent.

The range of price offers is sometimes considerable. The greatest variation demonstrated was a ratio of 1 to 12.6 for drug G.

Increase in range of prices with increase in number of tenderers parallels the national contractor picture. That relationship points to the presence of competitive forces between the companies. The final conclusion to be drawn from the findings is that one can predict that the more companies tendering the greater the variation in price, and so efforts to encourage companies to diversify and extend their range should result in greater price competition.

Contract price relative to individual RHA's

The success or otherwise attained by RHA's in buying at low prices is shown numerically in Table 7.2 and depicted in Figure 7.1. Clearly Region 7 the average price of which is very significantly higher (<0.01) than the mean is paying an average 1.69 times as much for its contract drugs as Region 10. Lest too many conclusions be drawn from the average findings, it must be stated that no weighting has been accorded for drug usage and there is individual drug variation. That factor is illustrated in Table 7.8. For example, Region 7, in general the most expensive, is paying the least for one drug and Region 10, the least expensive generally, is paying the most for two items.

FIGURE 7.1: MEAN PRICES PAID IN THE VARIOUS R.H.A.'s

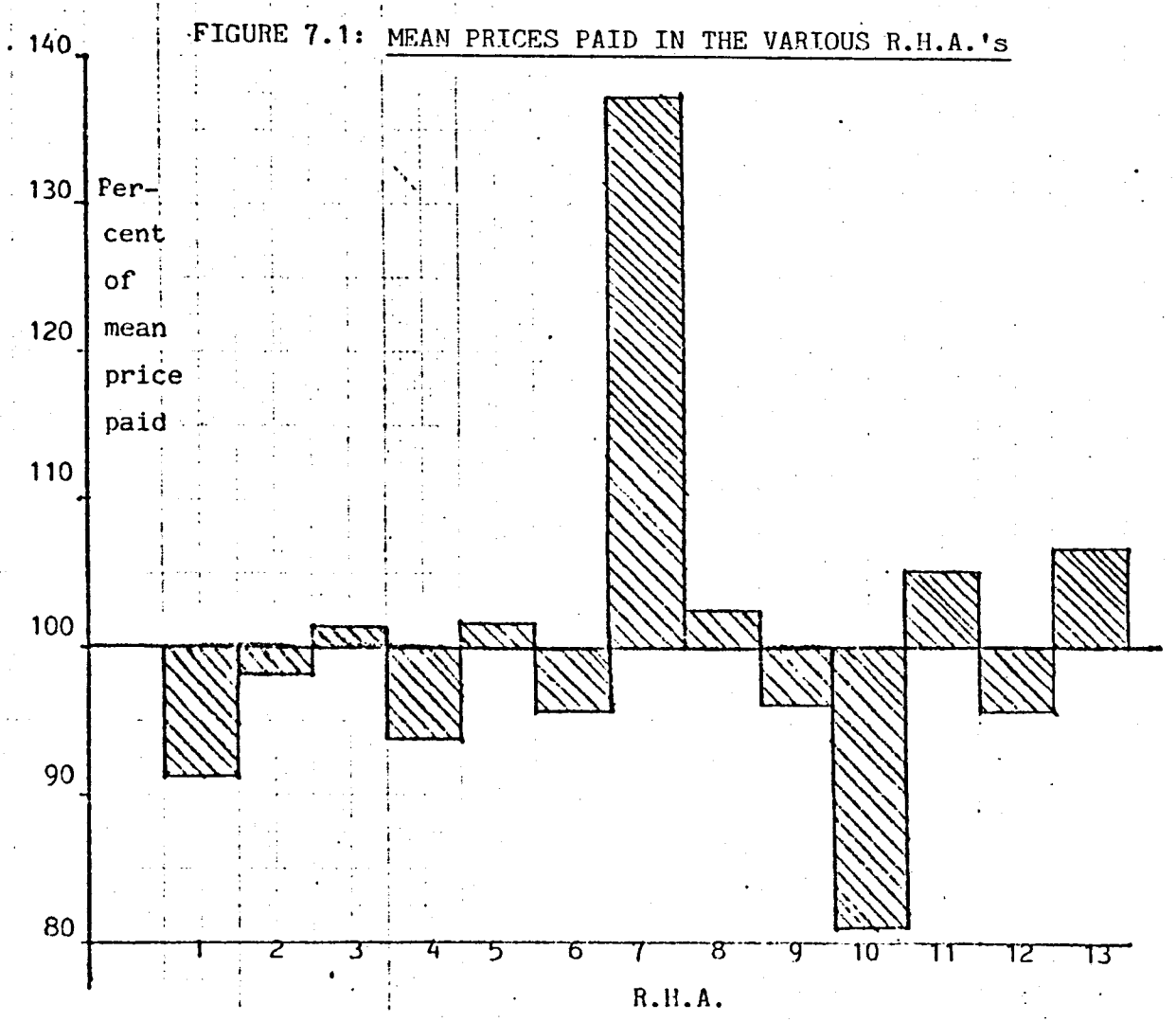


TABLE 7.8: INTER-REGIONAL PRICE LIMITS

REGION	NUMBER OF HIGHEST PRICE DRUGS	NUMBER OF LOWEST PRICE DRUGS
1	1	3
2	3	1
3	1	-
4	1	1
5	2	1
6	1	2
7	2	1
8	1	-
9	2	-
10	2	3
11	2	2
12	2	1
13	3	-

In order to derive some statistically meaningful results the results depicted in Table 7.8 were analysed further. The Regions were categorised in terms of the net expense of their drugs. Thus Region 1 with one highest price drug and three lowest price drugs was allocated a score of -2. All those with a minus or zero value were grouped as "least expensive", those with a score of 1 as "medium" and scores of 2 or 3 were classed as "most expensive". The results were constructed in a classification table (Table 7.9) and a chi-square test was performed. The value attained was 7.243 and the significance level attained was <0.05. There is therefore a significant difference in price between the groups of Regions. Hypothesis 2 (a) (xv) was apparently validated by the primary research.

TABLE 7.9: REGIONS AND PRICES PAID

Category of Regions	Number of highest price drugs	Number of lowest price drugs	Total
Three most expensive Regions	8	1	9
Five medium expense Regions	8	3	11
Five least expensive Regions	7	11	18
TOTAL	23	15	38

Contract price within a Region relative to trade price

It is surmised that contract price is lower than trade price. The extent of that difference had not previously been quantified. At random twenty drugs were chosen and their contract price was related to the trade price, the drugs being categorised according to whether or not there was a monopoly supply position.

The prices were those obtaining in December 1980 but are not quoted since confidentiality considerations militate against such treatment. The results are shown in Table 7.10.

For monopoly supply the mean relationship of contract/trade price is 0.695 with a range from 0.357 to 0.949, a standard deviation of 0.217, $p < 0.005$.

For multi-source supply the mean relationship of contract to trade price is 0.575 with a range from 0.066 to 0.901, a standard deviation of 0.276, $p < 0.001$.

The statistical test for difference between the means of monopoly source prices and multi-source prices was performed. The significance level, p, determined was < 0.3 and so the difference between them must be considered as being not statistically significant.

On the evidence presented it must be concluded that prices of contract drugs are significantly lower than trade prices, and the variation in price will be greater in multi-source supply situations compared with single (monopoly) supply situations and in both cases lower than trade prices.

Hypotheses 1 and 1(a) are therefore apparently validated by the research findings.

It can be seen that institution of contracts results in an average saving of about 36%, with generally lower savings being seen in situations of monopoly supply.

In multi-source circumstances the savings sometimes are so large as to defy accepted purchase price criteria. It might be assumed that the hospital contract price is sometimes set very low, not as a reflection of the costs of production but the encouragement of general practice sales which would recoup any losses in the hospital sector. This must be considered a combination of penetration (predatory) and promotional pricing.

TABLE 7.10: CONTRACT PRICE COMPARED WITH TRADE PRICE

MONOPOLY SUPPLY		MULTI-SOURCE SUPPLY	
DRUG	CONTRACT PRICE / TRADE PRICE	DRUG	CONTRACT PRICE / TRADE PRICE
1	0.692	1	0.645
2	0.592	2	0.645
3	0.949	3	0.848
4	0.600	4	0.723
5	0.948	5	0.415
6	0.636	6	0.839
7	0.403	7	0.340
8	0.357	8	0.066
9	0.875	9	0.901
10	0.895	10	0.323

References

7.1 Municipal Publications. The Municipal Year Book 1982. London. Municipal pp. 262 and 667-833.

7.2 Regional Trends 1984. London. HMSO. p.64.

7.3 Poole, H.H. Hospital pharmaceutical manpower - what are the needs of today and tomorrow? Proceedings of the Guild. Vol. 9, Spring 1981, pp. 31-71.

7.4 Benfield, M. Hospital pharmaceutical staffing. British Journal of Pharmaceutical Practice, Vol. 3, No. 5, August 1981, pp. 9-24.

7.5 Confidential supplier's information. March 1982.

7.6 Manpower in the UK Chemical and Allied Products Industries 1981. Staines Middlesex. Chemical & Allied Products Industry Training Board. 1982. Appendix IV.

7.7 Ibid. Appendix IX.

CHAPTER 8

NHS CENSUS

A census of senior NHS personnel was performed as described in Chapter 6 and it provided data assessed under the following headings:-

(a) Organisation of Contracts

- (i) Authority level
- (ii) Personnel involved
- (iii) Dissonance and concordance within RHA
- (iv) Steps in contract award process
- (v) Changes over last five years
- (vi) Duration of contract

(b) Attitudes towards drug contract organisation

- (i) Satisfaction with current procedure
- (ii) Disadvantages of contract system
- (iii) Advantages of contract system
- (iv) Beneficiaries of the system
- (v) Improvements suggested

(c) Pricing, tendering and negotiations

- (i) Comparison of prices with other regions
- (ii) Time spent in negotiation/discussion with suppliers
- (iii) Retendering
- (iv) Acceptance of restrictions to lower price

(a) Organisation of Contracts

(i) Authority Level

Question 1 determined the authority level at which drug contracts were currently organised.

Examination of Table 8.1 shows that contracts are primarily Regionally based, though in addition one of the RHA's possesses a multi-Regional/hospital element, the multi-Regional component being vaccine purchase, one a multi-Regional component and one a district/hospital component in its organisation. The additional factors were referred to by one officer only from each Region. Generally the RHA is the authority responsible for contracts.

(ii) Personnel Involved

Questions 6, 8, 10 and 12 sought details of staff involved in drug contract organisation (a) five years ago, (b) now, (c) suggested five years in the future, and (d) ideally.

Table 8.2 shows the expected declining role of Area Supplies Officers in the future compared with both the past and the present, and this reduced role appears to meet the ideal expectations of the respondents.

On the other hand a slightly increased role is expected for the Regional Supplies Officer. Given that the questionnaire was issued to R.S.O.'s (though not necessarily completed by them), the response may be a reflection of their own perceived importance in the drug contract scenario.

Table 8.3 attempts to show the difference in responses provided by the two disciplines, pharmacist (P) and supplies officer (S).

The view of the future declining role of the supplies officer below RSO grade is more prevalent among pharmacists than supplies officers. This points to a lack of appreciation of the role of those supplies officers by some pharmacists. There is low correlation between the views of the supplies officers and pharmacists as demonstrated in Table 8.3, r_s being of value 0.533, $p = 0.174$. This suggests a divergence of views on the scale of involvement, both predicted and ideal, of supplies officers in drug contract organisation, and it may be thought that the responses are a reaction on the part of pharmacists to the supplies officers' present greater role than that which existed five years ago. It might be considered that the pharmacists feel threatened by the supplies officers' enhanced position in the organisation.

TABLE 8.1: ADMINISTRATIVE LEVEL AT WHICH DRUG CONTRACTS ARE ORGANISED

ADMINISTRATION LEVEL OF ORGANISATION	(n = 26)
Multi-Regional/Regional/Hospital	3.8%
Multi-Regional/Regional	3.8
Regional	84.6
Regional/District/Hospital	3.8

TABLE 8.2: GRADE OF SUPPLIES OFFICER INVOLVED IN CONTRACT ORGANISATION

Grade	Five Years Ago (n = 26)	Now (n = 26)	Five Years Ahead (n = 26)	Ideally (n = 26)
One A.S.O.	57.7%	65.4	46.2	42.3
Several A.S.O.'s	30.8	26.9	23.1	15.4
Divisional S.O.	3.8	3.8	-	-
Senior Admin. Officer (Supplies)	3.8	7.7	-	-
Another S.O.	-	-	-	3.8
R.S.O.	69.2	76.9	76.9	80.8

NOTE: Totals for columns exceed 100% because some respondents ticked several boxes.

TABLE 8.3: PHARMACISTS' AND SUPPLIES OFFICERS' VIEWS ON SUPPLIES OFFICER INVOLVEMENT IN CONTRACT ORGANISATION

Supplies Officer grade involved	Five Years Ago		Now		Five Years Ahead		Ideally	
	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)
Below R.S.O.	92%	100	100	108	62	77	46	77
R.S.O.	77	62	85	69	69	85	77	85

NOTE: Column totals exceed 100% because respondents ticked several responses.

The role of the pharmacist can be similarly examined from the results shown in Table 8.4.

In the future there is a predicted greater involvement for pharmacists as compared with five years ago, and the ideal is almost identical to that future role. It is thought that the future will show a diminished role for pharmacists below R.Ph.O.grade with an enlarged role for the R.Ph.O's. This opinion may reflect the fact that R.Ph.O's were recipients of the questionnaire.

Examination of Tables 8.2 and 8.4 shows that generally at each stage of the historical scene and in the ideal view pharmacists play a bigger role than supplies officers.

Table 8.5 analyses the different opinions of the two disciplines toward the role of the pharmacist.

Comparison of Tables 8.3 and 8.5 shows that pharmacists generally perceive their own role as being of more importance than do the supplies officers.

Table 8.5 suggests that each discipline sees a growing involvement of the R.Ph.O.

Statistical analysis of the data demonstrated in Table 8.5 indicates a high correlation ($\bar{r}$ = 0.949) between the pharmacists' views and those of their supplies colleagues. The correlation is very significant ($p = 0.00032$). Apparently the supplies officer sees a smaller role for his pharmacist colleague than does the pharmacist, but there is nevertheless considerable agreement between the two groups of workers.

Apart from pharmacists' and supplies officers' roles, other disciplines appear to play a very small part in the organisation. Auditors in the view of one respondent have played and will continue to play a role and ideally should do so. The Treasurer in the view of one respondent has and is playing a role, but will not and should not in the future.

The consultant medical staff were mentioned by 4 respondents as playing a role both 5 years ago and at present, with 6 respondents suggesting their future role and 8 suggesting their role ideally. Their usefulness ranges, in the view of the respondents, from being very helpful to being a hindrance.

The nursing staff receive little acknowledgement perhaps because, unlike the consultants, they were not specifically listed in the questionnaire. One respondent noted a past theoretical involvement

and one (or possibly two) suggests an ideal role.

Though not specifically listed as a category to be ticked, many respondents referred to Quality Control pharmacists who loom larger in the thinking of the respondents now than five years ago but suggest in future a slightly diminishing role both practically and ideally.

The results are shown in Table 8.6.

The supplies and pharmacist disciplines show little difference in their view of QC involvement for the present, future and ideally. This result is somewhat surprising in view of the often vaunted claim of pharmacists that their own discipline rather than the supplies officer gives greater emphasis to quality. The role of the quality control pharmacist was little recognised in the past by the supplies officer but is now sufficiently important for QC to be listed and remarked upon by almost as many supplies officers as pharmacists.

The lay member of the Authority, representing the view of the impartial observer, does not figure very markedly in the thinking of the two major disciplines involved. One respondent suggests a past role, one (or possibly two) suggests a future role and one an ideal role.

Other responses cover the range of grades in hospital pharmacy and supplies but no tangible conclusions can be drawn.

The influence exerted by the three disciplines, pharmacists, supplies officers and medical, on the contract organisation was determined by questions 7, 9, 11 and 13. The results are shown in Table 8.7. The question had sought the opinion on the single discipline with the most influence and so the multiple answers must be discounted. Table 8.7 shows that clearly a greater influence appears to be exerted at all stages of the historical timescale by pharmacists than supplies officers. Those results are broken down by respondents in Table 8.8. Table 8.7 demonstrates that Consultants appear to be considered non-influential in contract organisation.

The supplies officer should not ideally, in the view of any of the responding pharmacists, exert the most influence on contract organisation, whereas almost equal numbers of supplies officers perceive each discipline as ideally being most influential in the organisation of the contracts.

In the historical perspective both pharmacists and supplies officers see their own influence diminishing in practice and the other

TABLE 8.4: GRADE OF PHARMACIST INVOLVED IN CONTRACT ORGANISATION

Grade	Five Years Ago (n = 26)	Now (n = 26)	Five Years Ahead (n = 26)	Ideally (n = 26)
One Ph.O	7.7%	3.8	7.7	11.5
Several Ph.O's	88.5	96.2	80.8	80.8
Other below R.Ph.O	38.5	88.5	69.2	73.1
R. Ph.O	96.2	84.6	92.3	100

TABLE 8.5: PHARMACISTS' AND SUPPLIES OFFICERS' VIEWS ON PHARMACIST INVOLVEMENT IN CONTRACT ORGANISATION

Pharmacist grade involved	Five Years Ago		Now		Five Years Ahead		Ideally	
	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)
Below R.Ph.O	154%	115	208	169	169	146	177	154
R. Ph. O	100	92	92	77	85	100	100	100

TABLE 8.6: QUALITY CONTROL PHARMACIST INVOLVEMENT IN CONTRACT ORGANISATION

	Five Years Ago		Now		Five Years Ahead		Ideally	
	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)
Q.C. Pharmacist	46%	8	46	38	38	31	31	31

TABLE 8.7: INFLUENTIAL DISCIPLINES IN CONTRACT ORGANISATION

	Five Years Ago (n=26)	Now (n=26)	Five Years Ahead (n=26)	Ideally (n=26)
Supplies Officer	23.1%	7.7	7.7	11.5
Pharmacist	65.4	57.7	53.8	65.4
Consultant Medical Staff	-	-	-	-
Supplies Officer and Pharmacist	3.8	26.9	23.1	15.4
Supplies Officer, Pharmacist and Consultant	3.8	3.8	3.8	3.8

TABLE 8.8: PHARMACISTS' AND SUPPLIES OFFICERS' VIEWS ON THE MOST INFLUENTIAL DISCIPLINE IN CONTRACT ORGANISATION

	Five Years Ago		Now		Five Years Ahead		Ideally	
	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)	P (n=13)	S (n=13)
Supplies Officer	23%	23	-	15	8	8	-	23
Pharmacist	77	54	85	31	69	38	100	31

TABLE 8.9: PHARMACISTS' AND SUPPLIES OFFICERS' VIEWS ON THE MOST INFLUENTIAL DISCIPLINE IN CONTRACT AWARD

	All Respondents (n=26)	Pharmacists' View (n=13)	Supplies Officers' View (n=13)
Supplies Officer	-	-	-
Pharmacist	76.9%	92	62
Neither	19.2	8	31

discipline's role increasing slightly.

The influential discipline in drug contract award was considered in question 22. The results are shown in Table 8.9.

Almost all pharmacists perceive themselves as the most influential discipline in the contract award, whereas the supplies officers are divided with one third of the respondents favouring neither discipline and two thirds suggesting the pharmacists.

Tensions between the two disciplines are suggested by the responses to question 6-13 and 22. Those tensions in each R.H.A. are examined later when an examination is made of the degree of dissonance or concordance between supplies officers' and pharmacists' responses.

Since drug contracts are organised at R.H.A. level it is to be expected that the R.S.O. and R.Ph.O. are involved in their organisation. In the main their role tends to be one of overseer and chairman (or joint chairman) of the adjudicating committee. The R.S.O. and R.Ph.O. often act in an advisory capacity to the district staff who perform the groundwork, although, as chairman, they do have a chairman's right to a casting vote should the need arise. The survey indicated that the Regional Officers remain in the background and prefer to do so and delegate the basic responsibilities to subordinate staff. Those personnel often have a specifically defined role and at the adjudicating stage the groundwork performed by both groups is combined to produce a synthesis of appropriate specification, quality, price and manufacturer viability.

The quality control pharmacists write and update product specifications, test the drugs considered for contract and report on the relationship between their test results and the specification drawn up.

The supplies officers are concerned with the reputation and viability of the manufacturer and they will assess the likelihood of new companies being able to supply an item when required. Often the supplies officer and Q.C. or technical pharmacist visit potential contractors to assess their efficiency and viability.

It must be readily apparent that in contract drug purchasing the two disciplines, pharmaceutical and supplies, must work closely together in order to harness their respective skills and knowledge.

(iii) Dissonance and Concordance within each R.H.A.

Responses relating to opinions, not facts, were analysed by comparing the two responses for each R.H.A. which provided two responses.

Twelve R.H.A.'s fell into that category. Identical responses were scored 0, diametrically opposite results scored 1. Where a gradation of response was possible, for example "very important" - "fairly important" - "not very important" - "not important at all", the semantic differential was applied and a score of 0.33 between each consecutive response was given, allowing a total difference from "very important" to "not important at all" of 1.

To illustrate the scoring scheme, question 3 allowed a choice of five answers. A score of ¼ was therefore allocated between "very satisfactory" and "satisfactory", between "satisfactory" and "neither satisfactory nor unsatisfactory", between the latter and "unsatisfactory", and between "unsatisfactory" and "very unsatisfactory". If the two respondents from a R.H.A. provided identical responses the score would be zero. If they would answer "very satisfactory" and "very unsatisfactory" the score would be one. In this way the degree of parallel thinking between respondents of one R.H.A. could be numerically described and a quantified result could be derived from a descriptive term.

It can be seen therefore that the higher the score the greater the dissonance shown. The results are shown in Table 8.10.

The maximum dissonance possible would create a score of 60. The results show that the R.H.A.'s showed a range from 6.6 to 16.8. There is, according to this scoring system,a high degree of concordance within each R.H.A. between pharmacist and supplies officer.

The questions which brought about the most dissonance were those which asked for a decision on the most influential discipline in contract award,and whether or not there should be the option to retender when a drug comes off patent.

(iv) Steps in Contract Award Process

Questions 2 and 2a sought information on the stages in the contract award. Ten respondents referred to procedures additional to those defined in the question, but they were seen on examination to be merely subgroupings of the main headings. One of the respondents referred to the system of issuing call-up lists to hospitals and noted that his RHA had dispensed with them since the estimates have proved inaccurate and unhelpful. This subject is covered in greater depth in connection with the survey of pharmaceutical suppliers.

(v) Changes over last five years

Question 5 covered changes in contract organisation over the last five

TABLE 8.10: SCORES FOR DIVERGENCE OF OPINION BETWEEN PHARMACIST AND SUPPLIES OFFICER IN EACH R.H.A.

Question No.	Max. possible score	R.H.A. arbitrarily numbered												Total
		1	2	3	4	5	6	7	8	9	10	11	12	
3	1	0.25	-	-	0.25	-	0.25	-	-	-	-	0.25	0.25	1.25
7	1	-	1	-	-	-	-	1	-	-	-	-	-	2
9	1	1	1	-	-	-	-	-	-	-	-	-	-	2
10	6	-	1	-	1	-	-	-	-	3	2	-	-	7
11	1	-	1	-	-	-	-	-	-	-	1	-	-	2
12	7	2	1	-	1	-	-	1	-	-	2	1	-	8
13	1	1	1	-	-	-	-	-	-	-	-	-	-	2
13a	1	-	-	-	-	-	1	-	1	1	-	-	1	4
14	1	0.25	-	0.25	-	-	0.25	-	0.25	-	-	0.25	-	1.25
16	9	2	1.67	4	2	1	1.33	2	1.33	1.33	1.67	4	2.33	24.67
19	11	1.67	4.67	2.67	2.67	3	1	2	-	2.67	6.67	1	4	32
22	1	1	-	1	1	-	1	-	-	1	-	1	-	6
25	1	0.5	0.5	-	-	0.5	0.5	-	-	-	-	-	-	2
27	1	-	-	-	-	-	-	-	-	-	-	-	-	-
29	10	3	2	3	2	2	-	3	4	4	-	1	2	26
31	1	-	-	-	-	1	1	1	-	-	-	-	-	3
33	6	2	2	2	1	-	1	-	-	-	1	-	2	11
TOTAL	60	14.67	16.84	12.92	10.92	7.5	7.33	10	6.58	13	14.33	8.5	11.58	

years and the answers are shown in Table 8.11.
The additional responses volunteered were change to buying guide (4 responses) and one response each for no estimates, more attention to communication and bioavailability, information needed on origin, positive vetting, more items on contract, more vetting and contact with suppliers, more management supplies involvement and selected number of items on contract, each mentioned by staff of one RHA.
Of all changes listed, QC received most attention, more so than shown in Table 8.6. Every RHA is represented in that opinion.
The contracts now are generally of longer duration (9 RHA's) but cover fewer drugs (8 RHA's). For one RHA the contract period is now shorter. For five RHA's there is now more formalised RHA staff involvement.
The impression is created of a more streamlined contract and of note is the equal attention given by the two disciplines to supplier service and packaging. This result demolishes any argument that supplies officers give less consideration to those matters than do pharmacists.
The staffing changes over the last five years are examined in section (a) (ii).
Clearly hypothesis 6, namely that the weighting of criteria considered important in purchase of drugs has altered over time, is validated by the research findings.

(vi) Duration of Contract

Those surveyed were asked if they preferred a one or two year duration of contract in question 31 and reasons for the choice were sought in question 32. Results are shown in Table 8.12.
No clear division of opinion between the two disciplines was apparent but the majority favoured a two year contract. This result of preferences must be compared with the reality of the system in which six regions possess one year contracts and seven possess two year contracts.
The reasons for the preferences are shown in Table 8.13.
Clearly subjective reasoning clouds the reasons for the preferences which are not often satisfied in reality, and it is suggested that the subject would benefit greatly from a comparison of prices charged and administrative costs in two regions, one having a two year contract the other having an annual review.

TABLE 8.11: CHANGES IN CONTRACT ORGANISATION OVER THE LAST FIVE YEARS

	All Respondents (n=26)	Pharmacist (n=13)	Supplies Officer (n=13)	No. of RHA's Represented
Increased involvement of QC Pharmacists	88.5%	85	92	14
Smaller number of items on contract	46.2	54	38	8
Longer duration of contract	57.7	46	69	9
Shorter duration of contract	7.7	8	8	1
More formalised RHA staff involvement	19.2	23	15	5
More consideration given to packaging	73.1	69	77	13
More consideration given to supplier service	46.2	46	46	9
Others	30.8	15	46	8

TABLE 8.12: PREFERRED DURATION OF CONTRACT

	All Respondents (n=26)	Pharmacist (n=13)	Supplies Officer (n=13)	No. of RHA's Represented
Prefer two years	53.8%	46	62	10
Prefer one year	23.1	23	23	5
No preference	11.5	23	-	2
Joint choice	11.5	8	15	3

TABLE 8.13: REASONS FOR PREFERRED DURATION OF CONTRACT

Duration Preferred	Response (n=26)	Reason for preferred duration
One year	11.5%	Volatile market makes placing of long-term contracts unsatisfactory.
	11.5	More drugs coming off patent and so competitively priced from generic manufacturers.
	7.7	Allows annual review of products' demand to ensure that contract is worthwhile.
	3.8	Two years is too long in inflationary times.
	3.8	To encourage a competitive market.
Two years	42.3	Reduces administrative costs/workload.
	11.5	Improves continuity of supplies.
	7.7	Simplifies quality control.
	7.7	Allows manufacturer to build up adequate stocks.
	7.7	Improves price.
	7.7	Provides reasonable expectancy of substantial business to bidders.
	3.8	Contract should be limited to well established products.
	3.8	Allows time for contract to settle down
	3.8	Supplier sourcing warrants longer contract.
No preference	15.4	Depends on market circumstances and product, e.g. proprietaries could be on relatively long contract related to list price and generics would be more open to competition (and implicitly more favourable prices if shorter contract).
	3.8	Too many amendments over two years in highly inflationery times.
	3.8	If schedule can be split or is small one year is preferred but for a large schedule two years is preferred to reduce administrative workload.

(b) Attitudes towards Drug Contract Organisation

(i) Satisfaction with current procedure

This topic is discussed in questions 3 and 4.

The results show in Table 8.14 a generally satisfactory view of the current contract procedure within each RHA. However, may one assume the same degree of satisfaction with the system of contracts itself? Whereas the respondents remarked that the personnel involved, their actions and the make up of committees are satisfactory their views on the system itself show a degree of dissatisfaction. This topic is discussed in the next sub-section.

(ii) Disadvantages of Contract System

The disadvantages of the existing contract system were elucidated in questions 18, 19 and 20. It would appear that there are several disadvantages. Those volunteered in question 18 were related to:-

1. Inflexibility of system
2. Poor utilisation of management information and communications within NHS
3. Lack of commitment
4. Unhelpful and possibly damaging to industry

1. The inflexibility of the system was noted sixteen times with eleven of those mentions arising from pharmacists. It was felt that market or price changes were not being catered for. Further, user problems were not being accommodated. Positive negotiation was suggested by ten pharmacists.

2. Utilisation of resources was remarked upon seventeen times, of which eleven were from supplies officers. The absence of full time contracts officers in the NHS, representing both pharmacy and supplies, was bemoaned by one supplies officer, as was the amount of administrative work and cost. Inadequate NHS QC information was remarked upon by two pharmacists. Poor coordination between RHA's causing duplication of effort was remarked upon by a pharmacist, as was the inclusion in contracts of items for which no real competition existed. More need for information on prices/packs, more monitoring of effectiveness in relation to number of items on contract, inaccurate estimates and unpredictable demand were noted as disadvantages.

3. The lack of commitment to adhere to contracts was noted by three respondents, of whom two were pharmacists.

4. Problems for the supplier were noted by two of each discipline.

TABLE 8.14: HOW SATISFACTORY IS CURRENT PROCEDURE?

	All Respondents (n=26)	Pharmacist (n=13)	Supplies Officer (n=13)	No. of RHA's Represented
Very satisfactory	23.1%	8	38	5
Satisfactory	53.8	62	46	10
Neither satisfactory nor unsatisfactory	23.1	31	15	4
Unsatisfactory	-	-	-	-
Very unsatisfactory	-	-	-	-

The damage to the industry when a contract is awarded for low margin items or overloading of orders at the start of the contract were listed. What is particularly noteworthy is that despite a generally satisfactory view of contracts generated by questions 3 and 4 (see Table 8.14) earlier in the questionnaire, considerable disquiet exists among respondents regarding the system as it is at present operated. As may be predicted user problems were a concern to pharmacists. What was not so predictable was the considerable body of opinion among pharmacists that the system was too rigid and more scope for negotiation should develop. Equally the absence among supplies officers of any concerted view in favour of a negotiated contract rather than the current sealed tender system must be noted. The supplies officers in particular would wish to see more realistic information on estimated demand, usage and administrative costs. Question 19 listed specific disadvantages of the contract system and sought an opinion on the degree of importance attached to each and reasons for such views. The results are as shown in Table 8.15. The largest response for a very important disadvantage was "no drug cost savings" with 19% mentions followed by 12% mentions each for "too rigid", and "does not satisfy local needs/preferences". A purview of the "not a disadvantage at all" column indicates 65% response, a very high score, for "no drug cost saving". Clearly opinion was divided on the savings accruing from the scheme. 62% response for "too few delivery points" and "too few ordering points" in the "not a disadvantage at all" column show that there is a large body of opinion in favour of a reduction in buying and delivery points, a view held particularly strongly by supplies officers. In order to derive more detailed information from the results a relative numerical rating was assigned to each yardstick on the scale 1 to 3, using the semantic differential as follows:-

each "very important" response scored 3 points;
each "fairly important" response scored 2 points;
each "not very important" response scored 1 point.

Whereas, there is no guarantee that the score alloted is totally accurate it allows quantitative analyses to be performed and is thus recognised as an appropriate tool in attitude measurement work. The scores derived are as shown in Table 8.16. Table 8.16 shows the tabulation resulting from the scoring system. The local needs, rigidity, lack of supply continuity and costly

TABLE 8.15: PERCEIVED DISADVANTAGES OF CONTRACTS

	Very Important			Fairly Important			Not very Important			Not Important at all		
	All Respon-dents. (n=26)	P (n=13)	S (n=13)	All Respon-dents (n=26)	P (n=13)	S (n=13)	All Respon-dents (n=26)	P (n=13)	S (n=13	All Respon-dents (n=26)	P (n=13)	S (n=13)
Order quantity makes excessive demands on small storage space	-	-	-	19.2	15	23	23.1	31	15	53.8	54	54
Too rigid (little or no freedom of choice)	11.5%	15	8	11.5	15	8	30.8	38	23	38.5	23	54
No drug cost saving	19.2	15	23	3.8	8	-	-	-	-	65.4	62	69
Does not satisfy local needs/preferences	11.5	15	8	15.4	23	8	38.5	38	38	30.8	23	38
Unsuitable pack sizes	3.8	8	-	19.2	15	23	23.1	31	15	46.2	38	54
Lack of continuity of supply at contract expiry	-	-	-	23.1	38	8	38.5	54	23	34.6	8	62
Irregular/unpredictable deliveries	3.8	8	-	11.5	23	-	26.9	23	31	46.2	31	62
Costly administration	7.7	8	8	23.1	31	15	7.7	8	8	50	38	62
Reduced possibility of utilising deliveries	3.8	-	8	7.7	15	-	11.5	8	15	38.5	23	54
Too few delivery points	-	-	-	3.8	8	-	11.5	15	8	61.5	38	85
Too few ordering points	-	-	-	-	-	-	15.4	23	8	61.5	38	85

TABLE 8.16: PERCEIVED DISADVANTAGES OF CONTRACTS

Response	Score
Does not satisfy local needs	27
Too rigid	23
Lack of continuity of supply	22
Costly administration	20
Unsuitable pack sizes	19
No drug cost saving	17
Irregular/unpredictable deliveries	16
Excessive demands on storage space	16
Reduced deliveries	10
Too few delivery points	5
Too few ordering points	4

TABLE 8.17: PERCEIVED DISADVANTAGES OF CONTRACTS

Response	Scores		
	All Respondents	Pharmacists	Supplies Officers
No drug cost saving	13	5	8
Local needs/preferences not satisfied	13	10	3
Too rigid restricting local choice	11	8	3
Inflexible to market changes	9	6	3
Costly to administer	8	6	2
Lack of continuity of supply at contract expiry	6	1	5
Quantity of order makes excessive demands on storage space	6	3	3

administration weigh heavily in the minds of the officers whereas the few delivery and order points are of little significance.

Respondents were asked to rank order the disadvantages under question 20. For each "most important" a score of 3 is given, "second most important" 2,and third most important 1. The results are shown in Table 8.17. Scores of 3 or less are omitted.

Using that scoring system the three most important disadvantages are the same as those apparent from Table 8.15. The pharmacists' concern for local needs and the lack of flexibility which restricts choice is marked.

Question 19 left space for additional disadvantages to be listed. Supplies officers noted restriction of initiative, administratively cumbersome and inflexible to market changes,whereas pharmacists remarked upon inaccurate estimates, uneven quality of suppliers of cheap generics, insufficient feedback from purchasing pharmacists of difficulties and annual contracts.

Verbal questioning of officers regarding the unacceptability of bargaining within the tendering system elicited the response from two officers that the resulting restriction on trading was equally a disadvantage to suppliers. For all its guidelines the system does not guarantee supply to the user and business to the supplier. This topic is discussed further in connection with the survey of pharmaceutical suppliers.

The views of the senior officers responsible for N.H.S. drug purchasing procedures shed considerable light on the failings. Some background to their thought processes is provided by the additional comments noted under "reason" in question 19 and suggested remedies are given. The views propounded are given below.

1. Order quantities and their demands on storage space only cause problems if not adequately considered at tender stages. A remedy is to disallow minimum order stipulations from contractual terms of suppliers or centralise storage.

2. The rigidity restricting local choice is a disadvantage to be remedied by participation of pharmacists in decision-making regarding supplier as well as in influencing prescriber. Clinical choice is considered by several respondents to be a myth.

3. No drug cost saving was a topic which showed the considerable divergence of opinion and lack of information available. Five pharmacists categorically confirmed drug cost savings by contracting.

4. Local needs or preferences not being satisfied are as given under 2 above.

5. Unsuitable pack sizes should be adequately covered by specification but some firms will not supply small packs. The remedy is to encourage firms to provide small packs or repack within region. The expense of that was remarked on by one pharmacist.

6. Lack of continuity of supply at contract expiry can arise with specialised contracts, unreliable sources or inadequate notification being given to new supplier. It can be remedied by adequate consultation and information during contract award process.

7. Irregular or unpredictable deliveries should be covered by using reliable sources, buyers reporting problems and a reference to deliveries being included in contract conditions.

8. Administrative costs were considered worthy of comment and thought to be low by five respondents (2 of whom were supplies officers) though three officers (pharmacists) admitted a lack of knowledge.

9. Reduced deliveries would be dealt with under conditions of contract and/or stock control measures.

10. Too few delivery points is a subject which should be adequately covered in the conditions of contract. Five respondents, including three pharmacists, felt that there were too many points.

11. Too few ordering points is a response which shows the features and remedy of the previous topic. Five officers, including three pharmacists, bemoaned the too large number of ordering points.

(iii) Advantages of Contract System

In parallel with the disadvantages the advantages were analysed in questions 15, 16 and 17. The opportunity was provided in the open question 15 for the respondents to volunteer their own views.

The most noted advantages were cost saving on drugs remarked upon by 11 pharmacists and 8 supplies officers, predictable quality stated by six respondents of each group, the lack of need for individual hospital price negotiation mentioned by six supplies officers, and the continuity or guarantee of supply noted by five supplies officers. Other responses were as shown in Table 8.18. Given the perceived difference in influence exerted by and the extent of divergence of views on the part of each discipline, as highlighted previously, it must be concluded that the importance allotted to purchase criteria is a function of the relationship between them and so hypothesis 6(a) was validated by the research findings.

TABLE 8.18: PERCEIVED ADVANTAGES OF CONTRACTS

Response	Pharmacists (n=13)	Supplies Officers (n=13)
Administrative saving	23%	8
Manufacturer more able to predict and satisfy needs	31	-
Compliance with standing orders/ legal requirements	8	23
Easier Pharm. Admin./one document listing all drugs	-	23
Standard pack size	8	15
Reduces variety and unco-ordinated buying	-	15
Psychol. benefit to supplier	8	8
Involvement of RPhO and DPhO's gives high degree of user satisfaction	-	8
Same brand in all hospitals	8	-
Allows monitoring of usage	-	8
Combines technical and commercial expertise	-	8
Very few, needs major revision	8	-
None	8	-
Provides sound data base for evaluating alternative purchasing methods	-	8

Of note is the equal concern for quality among both groups.
Question 16 listed some specific advantages of the contract system, and in a similar format to question 19 sought decisions on the importance of each and the reasons for that perceived view. The results are shown in Table 8.19.
"Cost saving on drugs" is rated by 81% of respondents as being very important. Next in importance is "obviates individual hospital price negotiation" mentioned by 73% of respondents, followed by "predictable quality". Somewhat unpredictably more supplies officers than pharmacists consider this of major importance.
So as to derive more detailed information the columns were scored for the degree of importance attached to each response, with three points for "very", two for "fairly" and one for "not very" important response. The scores derived are shown in Table 8.20.
Examination of Table 8.20 shows that the derived rank order and that of Table 8.19 are the same for the four most important factors.
Under question 17 respondents were asked to rank order the advantages. As previously each "most important" is scored 3, "second most important" is scored two and "third most important" is scored 1.
The results are presented in Table 8.21. Scores of 3 or less are omitted.
Cost saving on drugs is shown to be the major advantage of contracts. Again the higher score by supplies officers than pharmacists for predictable quality as an important advantage is noteworthy.
Question 16 allowed additional advantages to be listed. A pharmacist noted that the contract ensures a supplier for certain items and another pharmacist listed as very important the psychological pressure for suppliers and, as a fairly important advantage, the identification of requirement for low use items.
The reason for the perceived advantages of the contract system was allowed for in question 16. Those reasons were:-
1. Administrative saving. There was a broad range of responses to this answer with some emphasising the greater workload than would be the case in the absence of contracts, some respondents doubting savings and others recognising the avoidance of duplication.
2. Continuity of brand for contract duration. This was felt unimportant by some provided quality was assured. Some felt it was important to attain user confidence. Central prepacking allows

TABLE 8.19: PERCEIVED ADVANTAGES OF CONTRACTS

Advantage	Very Important			Fairly Important			Not very Important			Not Important at all		
	All Respondents (n=26)	P (n=13)	S (n=13)	All Respondents (n=26)	P (n=13)	S (n=13)	All Respondents (n=26)	P (n=13)	S (n=13)	All Respondents (n=26)	P (n=13)	S (n=13)
Administrative saving	34.6%	15	54	26.9	31	23	15.4	8	23	23.1	46	-
Continuity of brand for contract period	30.8	31	31	26.9	23	31	34.6	38	31	7.7	8	8
Predictable quality	57.7	46	69	34.6	46	23	3.8	-	8	3.8	8	-
Cost saving on drugs	80.8	69	92	15.4	23	8	-	-	-	-	-	-
Predictable delivery	30.8	15	46	38.5	38	38	7.7	8	8	11.5	15	8
Manufacturer can predict usage and so more easily satisfy needs	23.1	8	38	50.0	54	46	7.7	15	-	15.4	15	15
Standard pack sizes	17.3	-	35	36.6	38	35	19.2	23	15	23.1	31	15
Appropriate labelling	50.0	31	69	30.8	31	31	-	-	-	15.4	31	-
Obviates individual hospital price neg.	73.1	62	85	15.4	31	-	3.8	-	8	7.7	8	8

TABLE 8.20: PERCEIVED ADVANTAGES OF CONTRACTS

Response	Score
Cost saving on drugs	71
Obviates need for individual hospital price negotiation	66
Predictable quality	64
Appropriate labelling	55
Continuity of brand for contract period	47
Manufacturer can predict usage and more easily satisfy needs	46
Administrative saving	45
Predictable deliveries	44
Standard pack sizes	37

TABLE 8.21: PERCEIVED ADVANTAGES OF CONTRACTS

	Scores		
Advantages	All Respon-dents	Pharmacists	Supplies Officers
Cost saving on drugs	52	28	24
Predictable quality	37	14	23
Administrative saving	17	8	9
Obviates need for individual hospital negotiation	12	8	4
Continuity of brand for contract period	9	8	1
Appropriate labelling	4	-	4

information of change of brand to be notified in advance.

3. Quality predictability was thought to save QC costs and time but one respondent thought quality could vary throughout the duration of the contract and another felt it essential that prescriber confidence was retained.

4. "Cost saving of drugs" was doubted by one respondent but was generally considered the main aim of the exercise.

5. "Predictable deliveries" were not limited to contracts. Two respondents noted that delivery times may be included in the contract conditions. One respondent noted that predictable deliveries should save money.

6. "Manufacturer can predict usage and so more easily satisfy needs" realised three comments on the unreliability of estimates. Two respondents felt that their uptake was a small proportion of the market and so hardly likely to affect the seller's strategy.

7. "Standard pack sizes" was thought by four respondents to apply equally to non contracts. Two respondents referred to regional prepacking units and their needs to be satisfied. One person referred to the difficulty in achieving agreement on packs.

8. "Appropriate labelling" was considered equally applicable in the context of non contractual purchases. It can be dealt with at the adjudication stage. The difficulty in achieving agreement on labelling was referred to.

9. "Obviates need for individual price negotiation at hospital level" should, in the opinion of three respondents, apply with a saving of time.

(iv) Beneficiaries of the System

Question 27 asked which party, the NHS or supplier derived the most benefit from the drug contracts and question 28 sought reasons for that response. The results are given in Table 8.22.

The majority, 58%,of the respondents felt that both derived benefit from contracts. In addition 15% could not commit themselves. Of the remainder more felt that the NHS rather than the supplier derived most benefit.

The respondents who felt that the NHS derives most benefit suggested as reasons cost savings,predictable quality and the freeing of individual hospital pharmacists from the need to negotiate. One suggestion was that there was no obligation on the NHS to take up estimated quantities yet the agreement was binding on the supplier.

TABLE 8.22: PARTY DERIVING MOST BENEFIT FROM CONTRACTS

	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)
NHS	19.2%	23	15
Supplier	7.7	8	8
Both	57.7	54	62
Don't know	15.4	15	15

Those who thought that the supplier derived most benefit suggested as reasons the guaranteed or increased sales, planning production and absence of need to compete with other firms (assuming, of course, that the company is awarded the contract). It was thought that the contract kept the firm's products constantly before medical and other staff. One respondent felt that companies can play R.H.A.'s off against each other.

The reasons adduced by those who suggested that neither party derived most benefit were the cost savings, rationalisation and continuity of supply to the N.H.S. and planned production, stability, manpower and resources planning, openings to the GP market, continuity of orders and reasonable prediction of take up as benefits to the supplier. One respondent felt that since the contract had been negotiated, it must by definition be of equal mutual benefit. This is a view which is difficult to uphold given the absence of any meaningful negotiations in the process. One respondent, suggesting that both parties equally benefit, felt that both could benefit more if the N.H.S. placed a year's order instead of a year's estimate.

(v) Improvements suggested

The officers were provided with an open question, number 21, in which they could note spontaneously any desired improvements in any feature of the contract system. The answers ranged over the whole spectrum of aspects of the process.

The inflexibility of the system was noted by six pharmacists and three supplies officers. In contrast three supplies officers and one pharmacist regretted the lack of commitment by or pressures on health authorities to ensure compliance with the contract.

More utilisation of expert skills of pharmacists and supplies officers was referred to by two pharmacists and three supplies officers, some suggesting permanent negotiating and monitoring terms.

More improved management information, including computerisation and word processing, more accurate estimates and records of uptake, was mentioned by six pharmacists and three supplies officers.

Greater co-operation between Regions was suggested by two pharmacists.

Other suggested improvements were improved QC input, more influence from users on packaging and presentation,and more flexibility in dealing with defaulting suppliers, each being listed by one pharmacist, whereas supplies officers sought a reduction in delivery points, no changes at all, greater understanding by suppliers, particularly

wholesalers, of the objectives of contracts, and more flexibility in achieving direct or wholesaler deliveries. Each of those was mentioned by one officer.

It is useful to contrast those improvements with the disadvantages of the contract system raised previously. As before, the desire for a more flexible approach was particularly common among pharmacists whereas the supplies officers were more inclined to regret the lack of commitment to the rigidity of the system. Considering that it would be primarily the supplies officer whose negotiating skills would be utilised if a more flexible framework were adopted those officers appear somewhat reluctant generally to accept the challenge which would be presented.

(c) Pricing,Tendering and Negotiations

(i) Comparison of prices with other regions

Nine questions were devoted to pricing, tendering and negotiations to try to elucidate in depth the opinions of the NHS officers on the prices charged, the price negotiations which occur or which they would wish to see, the circumstances surrounding a changing market or price fluctuation, and their acceptance or otherwise of restrictions likely to allow a drop in price.

The first aspect confronting the respondent was the price being paid compared with that prevailing under other RHA's. Question 13a asked whether a systematic comparison had been made. The responses are shown in Table 8.23.

At first sight it might seem strange that the vast majority of senior officers do not systematically compare prices with those of other RHA's. But is there any benefit in so doing? It might be thought that such comparison would be very actively encouraged or even made mandatory, by the DHSS.

But DHSS attitude has been equivocal with the result that in only five of the fourteen RHA's in England is a systematic comparison of prices made. A further complication would be the decision on which disciplines should perform that task. One supplies officer in responding "no" added the comment "but the pharmaceutical officer has". In fact that was not the case.

Question 14 asked the officers to denote how they believed their regional prices compared with other regions'. The respondents were given a range of five answers and the results are shown in Table 8.24.

TABLE 8.23: IS SYSTEMATIC PRICE COMPARISON PERFORMED?

	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)	No. of RHA's represented
Yes	23.1%	31	15	5
No	69.2	69	69	11
Occasionally	3.8	-	8	1
Once	3.8	-	8	1

TABLE 8.24: RESPONDENTS' PERCEPTION OF HOW HIS RHA'S PRICES COMPARE WITH OTHERS.

	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)
10% + cheaper	-	-	-
2 - 10% cheaper	23.1%	23	23
The same ± 2%	46.2	54	39
2 - 10% dearer	-	-	-
10% + dearer	-	-	-
No response/Don't know	38.5	31	46

NOTE: Totals of columns exceed 100% because some respondents ticked two boxes.

Table 8.24 shows that none of the senior officers considers his prices to be dearer than other regions'. Considering this result together with that of the previous Table it is remarkable that with so little comparison actually occurring so many, 62%, are prepared to hazard a guess and yet in so doing to assume that their prices are no dearer than their neighbours'.

At least one could have expected all to respond "the same", but none wishes to believe that his prices are dearer.

(ii) Time spent in negotiation/discussion with suppliers

In order to elicit some realistic answers to the question of time spent in negotiation/discussion with potential suppliers, respondents were asked in question 23 to comment on whether they felt six man days per year was above, below or equal to the time spent in their regions on discussions on prices before contract award, and in question 24 to estimate that time. The results are shown in Tables 8.25 and 8.26. So as to quantify the average time spent on price discussions an assumption is made that the descriptive term of Table 8.25 "less than 6 man days per year" is 3 and "more than 6 man days per year" is 9. By this means pharmacist respondents can be assumed to feel that on average 7.0 man days per year is spent on price discussions and supplies officers 5.7 man days per year.

Analysis of data shown in Table 8.26 provides an average pharmacist response of 9.7 and a supplies officer response of 10.25 man days per year. One can assume, therefore, that the perceived time spent is between 6 and 10 man days per year.

Opinion on this topic is divided, with great inter-Regional variation. The two subsequent questions dealt with whether the respondent thought that the time spent on price negotiations with suppliers was adequate or otherwise and reasons were sought. The responses to the former are shown in Table 8.25.

Chi square analysis of the data demonstrated in Table 8.25 to try to elucidate any relationship between perceived time spent on price negotiation and thoughts on the adequacy of that time was considered but necessarily rejected owing to the small number of responses. Despite that restriction the impression produced by the findings on examination of Table 8.27 is of little relationship between perceived time spent on price discussion and its considered adequacy. Hypothesis 4 is therefore validated for buyers.

TABLE 8.25: PERCEIVED TIME AND ADEQUACY OF TIME SPENT ON PRE-AWARD PRICE DISCUSSION.

Response	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)
Less than 6 man days per year	26.9%	15	38
About 6 man days per year	11.5	15	8
More than 6 man days per year	34.6	38	31
Inadequate	46.2	46	46
About right	42.3	46	38

TABLE 8.26: ESTIMATED PERCEIVED TIME SPENT ON PRICE DISCUSSION

	Pharmacists	Supplies Officers
Number of man days per year	About 0, 2, 2, 6, 6, 10-12, 10-15, 12, 15, 30.	0, 0, 2, 6, 12, 12, 20, 30
Average number of man days per year	9.7	10.25

TABLE 8.27: NUMBER OF RESPONDENTS WHO EXPRESSED A VIEW ON ADEQUACY OF PRICE DISCUSSION AND PERCEIVED TIME SPENT ON PRICE DISCUSSION

	Time spent on price discussion considered to be			
	Too much	About right	Too little	Total
Price discussion up to 6 man days	0	3	5	8
Price discussion about 6 man days	0	2	1	3
Price discussion over 6 man days	0	4	5	9
TOTAL	0	9	11	20

Despite a considerable spread of responses to the question of actual time spent on negotiating price there is a considerable body of opinion which suggests that the time spent discussing prices is either too little or about right. No respondent considered the time too much. The open question, number 26, sought comments on this topic. Those respondents who felt that too little time was spent on price negotiations felt that an increase would enable the NHS to derive benefit. One felt a need for improvement of grade of staff with time available with one specifying the need for a full time suitably motivated officer. Two felt that there needs to be a commitment to buy by the NHS. Two supplies officers referred to the public accountability limitation on the use of negotiating skills. Three pharmacists and three supplies officers referred to the formality and lack of contact with suppliers and the possibility of the NHS using its bargaining power to its own advantage if negotiations occurred. Those who responded that the time spent on negotiation was about right suggested that it allows RHA staff to keep in touch with drug purchase/usage (2 pharmacists) and the public accountability requirement precludes price negotiation (2 supplies officers).
In general the comments reflect those reported previously with a desire on the part of both disciplines for more negotiation and discussion with potential suppliers so as to improve the service and prices charged to the NHS.

(iii) Retendering

The circumstances in which the option to retender during a contract period should prevail were provided in question 29. The responses are shown in Table 8.28.

It is clear from examination of Table 8.28 that NHS senior officers consider that poor service or deliveries and an unacceptable request for a price increase are good grounds for retendering. That opinion was almost unanimous. The two disciplines' opinions were virtually identical on those topics. Of slightly less importance with 81% responses was the retender when the product was subsequently shown to be not to specification. Whereas one might have predicted the pharmacists to give this item more weight Table 8.28 shows that supplies officers considered it more important. An "unsatisfactory new product" resulted in 62% responses, "a drug coming off patent" 46%,with less interest in "arrival of new significant drug" (27% responses), "change in price structures" (27% responses),

TABLE 8.28: CIRCUMSTANCES IN WHICH RETENDERING SHOULD OCCUR

	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)
Drug comes off patent	46.2%	38	54
Unacceptable request for price increase	92.3	92	92
Poor service/deliveries from supplier	96.2	100	92
Unsatisfactory new product	61.5	62	62
Product subsequently shown not to specification	80.8	77	85
Likely contract winner tendered late	7.7	8	8
Arrival of new significant drug	26.9	38	15
Significant change in prescribing habits	26.9	38	15
Change in price structures	26.9	15	38
Tender documents lost or failed to arrive	19.2	23	15

"significant change in prescribing habits" (27% responses), and "tender documents lost or failed to arrive" (19% responses). There is little desire for retendering in the event of a likely contract award winner tendering late, with 8% responses.

Additional items proferred were "quality not matching samples", "significant fall in market price" or "poor paper work (invoicing etc.) from supplier", "bankruptcy" or "total inability to supply", each receiving one mention.

There should, in the opinion of the respondents, be scope to change or cancel contracts. As regards the unacceptability of price increase requests that topic was raised in question 30. Respondents were asked what price increase should be tolerated before retendering should occur and the results are shown in Table 8.29.

No general consensus appeared from the results. In addition one supplies officer suggested "above inflation rate" and four supplies officers stated "depends on competitor prices". In conformity with standard practice, chi-square tests were not performed as the numbers in a contingency table would be too small to yield a statistically acceptable result. No major conclusions can be determined from that question.

(iv) Acceptance of restrictions to enable price reductions to be offered

Pharmaceutical suppliers have suggested, as a means of reducing prices, some restrictions. The opinion of respondents on those restrictions was sought in question 33 and reproduced in Table 8.30.

Table 8.30 shows that payment at the beginning of the year would be unacceptable to a large number of each discipline with none accepting it. 42% respondents would regard guaranteeing to buy a particular uptake as being unacceptable, whereas 46% would view it as being acceptable.

The most acceptable restriction was a reduced number of buying points (85% respondents) with 4% against. Another acceptable restriction with only 15% against was a reduced number of delivery points (73% respondents). Less frequent deliveries though unacceptable to 19% would be acceptable to 62%. A two year contract instead of a one year one would be unacceptable to 12% but acceptable to 77% respondents. When asked to nominate those restrictions they would be most pleased to accept, the two year contract emerged with 54% votes, reduction in buying points 42%, reduction in delivery points 31%, guaranteed

TABLE 8.29: MAXIMUM PRICE INCREASE BEFORE RETENDERING

	All Respondents (n=26)	Pharmacists (n=13)	Supplies Officers (n=13)
0 - 3%	3.8%	-	8
1 - 3%	3.8	8	-
4 - 10%	23.1	31	15
11 - 20%	11.5	15	8
More than 20%	7.7	-	15

TABLE 8.30: ACCEPTABILITY OF RESTRICTIONS

	Unacceptable			Acceptable			Greatly Acceptable		
	All Respondents (n=26)	P (n=13)	S (n=13)	All Respondents (n=26)	P (n=13)	S (n=13)	All Respondents (n=26)	P (n=13)	S (n=13)
Guaranteed drug quantity uptake	42.3%	46	38	42.3	38	46	19.2	8	31
Reduced number of buying points	3.8	8	-	80.8	85	77	38.5	38	38
Reduced number of delivery points	15.4	15	15	69.2	69	69	26.9	31	23
Less frequent deliveries	19.2	15	23	57.7	54	62	3.8	-	8
Payment at beginning of financial year	84.6	77	92	-	-	-	-	-	-
2 year contract instead of 1 year	11.5	8	15	73.1	77	69	50	46	54
All	-	-	-	3.8	8	8	3.8	-	8
None	-	-	-	3.8	-	8	3.8	-	8

NOTE: Responses under "greatly acceptable" have been included in "acceptable" to provide a realistic comparison.

drug quantity uptake 23%,and less frequent deliveries 8% votes. On their own these preferences do not impart a great deal of information but if it is knownhow much suppliers would in fact be prepared to reduce prices in the presence of any of the restrictions listed then a realistic picture could emerge of the cost/benefit relationship. This information is provided by the questionnaire submitted to pharmaceutical suppliers and referred to later.

CHAPTER 9

INDUSTRY CENSUS

The census of senior pharmaceutical industry personnel enabled the acquisition of results and inferences presented under the following headings:-

(a) Organisation of Contracts	(i)	Changes in the last five years
	(ii)	Duration of contract
	(iii)	Variation between RHA's
(b) Attitudes towards contracts	(i)	Interest in hospital sales and satisfaction with contract system
	(ii)	Disadvantages
	(iii)	Advantages
	(iv)	Beneficiaries
	(v)	Improvements suggested
(c) Pricing and tendering	(i)	Inter-Regional variation in price
	(ii)	Factors influencing price
	(iii)	Estimates of uptake
	(iv)	Price discussions
	(v)	Communications
	(vi)	Retendering
	(vii)	Methods of reducing prices
(d) Patents		
(e) Deliveries		

(a) Organisation of Contracts

(i) Changes in the last five years

The noted changes in contract procedure during the last five years in response to question 4 are shown in Table 9.1. Other prompted responses were: buying guide/separation of proprietaries and generics 6.0%, lack of conformity between regions 3.6%, little or no change in procedure 4.8%, more QC involvement/want inspection of premises 2.4%.

TABLE 9.1: CHANGES IN CONTRACT PROCEDURE IN PAST FIVE YEARS

Changes Noted	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Different relative involvement of pharmacists and supplies officers	44.0%	45	55	36	48	38	46	50	42	41	44	44	36	43	51
Different conditions of contract	28.6	39	25	21	44	25	18	32	33	22	29	25	32	33	23
More complex form filling now	28.6	29	30	27	41	33	15	32	25	28	29	25	29	24	31
Less complex form filling now	10.7	13	10	9	11	13	9	11	17	6	12	6	4	10	17
Different starting dates	40.5	42	35	42	48	25	46	50	29	41	41	38	46	43	34
More drugs now on tender forms	21.4	16	20	27	11	33	21	21	21	22	22	19	29	10	23
Fewer drugs now on tender forms	28.6	26	35	27	41	25	21	25	33	28	32	13	21	29	34
Changed duration of contract	51.2	55	50	49	59	50	46	54	46	53	56	31	50	48	54

Individual responses (1.2% of respondents) were: lack of appreciation between brands, decreased accuracy of estimates, rationalisation programmes with more central buying, penalty clauses, requirements for quantities static, no up to date planning, more competition from wholesalers, statistical information requirements, variation in what is included, increased tendency for absence of quantity per item, and less provision to offer equivalent preparations.

Clearly the suppliers perceive a change in NHS personnel involved over the last five years, with 44% noting this. A majority note the changed duration of contract. 41% refer to the different starting dates of contracts, with substantial minorities referring to the different conditions of contract (29%), more complex form filling (29%), and fewer drugs on tender form now (29%). Whereas 29% regard form filling as being more complex now, 11% feel it is less so, and although 29% cite fewer drugs on tender forms now, 21% refer to more now.

Breakdown of the results into categories highlights the large divergence of view on change in conditions of contract held by companies of various sizes. The larger the companies the more weight given to this factor. Possibly large businesses which are contracting more frequently perceive this most strongly. In a similar way they respond to "more complex form filling". Those responses suggest that the larger the company's hospital sales the more it desires standardisation and simplicity in forms used, an obvious desire given the number of tenders the large company tends to submit.

(ii) Duration of Contract

The changed contract duration referred to by 51% of respondents to question 4 was the subject of questions 22 and 23 in which the respondents were asked their preference for contract duration and reasons. The replies are shown in Table 9.2.

The majority (60%) of respondents prefer a one year duration of contract with an additional 6% favouring an even shorter duration. Clearly some two thirds of respondents favouring a duration of one year or less is a factor which must be considered by NHS staff and that response must be contrasted with the 25% preferring two years or more. There appears to be little support for contracts of less than one year or more than two years. Breakdown into categories shows that companies which supply through wholesalers prefer one

TABLE 9.2: PREFERRED DURATION OF CONTRACT

Choice of Contract duration	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Less than one year	6.0%	7	-	9	4	4	9	11	-	6	6	6	-	14	6
One year	59.5	61	55	61	67	54	58	54	75	53	62	50	82	38	54
Two years	23.8	23	30	21	22	29	21	32	13	25	25	19	14	33	26
More than two years	1.2	3	-	-	-	4	-	-	-	3	2	-	-	-	3
No preference	2.4	-	10	-	-	-	6	-	-	6	-	13	-	-	6
No response	7.1	7	5	9	7	8	6	4	13	6	6	13	4	14	6

year to two year contracts in the ratio of 82% to 14%.

The reasons for those preferences of contract durations provide background and are summarised below. It must be emphasised that those responses represent the vast majority of those returning the completed questionnaire document.

Those respondents who preferred a one year contract thought it allowed flexibility to cope with pack changes, price increases and shortfall in uptakes, as well as being administratively more convenient and cheaper. A one year cycle parallels the industry cycle of production, sales budgeting and profitability.

The two year contract was thought preferable by some industrialists since it allowed a reasonable period for planning production runs and reduced paperwork for both parties. It was suggested that a two year contract allowed greater scope for bulk delivery and extra discounts. The increasing practice of submitting half the drug schedule each year for a two year contract was favourably remarked upon.

If a scientifically based, objective assessment of administrative costs to the NHS of the various durations were to be performed, then those views would help to predict the likely opinions of and problems for the industry regarding any alterations envisaged.

(iii) Variation between RHA's

Question 26 sought opinions on the awareness by respondents of specified and unspecified variations between health authorities in contract procedures. Results are shown in Table 9.3. The unprompted responses were:-

increase in buying guides
bulk purchasing and ward pack requests
calling for samples
lines of communication and awareness
brand names versus generic names
bias towards some companies
information required
timing of communication re tenders/offers etc.
way estimates are expressed - some two year, some one year.

A large majority, 83%, note the variation in starting dates with smaller majorities referring to variation in number of drugs on tender forms (73%), durations (70%), complexity of documents (66%) and relative officer involvements (61%).

TABLE 9.3: VARIATIONS BETWEEN HEALTH AUTHORITIES

Variations between Health Authorities	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Relative involvement of pharmacists and supplies officers	60.7%	68	65	52	71	58	55	57	63	63	60	63	50	57	71
Complexity of documents	65.5	65	70	64	82	63	55	75	58	63	69	50	54	67	74
Conditions of contract	42.9	39	55	39	56	42	33	54	46	31	47	25	43	43	43
Starting date of contract	83.3	84	75	88	82	79	88	82	75	91	84	81	79	86	86
Number of drugs on tender form	72.6	68	75	76	74	67	76	71	75	72	74	69	68	76	74
Duration of contract	70.2	65	80	70	71	75	67	75	63	72	74	56	68	62	77

It is hard to justify the existence of some of those differences between portions, albeit large ones, of a single NHS organisation. In particular the size, complexity, duration and staff involved are characteristics which must have an ideal value, given the relative similarity between RHA profiles and it is suggested that thought be given to these by decision-makers.

Examination of the responses according to firms' categories highlights a gradation from the large sellers to small sellers for "involvement of pharmacists and supplies officers", "complexity of documents" and "conditions of contract" with the largest firms giving the largest response in each case.

That is probably a reflection of the greater tendering performed by larger companies and so those factors are perceived more strongly by them.

There is a gradation of response to "conditions of contract" depending on relative value of hospital sales, with those supplying mainly the community sector (general practice) noting this more than the average or hospital suppliers. This is probably a response to the difference, not between RHA's themselves, but between RHA's and general practice. Hospital sellers find the difference in conditions between RHA's less noticeable.

(b) Attitudes towards Contracts

(i) Interest in hospital sales and tendering, and satisfaction with contract system

The questionnaire document was commenced with simple questions, the first being whether or not the reader had submitted tenders for an English Health Authority contract within the last two years. This was the only question which was answered by every respondent so its choice as lead-in question must be considered justified. Table 9.4 shows the answers given, with a large majority, almost 92%, having tendered within the last two years. This would lead one to believe that drug contracting is popular with companies, a thought considered later. Statistical analysis shows that distribution method and response to that question are significantly related, the significance being 0.0379, with direct distributors all responding positively, those with mixed distribution methods showing a 91% positive response and those who use wholesaler routes showing an 82% response. This result was expected and probably reflects the reliance upon the wholesaler himself to tender shown by several companies who prefer wholesaler distribution.

TABLE 9.4: TENDERING PATTERN WITHIN THE LAST TWO YEARS

Have/have not tendered	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Have	91.7%	97	90	88	96	92	88	93	92	91	91	94	82	91	100
Have not	8.3	3	10	12	4	8	12	7	8	9	9	6	18	10	-

Boxed-in responses are significant ($p < 0.05$)

Question 1(a) sought to quantify that interest in tendering and the results are shown in Table 9.5.

A majority, 51%, have submitted 16 or more tenders in the past two years. A further 20% have submitted 11 to 15 tenders. It must be remembered that half the RHA's have two year contracts as opposed to one year ones organised by six, and so the maximum number of tenders would be about nineteen for two years.

Question 1(a) confirms the high level of interest apparently shown by companies toward tendering as displayed in question 1. Statistical analysis shows a significant (0.0130) relationship between size of hospital sales and number of tenders submitted. There is a gradation of interest seen with large firms submitting more tenders than smaller ones. That questionnaire result would be predictable. Speculation might give rise to the opinion that the amount of work involved in completing tender documents dissuades the smaller companies, with presumably fewer staff, from regular tendering. The result of this must be that the large companies, in terms of hospital sales, are likely to become larger and the small smaller. A large untapped reservoir of pharmaceutical goods is likely to develop, as far as hospitals are concerned, if this suggested link prevails, with the inherent danger of a monopoly evolving.

The historical perspective adds to the picture of interest in hospital drug tendering which emerges. Question 2 posed the options of more, the same, or less tendering than five years ago with the responses being shown in Table 9.6. Whereas about half of the respondents are submitting the same number of tenders, about 12% are submitting less, with 31% submitting more.

Apparently tenders have not lost their interest for companies generally. The only major categories of company to display substantial minority opinion for less tendering now than five years ago are those who mainly supply the community sector of the NHS (25%) and those with mixed distribution methods (24%). Statistical testing showed a significant (0.0421) relationship between distribution method and present tendering compared with the past with a considerable body of opinion among direct distributors that more or the same tendering than in the past is occurring (97%) against 71 or 72% for the other categories of distribution method. This appears to confirm the finding of question 1 that tendering is less favoured by non-direct distributors of pharmaceutical goods and this role of tendering is being carried out for them to a

TABLE 9.5: NUMBER OF TENDERS SUBMITTED WITHIN THE PAST TWO YEARS

Number of tenders submitted in past two years	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
1 or 2	1.2%	3	-	-	-	-	3	-	4	-	2	-	4	-	-
3 to 5	9.5	3	15	12	-	4	21	18	-	9	10	6	18	5	6
6 to 10	9.5	10	-	15	7	-	18	4	8	16	7	19	7	14	9
11 to 15	20.2	23	15	21	19	25	18	18	29	16	22	13	11	33	20
16 or more	51.2	58	60	40	70	63	27	54	50	50	50	56	43	38	66
No reply	8.3	3	10	12	4	8	12	7	8	9	9	6	18	10	-

Boxed-in responses are significant ($p < 0.05$)

TABLE 9.6: NUMBER OF TENDERS SUBMITTING NOW COMPARED WITH NUMBER SUBMITTED FIVE YEARS AGO

Number of tenders currently submitting compared with five years ago	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
More	31.0%	39	20	30	19	33	39	32	25	34	29	38	29	33	31
About the same	51.2	48	60	49	70	50	36	39	63	53	52	50	43	38	66
Less	11.9	7	15	15	11	8	15	25	8	3	13	6	14	24	3
No reply	6.0	7	5	6	-	8	9	4	4	9	6	6	14	5	-

Boxed-in responses are significant ($p < 0.05$)

greater extent now than five years ago by wholesalers themselves.
The actual satisfaction with the contract system was the subject of question 3. A range of responses to this question is seen on examination of Table 9.7.
There is a bias toward dissatisfaction with the contract system with some 36% expressing a degree of dissatisfaction and some 21% satisfied. Generic manufacturers are the group which expresses dissatisfaction most strongly with 13% very dissatisfied and provides a counterweight to the 13% satisfied. Although only 4% of large hospital sellers claim to be very dissatisfied, the addition of the 52% stating dissatisfaction provides a 56% sample of that group unhappy to some degree with the system. Whereas these results are not significant statistically they must sound a cautionary note to those decision-makers in the NHS who might be tempted to complacency in their thoughts on the system.
To add a further dimension to the emerging picture the degree of importance, irrespective of volume, attached to hospital sales compared to total sales was questioned in number 32. All respondents claimed they were important to some degree. The most notable result, though not statistically significant, is seen from examination of Table 9.8 in which apparently those companies which preferentially supply hospitals show a much higher response (81%) for "very important" than average sellers (50%) or community sellers (46%). This result might have been predicted and helps show the responses to be reliable and reasonably accurate.
The reason for the degree of importance, irrespective of volume, attached to hospital sales compared with total sales was the question posed in number 33. Many respondents, some two thirds of all who replied, took the opportunity provided to give their reasons for their view on importance of hospital sales. Those respondents who felt hospital sales were of marginal importance referred to the volume of hospital sales being low, despite the clear wording of the question. Those who felt hospital sales were important or very important referred again to volume of sales as well as the prestige of selling to hospitals, the encouragement of G.P. sales, the immediate and instantly measurable sales, promotional endorsement and the motivation of representatives provided.
No further information was forthcoming from that question.

TABLE 9.7: SATISFACTION WITH PRESENT DRUG CONTRACT SYSTEM

Degree of satisfaction with present drug contract system	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative Importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very satisfied	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Satisfied	21.4%	16	30	21	7	29	27	25	17	22	24	13	32	14	17
Neither satisfied nor dissatisfied	39.3	42	35	39	33	46	39	39	42	38	40	38	43	29	43
Dissatisfied	32.1	36	25	33	52	21	24	36	38	25	31	38	21	48	31
Very dissatisfied	3.6	7	5	-	4	-	6	-	-	9	2	13	-	5	6
No reply	3.6	-	5	6	4	4	3	-	4	6	4	-	4	5	3

TABLE 9.8: IMPORTANCE ATTACHED TO HOSPITAL SALES COMPARED WITH TOTAL SALES

Hospital sales' importance compared with total sales	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	60.7%	55	65	64	71	58	55	46	50	81	62	56	54	62	66
Important	33.3	42	30	27	22	38	39	50	42	13	35	25	43	33	26
Marginally important	3.6	3	5	3	4	-	6	4	4	3	2	13	-	5	6
Little importance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No importance at all	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No reply	2.4	-	-	6	4	4	-	-	4	3	2	6	4	-	3

(ii) Disadvantages of Contracts

The disadvantages of contracts were considered under questions 9 and 10. The former listed specific items with space for additional unprompted ones and the degree to which each was thought a disadvantage was marked. The results are tabulated in Tables 9.9 to 9.17. Examination of Table 9.9 shows "formality" as being classed in the main "not very important". Table 9.10 demonstrates "paperwork" as being not very important. "Inflexibility" is generally considered important, as seen from Table 9.11. Table 9.12 shows "impersonal" to be a marginally important disadvantage. "No guaranteed uptake" is very important, as seen from Table 9.13. Table 9.14 gives rise to the opinion that "administratively costly" would be thought to be a not very important disadvantage of contracts. "Too many contracts nationally" is not very important (Table 9.15), "too few contracts nationally" is not important at all (Table 9.16) and "organisation of contract biased in favour of health authority" is generally thought very or marginally important, as seen from Table 9.17.

Scrutiny of summary Table 9.18 shows "no guaranteed uptake" as being that disadvantage thought to be very important by more respondents than any other, with 39% noting it at that degree. Next in order of mention was "bias in favour of health authority" with 24%. For items considered not a disadvantage at all "too few" received 38% of mentions with "formal" at 23% and "too many" at 22%. It would appear that respondents generally feel that contracts should provide for guaranteed uptake, less bias in favour of the NHS, and less formality. Analysis of respondents by categories showed that the impersonal nature of contracts, losing contact with individual hospitals, was related significantly to both country of origin of supplier and distribution method. In the case of country of origin the result was highly significant at 0.0090 and in the case of distribution method it was significant (0.0226).

The responses for country of origin show U.K. companies attaching less importance to the disadvantages implicit in impersonal contracts while U.S. companies strongly disagree with the term "impersonal" being applied to contracts. In the case of distribution method companies who supply direct are more likely (29%) to regard loss of contact with individual hospitals as being not a disadvantage at all compared with other companies (4 or 5%). It must be assumed that those

TABLE 9.9: DEGREE OF DISADVANTAGE OF FORMALITY IN CONTRACTS

Formality as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	2.4%	3	-	3	4	-	3	-	4	3	3	-	4	-	3
Important	10.7	7	15	12	7	8	15	4	17	13	6	31	11	10	11
Marginally important	22.6	16	30	24	26	33	12	21	21	25	25	13	18	24	26
Not very important	28.6	36	5	36	37	21	27	39	33	16	29	25	29	38	23
Not important at all	22.6	26	20	21	19	21	27	29	13	25	25	13	18	19	29
No reply	13.1	13	30	3	7	17	15	7	13	19	11	19	21	10	9

TABLE 9.10: DEGREE OF DISADVANTAGE OF PAPERWORK IN CONTRACTS

Paperwork as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	13.1%	16	10	12	19	21	3	11	17	13	10	25	11	14	14
Important	13.1	7	10	21	7	25	9	11	17	13	13	13	18	10	11
Marginally important	23.8	26	30	18	30	17	24	18	29	25	24	25	25	19	26
Not very important	25.0	32	5	30	26	17	30	36	21	19	28	13	29	33	17
Not important at all	11.9	10	15	12	11	13	12	18	-	16	13	6	-	14	20
No reply	13.1	10	30	6	7	8	21	7	17	16	19	19	18	10	11

TABLE 9.11: DEGREE OF DISADVANTAGE OF INFLEXIBILITY IN CONTRACTS

Inflexibility as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	11.9%	7	15	15	11	21	6	18	8	9	12	13	7	5	20
Important	28.6	23	30	33	37	21	27	25	33	28	29	25	39	33	17
Marginally important	25.0	32	15	24	26	25	24	14	33	28	21	44	11	33	31
Not very important	14.3	19	10	12	15	17	12	25	4	13	18	-	11	14	17
Not important at all	7.1	7	5	9	7	4	9	7	4	9	9	-	7	5	9
No reply	13.1	13	25	6	4	13	21	11	17	13	12	19	25	10	6

TABLE 9.12: DEGREE OF DISADVANTAGE OF IMPERSONAL NATURE OF CONTRACTS

Impersonal as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	10.7%	16	15	3	11	13	9	7	8	16	10	13	7	5	17
Important	20.2	16	5	33	19	25	18	32	13	16	21	19	25	38	6
Marginally important	25.0	26	15	30	22	17	33	18	33	25	24	31	25	19	29
Not very important	16.7	10	20	21	11	21	18	25	13	13	19	6	21	19	11
Not important at all	14.3	23	10	9	26	13	6	14	21	9	15	13	4	5	29
No reply	13.1	10	35	3	11	13	15	4	13	22	12	19	18	14	9

Boxed-in results are significant for country of origin ($p < 0.01$) and distribution ($p < 0.05$)

TABLE 9.13: DEGREE OF DISADVANTAGE OF NO GUARANTEED UPTAKE IN CONTRACTS

No guaranteed uptake as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative Importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very importaht	39.3%	39	30	46	41	50	30	36	42	41	38	44	39	48	34
Important	31.0	29	15	42	22	38	33	46	29	19	35	13	32	38	26
Marginally important	13.1	13	25	6	11	13	15	11	13	16	7	38	18	5	14
Not very important	6.0	10	5	3	11	-	6	-	8	9	7	-	4	-	11
Not important at all	3.6	3	5	3	7	-	3	-	4	3	3	6	-	-	9
No reply	7.1	7	20	-	7	-	12	7	4	9	9	-	7	10	6

Boxed-in results are significant ($p < 0.05$)

TABLE 9.14: DEGREE OF DISADVANTAGE OF ADMINISTRATIVE COST

Administrative cost as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	6.0%	7	-	9	11	8	-	4	8	6	4	13	4	10	6
Important	7.1	3	5	12	15	-	6	11	4	6	6	13	11	10	3
Marginally important	21.4	13	25	27	26	17	21	14	25	25	21	25	21	10	29
Not very important	34.5	39	15	42	22	42	39	46	38	22	38	19	36	38	31
Not important at all	17.9	26	20	9	19	21	15	14	17	22	18	19	7	24	23
No reply	13.1	13	35	-	7	13	18	11	8	19	13	13	21	10	9

Boxed-in results are significant ($p < 0.05$)

TABLE 9.15: DEGREE OF DISADVANTAGE OF TOO MANY CONTRACTS NATIONALLY

Too many contracts as degree of disadvantage:	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	9.5%	7	5	15	15	8	6	7	8	13	9	13	7	14	9
Important	6.0	13	-	3	7	8	3	4	4	9	4	13	7	-	9
Marginally important	19.0	19	20	18	26	4	24	21	33	6	21	13	14	33	14
Not very important	29.8	23	30	36	15	38	36	39	21	28	29	31	36	24	29
Not important at all	21.4	26	20	18	26	25	15	18	21	25	22	19	11	19	31
No reply	14.3	13	25	9	11	17	15	11	13	19	15	13	25	10	9

TABLE 9.16: DEGREE OF DISADVANTAGE OF TOO FEW CONTRACTS NATIONALLY

Too few contracts as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	8.3%	13	5	6	15	4	6	7	-	16	9	6	7	-	14
Important	6.0	-	5	12	4	4	9	11	8	-	6	6	14	5	-
Marginally important	7.1	7	-	12	-	13	9	11	4	6	7	6	11	10	3
Not very important	17.9	16	15	21	15	21	18	21	13	19	16	25	14	10	26
Not important at all	38.1	45	30	36	44	33	36	39	50	28	40	31	18	57	43
No reply	22.6	19	45	12	22	25	21	11	25	31	22	25	36	19	14

Boxed-in results are significant ($p < 0.05$)

TABLE 9.17: DEGREE OF DISADVANTAGE OF BIAS IN FAVOUR OF HEALTH AUTHORITY

Bias to NHS as degree of disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	23.8%	13	30	30	22	25	24	29	25	19	22	31	32	24	17
Important	9.5	10	5	12	7	17	6	11	8	9	12	-	18	5	6
Marginally important	25.0	29	10	30	30	25	21	25	25	25	27	19	14	33	29
Not very important	14.3	19	10	12	7	25	12	14	17	13	12	25	11	14	17
Not important at all	8.3	7	15	6	11	4	9	7	8	9	9	6	4	14	9
No reply	19.0	23	30	9	22	4	27	14	17	25	19	19	21	10	23

TABLE 9.18: DEGREE OF DISADVANTAGE OF VARIOUS FACETS

Disadvantages	Very important (n=84)	Important (n=84)	Marginally important (n=84)	Not very important (n=84)	Not important at all (n=84)	No reply (n=84)
Formality	2.4%	10.7	22.6	28.6	22.6	13.1
Paperwork	13.1	13.1	23.8	25.0	11.9	13.1
Inflexibility	11.9	28.6	25.0	14.3	7.1	13.1
Impersonal	10.7	20.2	25.0	16.7	14.3	13.1
No guaranteed uptake	39.3	31.0	13.1	6.0	3.6	7.1
Administrative cost	6.0	7.1	21.4	34.5	17.9	13.1
Too many contracts	9.5	6.0	19.0	29.8	21.4	14.3
Too few contracts	8.3	6.0	7.1	17.9	38.1	22.6
Bias to NHS	23.8	9.5	25.0	14.3	8.3	19.0

companies who deal direct feel that the advantages of contracts, whatever they may be, do not in themselves create an impersonal relationship with hospitals.

No guaranteed uptake as a disadvantage was significantly related to products at 0.0141, with proprietary producers in general considering it an important or very important disadvantage whereas generic producers regard it as very important or marginally important. The reason for this finding can be speculated upon.

Administrative costs are related significantly to country of origin of companies, with a significance of 0.0125. U.K. companies feel administrative costs to be of less importance as a disadvantage of contracts than do U.S. or European firms though in general little weight is given to this factor by companies in the total sample.

At a significance of 0.0210 distribution method of company is related to opinion on "too few contracts nationally" as a disadvantage. Direct suppliers strongly favour more contracts as compared with those using wholesaler routes.

Contracts' bias toward the NHS is the strongly held view of companies supplying via wholesalers compared with direct suppliers, though the finding is not statistically significant.

Whereas question 9 sought a ranking for degree of disadvantage for each specific item, question 10 sought a ranking of those items for the greatest degree of importance. The results are demonstrated in Tables 9.19 to 9.21, and summarised in Table 9.22.

"No guaranteed uptake" is shown as being the most important disadvantage with 45% noting that as first choice with "inflexibility" recorded by 16% and "bias in favour of health authority" with 11%. The list of second most important disadvantages confirms the three topics uppermost in companies' thoughts.

U.S. companies accord a high score to "too much paperwork" as do companies with large absolute hospital sales.

Ranking of items listed in question 9 by scoring 3 for the most important noted in question 10, 2 for second most important and 1 for third most important produces the following list:-

No guaranteed uptake 195, bias 97, inflexible 90, impersonal 57, paperwork 52, formality 18, too many 13, administratively costly 11, too few 2.

The unprompted replies listed as "others" for questions 9 and 10 were as follows:-

TABLE 9.19: MOST IMPORTANT DISADVANTAGE OF CONTRACTS

Most important disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Too formal	1.2%	3	-	-	4	-	-	-	-	3	-	6	-	-	3
Too much paperwork	9.5	16	10	3	15	8	6	7	17	6	10	6	11	14	6
Inflexible	15.5	16	15	15	11	21	15	14	25	9	16	13	21	10	14
Impersonal	7.1	-	10	12	7	-	12	7	4	9	9	-	4	14	6
No guaranteed uptake	45.2	45	35	52	44	50	42	54	25	53	44	50	50	29	51
Administratively costly	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Too many contracts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Too few contracts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bias in favour of NHS	10.7	7	10	15	7	13	12	7	21	6	7	25	11	14	9
Others	2.4	3	5	-	4	4	-	4	-	3	3	-	-	5	3
No response	8.3	10	15	3	7	4	12	7	8	9	10	-	4	14	9

TABLE 9.20: SECOND MOST IMPORTANT DISADVANTAGE OF CONTRACTS

Second most important disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Too formal	3.6%	7	5	-	4	8	-	4	4	3	2	13	4	-	6
Too much paperwork	6.0	3	5	9	7	8	3	-	13	6	4	13	4	5	9
Inflexible	13.1	13	20	9	15	13	12	18	13	9	12	19	7	14	17
Impersonal	10.7	19	5	6	15	13	6	7	17	9	10	13	14	10	9
No guaranteed uptake	23.8	16	30	27	22	17	30	21	38	16	25	19	18	33	23
Administratively costly	3.6	3	-	6	7	-	3	4	4	3	4	-	-	10	3
Too many contracts	2.4	-	-	6	4	-	3	-	4	3	3	-	7	-	-
Too few contracts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bias in favour of NHS	28.6	29	25	30	22	29	33	43	4	34	29	25	43	14	26
Others	2.4	3	5	-	4	4	-	-	4	3	3	-	-	5	3
No response	6.0	7	5	6	-	8	9	4	-	13	7	-	4	10	6

TABLE 9.2k: THIRD MOST IMPORTANT DISADVANTAGE

Third most important disadvantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Too formal	7.1%	3	5	12	7	-	12	4	8	9	6	13	-	10	11
Too much paperwork	10.7	16	5	9	4	21	9	11	13	9	10	13	11	10	11
Inflexible	16.7	16	10	21	19	8	21	21	17	13	21	-	14	24	14
Impersonal	15.5	13	20	15	19	17	12	21	8	16	15	19	21	10	14
No guaranteed uptake	10.7	13	5	12	4	21	9	14	13	6	10	13	18	19	-
Administratively costly	3.6	-	5	6	7	4	-	-	8	3	3	6	7	-	3
Too many contracts	8.3	10	5	9	15	-	9	14	4	6	9	6	4	10	11
Too few contracts	2.4	3	-	3	4	4	-	4	-	3	3	-	4	-	3
Bias in favour of NHS	8.3	10	10	6	15	8	3	-	21	6	9	6	7	5	11
Others	2.4	3	5	-	4	-	3	-	4	3	2	6	-	-	6
No response	14.3	13	30	6	4	17	21	11	4	25	13	19	14	14	14

TABLE 9.22: DEGREE OF IMPORTANCE OF CONTRACTS' DISADVANTAGES

Disadvantage	Most important (n=84)	Second most important (n=84)	Third most important (n=84)
Formality	1.2%	3.6	7.1
Paperwork	9.5	6.0	10.7
Inflexibility	15.5	13.1	16.7
Impersonal	7.1	10.7	15.5
No guaranteed uptake	45.2	23.8	10.7
Administrative cost	-	3.6	3.6
Too many contracts	-	2.4	8.3
Too few contracts	-	-	2.4
Bias to NHS	10.7	28.6	8.3

Very important

Focuses on price to exclusion of other factors

No meaningful negotiations possible

Omission of certain drugs

Contract not binding

QC - too many duplicating personnel and quality not fully considered

Important

Non standardisation of tender forms

Extreme price competition.

(iii) Advantages of contracts

As a counterweight to the disadvantages, advantages of contracts were considered earlier in the questionnaire in questions 7 and 8. The former question required a decision to be made on the degree of importance to be applied to specific and unprompted advantages. Table 9.23 shows that the advantage of spin off sales being encouraged in general practice is considered generally by companies as important. United States and European companies would think it very important. Relatively large community suppliers consider it very important (50% response), average sellers very important/important (76%) and hospital sellers important 38% or irrelevant 25%. To a degree the result could be predicted and shows the result to be reliable and reasonably accurate. That relationship between relative value of sales and importance of encouragement of G.P. sales was found to be statistically very significant at 0.0088. Examination of the relationship between products and view on encouragement of G.P. sales shows a statistically very significant relationship at 0.0003. Generic suppliers regard it as marginally important or totally irrelevant (62%), in contrast to proprietary producers who feel it is important or very important (76%). "Administrative saving" is shown in Table 9.24. It is generally considered a marginally important advantage with a 30% response. Company profiles do not add much useful information to that description. "Prescribers' brand loyalty" is generally thought important with 31% of the responses, as shown in Table 9.25. Generic manufacturers give it a lower degree of importance than proprietary suppliers as may be predicted. The relative weight given to very important/important/ marginally important is 34%/29%/15% for proprietary suppliers and 6%/38%/31% for generic manufacturers.

"Predictable usage" is thought in the main to be important, with 33% of the responses, as seen in Table 9.26. No major conclusions can be

TABLE 9.23: DEGREE OF ADVANTAGE OF SPIN OFF G.P. SALES IN CONTRACTS

Spin off G.P. Sales as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	32.1%	36	20	36	30	42	27	50	38	13	38	6	32	48	23
Important	34.5	36	30	36	48	29	27	29	38	38	38	19	43	29	31
Marginally important	14.3	7	25	15	4	21	18	18	13	13	10	31	11	5	23
Unimportant	1.2	3	-	-	-	-	3	-	-	3	-	6	-	-	3
Totally irrelevant	9.5	13	15	3	11	4	12	-	-	25	4	31	4	10	14
No reply	8.3	7	10	9	7	4	12	4	13	9	9	6	11	10	6

Boxed-in results are very significant ($p < 0.01$)

TABLE 9.24: DEGREE OF ADVANTAGE OF ADMINISTRATIVE SAVING IN CONTRACTS

Administrative saving as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	4.8%	3	-	9	4	8	3	4	8	3	4	6	-	14	3
Important	25.0	36	40	6	26	29	21	32	21	22	25	25	21	24	29
Marginally important	29.8	26	20	39	33	29	27	29	29	31	31	25	32	19	34
Unimportant	23.8	23	20	27	30	17	24	18	25	28	24	25	14	29	29
Totally irrelevant	8.3	7	5	12	7	13	6	11	4	9	9	6	14	5	6
No reply	8.3	7	15	6	-	4	18	7	13	6	7	13	18	10	-

TABLE 9.25: DEGREE OF ADVANTAGE OF PRESCRIBERS' BRAND LOYALTY IN CONTRACTS

Prescribers' brand loyalty as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	28.6%	26	25	33	33	38	18	43	33	13	34	6	25	48	20
Important	31.0	39	20	30	30	21	39	36	25	31	29	38	32	24	34
Marginally important	17.9	26	25	6	18	21	15	14	21	19	15	31	29	10	14
Unimportant	7.1	-	5	15	4	13	6	4	8	9	7	6	-	10	11
Totally irrelevant	6.0	3	15	3	7	-	9	-	-	16	4	13	4	-	11
No reply	9.5	7	10	12	7	8	12	4	13	13	10	6	11	10	9

TABLE 9.26: DEGREE OF ADVANTAGE OF PREDICTABLE USAGE IN CONTRACTS

Predictable usage as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	9.5%	3	10	15	15	17	-	4	4	19	10	6	7	10	11
Important	33.3	32	25	39	19	38	42	50	21	28	32	38	39	29	31
Marginally important	29.8	36	35	21	41	25	24	29	33	28	34	13	29	29	31
Unimportant	10.7	10	10	12	15	8	9	11	17	6	10	13	7	19	9
Totally irrelevant	7.1	7	10	6	7	4	9	-	8	13	4	19	-	5	14
No reply	9.5	13	10	6	4	8	15	7	17	6	9	13	18	10	3

derived from analysis of company characteristics. "Standardised pack sizes" is unimportant as seen from Table 9.27. 29% gave that response. Degree of importance of standard pack sizes was significantly related to relative sales at a significance value of 0.0465. Community suppliers generally consider standardised pack sizes of much more importance than average sellers, and average sellers more so than hospital sellers. This is predictable given the markets being catered for by each group.

Similarly, though not significantly, generic suppliers attach less importance to that factor than proprietary suppliers.

"Standardised labelling" responses are seen in Table 9.28. It is generally thought unimportant, with 33% of responses. Hospital sellers think it less important than community sellers. Likewise generic suppliers think it less important than proprietary companies. This must be considered a reflection of the target markets and their needs.

Absence of hospital price negotiation was thought in the main to be important, the response being 39%. This is seen from perusal of Table 9.29. No conclusions can be drawn from analysis of the company characteristics.

Standardised deliveries as an advantage of contracts was thought generally marginally important, the response being 30%. Examination of Table 9.30 shows that company characteristics do not add any further information on this subject. Table 9.31 shows summaries.

When asked to rank the advantages in order of importance the results seen in Tables 9.33-34 and Summary 9.35 are produced. "Spin off sales in general practice" are the most important, at a 35% response level.

Next in importance are "encouragement of brand loyalty among prescribers" and "obviating individual hospital price negotiation" each with a response of 16%. "Predictable usage allowing easier satisfaction of needs" received 12% of responses. "Administrative saving" was ranked very low in the list of most important advantages with 6% of responses, but appeared to be the most popular choice at 23% in the "third most important" list. "Standardised pack sizes", "labelling" and "deliveries" are not considered important.

When the responses to question 8 are scored 3 for most important, 2 for second most important and 1 for third most important, the rank order developed is the same as that shown above, the scores being G.P. sales 150, Brand loyalty 110, Obviates individual negotiations 88, Predicts

TABLE 9.27: DEGREE OF ADVANTAGE OF STANDARDISED PACK SIZES IN CONTRACTS

Standardised pack sizes as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	4.8%	7	10	-	7	8	-	-	8	6	4	6	7	-	6
Important	22.6	16	20	30	26	33	12	29	17	22	27	6	14	29	26
Marginally important	13.1	19	10	9	22	4	12	18	13	9	12	19	4	14	20
Unimportant	28.6	29	20	33	22	33	30	32	42	16	29	25	39	33	17
Totally irrelevant	21.4	19	25	21	19	13	30	14	4	41	19	31	18	14	29
No reply	9.5	10	15	6	4	8	15	7	17	6	9	13	18	10	3

Boxed-in results are significant ($p < 0.05$)

TABLE 9.28: DEGREE OF ADVANTAGE OF STANDARDISED LABELLING IN CONTRACTS

Standardised labelling as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	3.6%	3	5	3	-	8	3	-	4	6	3	6	4	5	3
Important	16.7	13	30	12	22	13	15	21	21	9	19	6	14	19	17
Marginally important	9.5	16	-	9	15	-	12	14	8	6	7	19	-	14	14
Unimportant	33.3	36	25	36	33	42	27	43	42	19	37	19	43	24	31
Totally irrelevant	25.0	19	30	27	26	17	30	14	13	44	21	44	18	29	29
No reply	11.9	13	10	12	4	21	12	7	13	16	13	6	21	10	6

TABLE 9.29: DEGREE OF ADVANTAGE OF NO INDIVIDUAL PRICE NEGOTIATIONS IN CONTRACTS

No individual price negotiation as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	19.0%	29	15	12	22	25	12	29	17	13	19	19	14	19	23
Important	39.3	36	45	39	41	54	27	29	46	44	40	38	43	33	40
Marginally important	16.7	19	10	18	7	8	30	21	17	13	16	19	25	19	9
Unimportant	9.5	3	10	15	7	8	12	14	4	9	10	6	-	14	14
Totally irrelevant	8.3	7	10	9	19	-	6	4	4	16	7	13	7	5	11
No reply	7.1	7	10	6	4	4	12	4	13	6	7	6	11	10	3

TABLE 9.30: DEGREE OF ADVANTAGE OF STANDARDISED DELIVERIES IN CONTRACTS

Standardised deliveries as degree of advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P. above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very important	4.8%	7	-	6	4	13	-	4	4	6	4	6	4	14	-
Important	13.1	13	10	15	15	13	12	18	13	9	15	6	11	14	14
Marginally important	29.8	32	40	21	33	21	33	43	25	22	28	38	29	29	31
Unimportant	25.0	26	-	39	26	33	18	18	33	25	29	6	21	10	37
Totally irrelevant	13.1	13	25	6	15	8	15	7	8	22	9	31	11	14	14
No reply	14.3	10	25	12	7	13	21	11	17	16	15	13	25	19	3

TABLE 9.31: DEGREE OF ADVANTAGE OF VARIOUS FACETS

Advantage	Very important (n=84)	Important (n=84)	Marginally important (n=84)	Not very important (n=84)	Not important at all (n=84)	No reply (n=84)
Spin off GP sales	32.1%	34.5	14.3	1.2	9.5	8.3
Administrative saving	4.8	25.0	29.8	23.8	8.3	8.3
Prescribers' brand loyalty	28.6	31.0	17.9	7.1	6.0	9.5
Predictable usage	9.5	33.3	29.8	10.7	7.1	9.5
Standardised pack sizes	4.8	22.6	13.1	28.6	21.4	9.5
Standardised labelling	3.6	16.7	9.5	33.3	25.0	11.9
No individual price negotiation	19.0	39.3	16.7	9.5	8.3	7.1
Standardised deliveries	4.8	13.1	29.8	25.0	13.1	14.3

TABLE 9.32: MOST IMPORTANT ADVANTAGE OF CONTRACTS

Most important advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Spin off G.P. Sales encouraged	34.5%	39	25	36	37	38	30	50	42	16	40	13	36	52	23
Administrative saving	6.0	10	5	3	4	-	12	4	4	9	4	13	7	5	6
Encourages brand loyalty	15.5	10	15	21	19	8	18	14	17	16	16	13	18	10	17
Predictable usage	11.9	3	15	18	15	17	6	7	4	22	12	13	7	-	23
Standardised pack sizes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standardised labelling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Obviates individual price negotiation	15.5	23	15	9	11	21	15	18	17	13	13	25	14	14	17
Standardised deliveries	2.4	3	-	3	-	4	3	-	4	3	2	6	4	5	-
Others	3.6	3	10	-	7	4	-	4	4	3	4	-	4	5	3
No response	10.7	10	15	9	7	8	15	4	8	19	9	19	11	10	11

TABLE 9.33: SECOND MOST IMPORTANT ADVANTAGE OF CONTRACTS

Second most important advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Spin off G.P. sales encouraged	20.2%	19	20	21	22	21	18	21	21	19	25	-	21	14	23
Administrative saving	10.7	16	10	6	11	4	15	18	4	9	9	19	-	19	14
Encourages brand loyalty	25.0	26	15	30	30	29	18	39	29	9	31	-	25	38	17
Predictable usage	7.1	7	-	12	7	4	9	-	8	13	4	19	7	10	6
Standardised pack sizes	3.6	3	5	3	7	4	-	-	4	6	3	6	7	-	3
Standardised labelling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Obviates individual price negotiation	14.3	16	15	12	7	21	15	11	17	16	12	25	18	5	17
Standardised deliveries	4.8	-	10	6	7	4	3	4	8	3	4	6	7	-	6
Others	2.4	-	10	-	4	-	3	-	-	6	2	6	-	5	3
No response	11.9	13	15	9	4	13	18	7	8	19	10	19	14	10	11

Boxed-in results are significant ($p < 0.05$)

TABLE 9.34: THIRD MOST IMPORTANT ADVANTAGE OF CONTRACTS

Third most important advantage	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Spin off G.P. sales encouraged	6.0%	7	5	6	11	4	3	4	8	6	4	13	7	-	9
Administrative saving	22.6	26	25	18	26	25	18	18	38	16	24	19	18	33	20
Encourages brand loyalty	13.1	16	15	9	19	8	12	4	13	22	12	19	11	14	14
Predictable usage	21.4	19	20	24	7	25	30	36	8	19	24	13	25	14	23
Standardised pack sizes	2.4	7	-	-	7	-	-	-	4	3	2	6	-	-	6
Standardised labelling	1.2	3	-	-	-	4	-	-	-	3	-	6	4	-	-
Obviates individual price negotiation	11.9	10	10	15	19	13	6	21	13	3	15	-	7	19	11
Standardised deliveries	6.0	-	10	9	4	4	9	7	4	6	6	6	14	5	-
Others	2.4	-	-	6	4	-	3	4	4	-	3	-	-	5	3
No response	13.1	13	15	12	4	17	18	7	8	22	12	19	14	10	14

TABLE 9.35: DEGREE OF IMPORTANCE OF CONTRACTS' ADVANTAGES

Advantage	Most important (n=84)	Second most important (n=84)	Third most important (n=84)
Spin off GP sales	34.5%	20.2	6.0
Administrative saving	6.0	10.7	22.6
Prescribers' brand loyalty	15.5	25.0	13.1
Predictable usage	11.9	7.1	21.4
Standardised pack sizes	-	3.6	2.4
Standardised labelling	-	-	1.2
No individual price negotiation	15.5	14.3	11.9
Standardised deliveries	2.4	4.8	6.0

usage 71, Administrative saving 62, Standardised deliveries 23, Standardised pack sizes 9, Standardised labelling 1.

Examination of company characteristics and responses to question 8 shows a significant relationship at 0.0215 for products manufactured, with generic companies giving more weight than proprietary producers to administrative saving, predictable usage and obviates individual hospital negotiation (Table 9.33).

In contrast proprietary companies give more weight to G.P. sales encouragement and brand loyalty encouragement. Those results were predictable given the sales promotion of branded drugs in general practice.

Other advantages quoted by respondents in questions 7 and 8 were as follows:-

Very important

Production scheduling easier and less expensive

Gaining contract award

Sales turnover

Encourages direct buying

Keeps direct account of business - not always known via wholesaler

Improves margin at expense of wholesaler

Important

Improved production planning

Marginally Important

Makes reps job easier.

(iv) Beneficiaries of Contracts

It was hypothesised that any views on contracts held by industry staff would be coloured by their perception of the beneficiaries of the contract system and so questions 11 and 12 sought to analyse this subject.

Question 11 gave four options of party gaining most benefit from the contract system, "NHS", "Supplier", "Both equally" and "Neither". The results are shown in Table 9.36.

The majority, 55%,suggest the NHS as most benefiting from the drug contract system, with a further 40% noting both NHS and Supplier or Neither benefiting equally, Only 4% feel the supplier is the most benefiting party, though one can add to that the 40% suggesting a joint benefit.

TABLE 9.36: PARTY MOST BENEFITING FROM THE CONTRACT SYSTEM

Party deriving most benefit	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
N.H.S.	54.8%	61	45	55	56	67	46	54	63	50	54	56	61	62	46
Supplier	3.6	7	5	-	7	-	3	4	4	3	3	6	-	5	6
Both equally	33.3	32	30	36	26	29	42	39	33	28	35	25	39	29	31
Neither	7.1	-	15	9	7	4	9	4	-	16	6	13	-	5	14
No response	1.2	-	5	-	4	-	-	-	-	3	2	-	-	-	3

Clearly the industry considers itself to be at a distinct disadvantage in terms of benefit from the system, and this result must be regarded as an indictment upon the system and demonstrates the need for greater emphasis to be placed upon the mutual benefit which contracts can and should bestow upon both parties.

U.S. owned companies show the strongest opinion of all categories of firms' owners, with 61% stating that the NHS is benefiting most 32% both or neither parties and 7% the supplier. In contrast U.K. suppliers showed 45% the NHS, 45% both or neither and 5% the supplier. Companies demonstrating average relative sales show a score of 63% for NHS, 33% for both or neither and 4% for supplier.

Question 12 sought reasons for the beneficiary answer given. The question was answered by some seven eighths of respondents. Those who suggested the NHS as most benefiting from the contract system referred to lower prices attained by the NHS, the unreliable estimates of uptake, no guaranteed sales and proven quality of products for NHS. The results could be summarised by the comment "a distorted balance of obligations".

One respondent admitted that the NHS price offered is often below the supplier's own costs, proof positive of promotional pricing policies pursued by suppliers.

Those who felt that both the NHS and the supplier gained equal benefit from the contract system suggested as reasons the guaranteed best prices and reliability of products for the NHS and the following benefits for suppliers; guaranteed sales to suppliers, controlled costs and net returns to companies, economy of scale to companies, higher uptake, assurance of use, production planning, ability to promote contracted items and spin off sales.

One supplier referred to both parties benefiting provided the contract is upheld and no buying off contract occurs. A critical examination of those reasons promulgated would lead an observer to comment that whereas contract prices are very often lower than normal trade prices the presence of a contract does not guarantee the lowest possible prices. Items on contract are not necessarily of appropriate quality and the presence of a contract does not automatically confer adequate quality standards upon drugs. Obviously the award of a contract does not guarantee sales to suppliers but should provide the company with increased sales. The contract would be most beneficial if it <u>did</u> guarantee sales and so allow more realistic production planning to firms.

Those respondents who answered "Neither" as benefiting from the contract system did so for the following reasons; for the NHS they are administratively cumbersome, time consuming and cause loss of special offers, they are binding on the supplier but not on the NHS, they have an inflexible price structure, they are ineffective, costly and provide no information on why decisions are made. Several respondents referred to no advantage to any party and one put forward the view that "we do not contract now and neither the NHS nor us suffer." Clearly a wide divergence of opinion is apparent but through all the answers comes a desire on the part of companies to lower prices in response to fairer treatment and more flexibility in the system. A natural sequel to such topics is the aspect of improvements in the system which is considered next.

(v) Improvements Suggested

Some two thirds of respondents took the opportunity provided by question 25 to suggest improvements in the drug contract system. The unprompted answers may be classified under set headings and are given below.

Standardisation

Conditions, format of documents, integration of contracts and buying (otherwise known as discount or ongoing) guides, separation of generic items from proprietaries, procedures, one year with fewer items, two year duration, dates, duration policies, description of drugs, absence of trade names, sample call-up and all prices quoted to be consistent in excluding or including VAT.

Information

On the membership of the contract committee, the products awarded contracts, more communication between RHA's and hospitals, register of contracts personnel of each authority, more realistic estimates, frequency of deliveries expected should be quoted, more discussion on service, quality and efficacy, less conflict between contracts and formularies, smaller committee composed of knowledgeable people beyond reproach and information should be provided to confirm receipt by the RHA of completed documents or samples.

Clarification and Simplification

Less paperwork, easier clearer forms, inclusion of company product name, a simple offer to supplier rather than formal legalistic one-sided contract, tender document may contain 500 items when only one

or two are produced by many firms (one RHA before contract invites offers and tender documents only contain those items), and packs of offers differ from those on tender forms.

More flexibility for suppliers

More loyalty to patent originator once patent expires, facility for several contractors for one item, more customer flexibility, opportunity for interim tenders for new products or prices, acceptance of guaranteed price based on minimum order value, negotiation, variance between trade and contract prices omitted, complete dissolution of contract system, less centralisation, quicker response to new products/packs, recourse to personal representation and samples required only when absolutely needed.

Less flexibility for NHS

Should be binding on both parties, 80% of items should be covered allowing 20% for new products suggested by either party, realisation that best prices with "standard" packs and requests for reduction in price for "one drop" or "bulk" orders increase costs, guaranteed quantity, emphasis on standing orders to reduce costs and administration, reduction in delivery points, reduction in number of buying points, less frequent deliveries, payment before delivery and centralisation of the whole system so that company is only dealing with one body at one time.

Some of the suggested improvements appear relatively difficult to implement. Many, on the other hand, could, it is thought, be pursued successfully. The comments under "more flexibility" and "less flexibility" are not mutually exclusive, many possessing much merit.

It is suggested that detailed consideration be given to those volunteered suggestions for improvement of the drug contract system, some of which would undoubtedly be of advantage to the supplier with little or no benefit to the NHS, and others of which would be to the advantage of both parties.

(c) Pricing and Tendering

(i) Inter-Regional variation in price

Question 5 asked whether different prices were quoted to the various RHA's. Responses are shown in Table 9.37. Question 5(a), aimed at those who did not differentially price, asked if respondents knew or believed that other companies differentially priced. Answers

TABLE 9.37: QUOTING DIFFERENT PRICES TO THE VARIOUS R.H.A.'S

Quote/do not quote different prices	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Quote different prices	28.6%	32	35	21	44	21	21	21	33	31	28	31	18	38	31
Do not quote different prices	70.2	68	65	76	56	79	76	75	67	69	71	69	82	57	69
No response	1.2	-	-	3	-	-	3	4	-	-	2	-	-	5	-

are shown in Table 9.38.

Whereas the question was aimed only at the 70% who claimed they did not differentially price themselves, nine of the "yes" respondents to question 5 answered question 5(a).

It is apparent that 29% of respondents admit to differential pricing with 58% knowing or believing others to carry it out. This information bears out data collated by the author which point to companies optimising their profits by adjusting their prices to the various RHA's.

Analysis of the data generated by questions 5 and 5(a) under characteristics of respondent provides information that, compared with respondents generally, British companies are more likely to quote different prices and European ones are less likely. For all companies a majority claim not to quote different prices. Community sellers show a substantial minority, 44%, quoting different prices and direct distributors again showing a substantial minority, 31%, as quoting different prices. Reasons for these results can be speculated upon.

United States based firms, though not particularly noticeable among those quoting different prices, nevertheless show a substantial minority, 32%, as knowing it occurs. British firms, though heavily represented, at 35%, among differential pricers, are almost equally represented, 30%, among those claiming neither to know nor believe differential pricing occurs.

(ii) Factors influencing price

The factors taken into consideration by companies in their offers to regions were considered in questions 6(a) and 6(b), the former seeking those factors considered, the latter the single most important factor. Results are shown in Tables 9.39 and 9.40.

The "others" conform to four general headings. They are:-

(a) Competition/market factors 8% of responses (significant for relative value of hospital sales),

(b) type of packs ordered 2% of responses

(c) gaining contract award/requirement for volume at prevailing prices 4% of responses (significant for absolute value of hospital sales)

(d) each contract treated the same 1% of responses

TABLE 9.38: KNOWLEDGE OR BELIEF THAT DIFFERENTIAL PRICING OCCURS

Knowledge of differential pricing	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Know it occurs	22.6%	32	10	21	26	21	21	21	13	31	22	25	29	10	26
Believe it occurs	35.7	39	30	36	30	38	39	39	46	25	32	50	39	48	26
Neither know nor believe it occurs	22.6	19	30	21	22	17	27	29	17	22	24	19	18	14	31
No response	19.0	10	30	21	22	25	12	11	25	22	22	6	14	29	17

TABLE 9.39: FACTORS CONSIDERED IN OFFERS TO REGIONS

Factors considered	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Total volume of single order	52.4%	52	40	61	48	46	61	54	50	53	52	56	54	62	46
Number of buying points	21.4	32	20	12	22	25	18	14	21	28	19	31	21	19	23
Number of delivery points	28.6	32	25	27	30	25	30	21	29	34	27	38	29	33	26
Population served	8.3	7	15	6	4	4	15	11	4	9	9	6	7	14	6
Estimated uptake	63.1	55	60	73	67	50	70	68	54	66	65	56	79	52	57
Duration of contract	57.1	48	65	61	48	42	76	57	54	59	57	56	75	52	46
Geographical spread of region	6.0	7	10	3	4	4	9	4	4	9	3	19	4	5	9
Actual previous uptake	44.0	42	45	46	41	21	64	50	38	44	41	56	39	52	43

Significant results ($p < 0.05$) are within a single box

Very significant results ($p < 0.01$) are within a double box

TABLE 9.40 MOST IMPORTANT CONCERN IN OFFER TO REGIONS

Most important subject considered	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Total volume of single order	20.2%	23	10	24	19	25	18	25	13	22	22	13	25	19	17
Number of buying points	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of delivery points	8.3	10	5	9	7	4	12	7	13	6	9	6	11	14	3
Population served	3.6	3	-	6	-	-	9	7	4	-	4	-	-	14	-
Estimated uptake	28.6	32	30	24	37	17	30	29	29	28	28	31	36	19	29
Duration of contract	3.6	3	10	-	7	-	3	4	4	3	4	-	-	5	6
Geographical spread of region	1.2	-	5	-	-	-	3	4	-	-	2	-	4	-	-
Actual previous uptake	11.9	10	15	12	11	13	12	7	8	19	10	19	7	14	14

As shown those factors which loom large, in the expressed opinions of respondents, when price offers are being formulated by firms are, in order of precedence:-

(i)	estimated uptake	63% of respondents
(ii)	duration of contract	57% " "
(iii)	total volume of single order	52% " "
and (iv)	actual previous uptake	44% " "

Those factors of some importance to respondents are:-

(v)	number of delivery points	29% of respondents
(vi)	number of buying points	21% " "

Those considered of very little consequence in offers are:-

(vii)	population served	8% of respondents
(viii)	competition/market factors	8% " "
(ix)	geographical spread of region	6% " "
(x)	need for business to be acquired	4% " "
and (xi)	type of packs ordered	2% " "

Examination of responses for the "single most important factor" show again estimated uptake as the most important with total volume of single order as the next in importance.

Statistical analysis of the responses provided the data shown in Tables 9.41 to 9.45.

Table 9.41 shows that the absolute value of hospital sales influences response to duration of contract and the significance is 0.0192. Clearly smaller companies accord significantly more consideration to duration of the contract in offers than do their medium sized or larger counterparts. To some extent the loss or gain of business for an appreciable length of time might have been predicted to play a more dominant role among small companies than among bigger ones. The loss of a contract for a small company is more likely to have a harmful effect than for a larger one.

Table 9.42 shows that the type of products sold has a bearing on response to geographical spread of region with the raw significance being 0.0162.

Corrected significance was 0.0691. Generic manufacturers consider geographical spread of region, including resulting delivery costs, in offer price formulation and the opinion is significantly different from those companies which in the main supply proprietary items.

TABLE 9.41: RESPONDENTS' ABSOLUTE VALUE OF HOSPITAL SALES AND CONSIDERATION OF CONTRACT DURATION IN PRICE DETERMINATION

Response	Sales >£2.5 million	Sales £1 to £2.5 million	Sales <£1 million
Duration of contract not considered	52%	58	24
Duration of contract considered	48	42	76

TABLE 9.42: RESPONDENTS' PRODUCTS AND CONSIDERATION OF REGIONS' GEOGRAPHICAL SPREAD IN PRICE DETERMINATION

Response	Proprietary Producer	Non-proprietary Producer
Geographical spread not considered	97%	81
Geographical spread considered	3	19

TABLE 9.43 RESPONDENTS' ABSOLUTE VALUE OF HOSPITAL SALES AND CONSIDERATION OF ACTUAL PREVIOUS UPTAKE IN PRICE DETERMINATION

Response	Sales >£2.5 million	Sales £1 to £2.5 million	Sales <£1 million
Actual previous uptake not considered	59%	79	36
Actual previous uptake considered	41	21	64

Responses depicted in Table 9.43 show that the absolute volume of hospital sales influences the response to actual previous uptake being considered in price offers and this is very significant at 0.0052. Medium sized companies (in terms of hospital business) generally accord previous sales figures little importance. The large companies accord more importance to that factor with the smallest ones giving it most consideration. The reason for this must remain in the realm of conjecture. Whatever the explanation if estimates of usage are inaccurate, as appears to be the finding referred to in the next section, the actual previous uptakes would be a more reliable guide for manufacturers to possible future usage. It might be thought that in such an environment a small manufacturer could be more harmed by excess production than the larger ones.

TABLE 9.44: RESPONDENTS' RELATIVE VALUE OF HOSPITAL SALES AND CONSIDERATION OF COMPETITION AND MARKET FACTORS IN PRICE DETERMINATION

Response	Mainly Community Sales	Average Sales	Mainly Hospital Sales
Competition not considered	100%	79	94
Competition considered	-	21	6

Examination of Table 9.44 shows that the relative value of hospital sales influences consideration given to competition in price offers and has a significance of 0.0220. Those companies who rely to a large extent on the hospitals for their sales give little thought to competition or market factors when they formulate their price offers. In a similar way those selling little to hospitals give apparently no consideration to competition from other companies. Those who sell to both sectors of the NHS give a small amount of thought to market forces. In view of the relatively small number of respondents who remarked on this subject this factor is not considered worthy of major emphasis.

TABLE 9.45: RESPONDENTS' ABSOLUTE HOSPITAL SALES AND CONSIDERATION OF NEED FOR BUSINESS IN PRICE DETERMINATION

Response	Sales >£2.5 million	Sales £1 to £2.5 million	Sales <£1 million
Need for business not considered	100%	88	100
Need for business considered	-	12	-

Table 9.45 shows the percentages of the various sales categories. The significance of the results is 0.0205, but in view of the small number of companies who suggested the response, three in all, it is thought unworthy of further consideration.

Analysis of responses by company characteristics in Table 9.39 provides some additional insight into their behaviour. U.K. firms attach less importance than foreign firms to total volume of single order in price offers. Small sellers attach more weight to volume of single order than larger ones.

"Number of buying points" is of more concern to U.S. companies than U.K. and of more concern to U.K. ones than European ones. It is twice as much of concern (28%) to hospital sellers than community ones (14%) with average sellers showing a 21% response. Generic sellers give this subject a 31% response compared with proprietary producers at 19%.

Twice as many U.K. companies as foreign ones (15% compared with 6 or 7%) consider population served as being important. "Estimated uptake" which is the biggest single consideration is the subject of question 16 in which it is seen that estimates are reputed to be inaccurate.

Clearly a contradiction is presented which is difficult to resolve. Company characteristics and responses to question 6(b), which seeks the single most important factor considered in price offers, add little information to that for companies generally. The results are shown in Table 9.40.

(iii) Estimates of Uptake

The accuracy and usefulness of uptake estimates to companies were discussed in questions 16 and 17 with results shown in Tables 9.46 and 9.47. Some 62% of respondents describe estimates as being "inaccurate" or "very inaccurate" as contrasted with 33% suggesting them to be "accurate" or "very accurate".

In general Table 9.46 shows that U.K. companies regard estimates, perhaps somewhat chivalrously, as being more accurate than the general sample and more accurate than inaccurate, while European companies regard them as more inaccurate than the general sample and more inaccurate than accurate.

In view of the large amount of time, though unquantified, expended by NHS staff in gathering such data, the industry responses must be regarded as a major criticism of the drug contract system and a waste of scarce human resources. However inaccurate, the question 6 responses point to the usefulness of estimates in price offers. Estimates' usefulness appears generally acknowledged, as shown in Table 9.47 with 62% noting them as "very" or "fairly" useful as against 35% stating "not of much use" or "of no use at all".

In an attempt to correlate perceived accuracy of estimates and their usefulness a contingency table was prepared and is demonstrated in Table 9.48. A chi-square test was considered but rejected as inappropriate owing to the limited data in some cells. Nevertheless some inferences can be drawn from an examination of that Table. Whereas a sole respondent described estimates as being very accurate no attempt was made to describe their usefulness. Generally, as predicted, those who felt estimates to be accurate thought them useful to some extent, whereas those who thought them inaccurate or very inaccurate showed no clear view on their usefulness.

Combining some results a 2 x 2 contingency table is produced and the data presented, as shown in Table 9.49, allows a chi-square test to be performed. The chi-square value is 7.976 with a significance of <0.005. The results are significantly different from those theoretically expected and it is seen from Table 9.49 that a greater

TABLE 9.46: ACCURACY OF ESTIMATES

Degree of accuracy	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very accurate (± 5%)	1.2%	-	-	3	4	-	-	-	-	3	2	-	-	-	3
Accurate (± 5 to 20%)	32.1	36	45	21	22	42	33	29	38	31	32	31	32	19	40
Inaccurate (± 20 to 50%)	51.2	48	35	64	56	50	49	57	54	44	52	50	43	67	49
Very inaccurate (± 50% or more)	10.7	7	15	12	15	8	9	7	4	19	9	19	14	14	6
No response	4.8	10	5	-	4	-	9	7	4	3	6	-	11	-	3

TABLE 9.47: USEFULNESS OF ESTIMATES

Usefulness of estimates	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Very useful	19.0%	13	25	21	11	25	21	18	13	25	18	25	14	14	26
Fairly useful	42.9	39	45	46	44	33	49	43	58	31	46	31	46	33	46
Not of much use	25.0	36	15	21	22	33	21	36	17	22	25	25	29	38	14
Of no use at all	9.5	13	10	6	19	4	6	4	8	16	9	13	4	14	11
No response	3.6	-	5	6	4	4	3	-	4	6	3	6	7	-	3

TABLE 9.48: RESPONDENTS' PERCEPTION OF ACCURACY AND USEFULNESS OF ESTIMATES

	Very Accurate	Accurate	Inaccurate	Very Inaccurate	No Response	Total
Very useful	-	8	6	1	1	16
Fairly useful	-	15	20	-	1	36
Not of much use	-	4	13	3	1	21
Of no use	-	-	4	4	-	8
No response	1	-	-	1	1	3
TOTAL	1	27	43	9	4	84

TABLE 9.49: RESPONDENTS' PERCEPTION OF ACCURACY AND USEFULNESS OF ESTIMATES

	Very accurate or accurate	Inaccurate or very inaccurate
Very or fairly useful	23	27
Not of much use or of no use	4	24

than expected proportion of respondents apply the terms useful and inaccurate to some degree, whereas, a much smaller than expected proportion consider estimates both accurate and useless. However, accuracy is predictably associated with usefulness and vice versa. It would appear that despite their inaccuracy many companies find estimates of some use.

United States firms think them less useful than companies generally, U.K. companies more useful than generally. This latter response may reflect their perception of estimates' accuracy.

(iv) Price Discussions

Price discussion was the subject of questions 13, 14 and 15.

Question 13 asked respondents to denote the number of man days spent discussing contract prices with each Health Authority in a year and the responses are shown in Table 9.50.

It shows that on average a little less than four man days effort is expended by each company in price discussions with each Health Authority in a year. Respondents answering "more than three days" were provided with space to enter an estimate. Sixteen of the twenty one wrote in a figure the range extending from 5 to 30 man days. The actual responses were 5, 5, 5, 5 to 6, 7, 7 to 8, 10, 10, 10, 10 to 12, 10 to 15, 15, 15, 15, 20, 30 man days. Clearly a wide divergence of opinions is apparent.

Company characteristics show a bias in favour of more price discussions by United States firms than those based elsewhere. Proprietary manufacturers tend to spend more time on price discussions with health authorities than non-proprietary firms. Perhaps this is a reflection of the desire of branded drugs' suppliers to encourage their drugs' inclusion in contracts to promote their sales in general practice.

Direct sellers spend more time discussing prices than those supplying through other means. Perhaps those who distribute through wholesalers tend to rely on the wholesalers to engage in price discussions on their behalf.

Question 14 broached the subject of the view of the respondents on the quantity of price discussions and the results are demonstrated in Table 9.51.

Table 9.51 shows that no clear-cut opinion exists, with the majority feeling the amount of price discussion is about right with a slight tendency towards the opinion "too little".

TABLE 9.50: TIME SPENT ON PRICE DISCUSSIONS

Time spent discussing prices	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Less than one day	23.8%	16	25	30	19	21	30	25	25	22	29	-	32	29	14
About one day	15.5	23	15	9	26	4	15	11	17	19	13	25	14	14	17
Two to three days	28.6	29	30	27	33	25	27	32	25	28	27	38	36	19	29
More than three days	25.0	29	25	21	15	46	18	25	25	25	24	31	11	29	34
No response	7.1	3	5	12	7	4	9	7	8	6	7	6	7	10	6

TABLE 9.51: THOUGHTS ON TIME SPENT ON PRICE DISCUSSIONS

Thoughts on time spent on price discussions	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Too much time	10.7%	10	15	9	4	8	18	21	-	9	9	19	4	24	9
Time about right	58.3	61	55	58	59	63	55	57	50	66	59	56	61	48	63
Too little time	22.6	19	25	24	33	17	18	18	38	16	24	19	18	24	26
No response	8.3	10	5	9	4	13	9	4	13	9	9	6	18	5	3

Analysis of the results in terms of company characteristics did not provide any further insight into company staff thoughts or behaviour. Analysis of a comparison of responses to questions 13 and 14 provided the results demonstrated in Table 9.52. Chi-square tests showed no statistical significance in the results attained p having a value of < 0.8. No relationship can be said to exist between perceived price discussion and perceived adequacy of such discussion. Hypothesis 4 was shown to be validated for suppliers.

Question 15 wished to pursue the reasons for the opinions expressed on whether time spent on price discussions with Health Authorities was "too much", "about right", or "too little". Over half the respondents answered the question.

Those who felt it was "too little" did so for the following reasons: the frequent lack of pooling of company offers information because of lack of co-operation between NHS pharmacists and supplies officers, the lack of encouragement to price flexibility accorded by the terms and conditions of contracts, the absence of negotiations caused by few regions having staff able to discuss details outside a standard price discount tender, the difficulty in obtaining information, absence of personal communications and involvement with RHA staff, the disproportionate time spent promoting drugs to prescribers, lack of time for both parties to explore all pricing options, lack of access to NHS committees to present case, lack of ability to attain award of contracts, the reluctance on the part of health authorities to be approached by the industry and the desire for more opportunity to negotiate.

Those who felt it was "about right" put forward the following reasons: the time spent was reasonable, there was no merit in wasting NHS or company's time repeating information already provided, and minimum negotiation was needed. Several referred to the time quoted in the previous questions 13 and 14 as including all the time spent on the documentation of contracts. Other comments included the fact that more time could create price confusion, both parties need to understand each other's reasoning and the need to educate supplies officers in therapeutics, and the time was sufficient given the absence of real discussion. Respondents feeling that the time spent on price discussion was "too much" referred to the following reasons: excessive amounts of paperwork involved, the absence of any company advantage in price discussions, the irrelevance of contracts, the absence of

TABLE 9.52: NUMBER OF RESPONDENTS WHO EXPRESSED A VIEW ON ADEQUACY OF PRICE DISCUSSION AND PERCEIVED TIME SPENT ON PRICE DISCUSSION

	TIME SPENT ON PRICE DISCUSSION CONSIDERED TO BE			
	Too Much	About Right	Too Little	Total
Price discussion < 1 man day	1	14	4	19
Price discussion 1 man day	1	7	3	11
Price discussion 2 to 3 man days	4	14	4	22
Price discussion > 3 man days	1	14	6	21
Total	7	49	17	73

decisions, the referral of everything to "faceless men", the fact that time is better spent elsewhere and the bias inherent in the system against the supplier.

(v) Communications regarding tenders, offers and contracts

Communications between Health Authority and suppliers were discussed in questions 18 and 19 and the responses are shown in Tables 9.53 and 9.54.

Table 9.53 shows that in general the period during which the company must complete its tender document is considered about right. Once the tender has been returned it is generally felt that there is too long a gap until the offer is accepted (or rejected). Once the offer has been accepted the period until the company is informed of acceptance is generally thought to be about right with 54% responses but with a substantial minority of 33% for "too long".

To comply with the desires of the companies the NHS would have to speed up the deliberation process on tenders and once the decision on contract award is made the company should more speedily be informed. This finding confirms complaints from companies that in some instances contract orders had been received from NHS hospitals prior to the company itself being told of its tender being accepted.

Analysis of the results by characteristics shows that those companies showing a higher than general response for "too long" a time period from tender return to offer acceptance are United States based, large, community and generic suppliers. By contrast the following companies show higher responses for "about right" than "too long"; United Kingdom based, medium sized and those supplying via wholesalers.

As a sequel to the previous subject it was thought useful to seek from the respondents their views on the ideal time scales. Examination of Table 9.54 shows that ideally the average company would wish to see a time scale of about 4 to 5 weeks in which to complete the tender document, about 4 weeks in which Health Authorities collate the information, deliberate upon it and award contracts, and about 2 to 3 weeks following offer acceptance the company would be informed.

United Kingdom companies are more generous to the NHS in suggesting a longer period for tender return to acceptance than companies generally. In a similar way they favour a longer gap between offer acceptance and notification.

Under the question of improvements (question 25) note is made of the

TABLE 9.53: VIEWS ON TIME SCALES FOR CONTRACT COMMUNICATIONS

Question 18	Tender Receipt To Return (n=84)	Tender Return To Offer Acceptance (n=84)	Tender Acceptance To Notification (n=84)
Too long	10.7%	51.2	33.3
About right	66.7	38.1	53.6
Too short	15.5	2.4	2.4
No response	7.1	8.3	10.7

TABLE 9.54: IDEAL TIME SCALES FOR CONTRACT COMMUNICATIONS

Ideal time scale	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
Tender receipt to return		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
1 - 3 weeks	36.9%	42	40	30	44	29	36	36	38	38	37	38	29	38	43
4 - 6 weeks	46.4	48	40	49	48	50	42	54	50	38	49	38	46	43	49
7 - 9 weeks	9.5	7	15	9	4	13	12	7	8	13	7	19	7	14	9
10 -12 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 -15 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
⩾ 16 weeks	1.2	-	-	3	-	12	3	4	-	-	2	-	4	-	-
No response	6.0	3	5	9	4	8	6	-	4	13	6	6	14	5	-
Tender return to acceptance															
1 - 3 weeks	31.0	36	20	33	30	33	30	39	25	28	29	38	36	29	29
4 - 6 weeks	51.2	52	60	46	52	50	52	50	54	50	52	50	46	52	54
7 - 9 weeks	3.6	-	-	9	-	8	3	-	8	3	4	-	-	5	6
10 -12 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 -15 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
⩾ 16 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No response	14.3	13	20	12	19	8	15	11	13	19	15	13	18	14	11
Offer acceptance to notification															
1 - 3 weeks	64.3	68	45	73	56	79	61	75	63	56	65	63	57	62	71
4 - 6 weeks	17.9	19	25	12	19	8	24	14	21	19	18	19	25	19	11
7 - 9 weeks	2.4	-	5	3	4	4	-	4	-	3	3	-	-	5	3
10 -12 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 -15 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
⩾ 16 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No response	15.5	13	25	12	22	8	15	7	17	22	15	19	18	14	14

desire expressed to receive notification of receipt by the RHA of tender forms and/or samples. Lack of such information could deprive the NHS of a source of supply and deprive a company of substantial business.

Whereas these ideals may not be feasible for Health Authorities, information on them may be of some help in remedying the more traumatic experiences which some companies claim to have undergone.

It was thought instructive to compare those ideal time periods with the practical reality of a typical RHA's arrangements. As outlined in the secondary research, in 1984 the Mersey RHA allowed four weeks from issue of tender to return. Allowing for postal delays the company has about 3½ weeks in which to examine, consider, complete and return the documents. Though identical to that of 1982, it was a reduction from the theoretical five weeks allowed in 1980. This time period would be thought too short by 57 per cent of companies. Whereas in 1982 eight weeks was thought sufficient, in 1984 Mersey RHA required more than ten weeks to compile the information received and decide upon its acceptances. This was almost double the 5½ week period alloted four years previously, effectively requiring companies to hold prices stable much longer. Suppliers think that four weeks would be ideal, no respondent feeling that a period such as ten weeks is ideal, and this is confirmed by the majority view that the NHS devotes too much time to this portion of the procedure.

After one week has elapsed Mersey RHA informs companies of the outcome of the deliberations. This time period is viewed by companies as being about right as ideally it should be about two or three weeks. From the suppliers' vantage point passage of years has seen a deterioration of communication time scales but the NHS is effectively securing longer price stability and greater opportunity for quality analyses of products offered.

(vi) Retendering

Retendering was the topic of questions 20 and 21. Those circumstances posed in question 20 requiring retender during an existing contract period were analysed and shown in Table 9.55. So as to, hopefully, elicit a more realistic response the question was deliberately worded "circumstances affecting a competitor" since this phrase was thought to make the respondent reply more objectively than if he had been asked a more general question.

TABLE 9.55: REQUIREMENTS TO RETENDER

Circumstance requiring retender	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative Importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Drug comes off patent	22.6%	29	20	18	11	29	27	21	33	16	22	25	29	19	20
Request for unacceptable price rise	60.7	65	65	55	56	58	67	64	58	59	57	75	61	67	57
Supplier giving poor service/deliveries	73.8	87	55	73	70	75	76	68	79	75	74	75	64	71	83
New product unsatisfactory	38.1	42	25	42	33	29	49	39	42	34	41	25	57	24	31
Product subsequently shown not to specification	58.3	68	45	58	56	63	58	61	67	50	65	31	61	52	60
Firm failed to tender in time	16.7	26	20	6	19	17	15	18	8	22	16	19	29	5	14
Arrival of new significant drug	34.5	36	20	42	30	33	39	54	25	25	41	6	39	52	20
Significant change in prescribing	28.6	29	25	30	22	29	33	43	25	19	34	6	25	43	23

Boxed-in results are significant ($p < 0.05$)

TABLE 9.55: REQUIREMENTS TO RETENDER (CONTINUED)

Circumstance requiring retender	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Change in price structure	34.5%	32	35	36	30	33	39	50	21	31	38	19	43	38	26
Tender documents lost or not arrived	34.5	39	25	36	30	50	27	25	29	47	34	38	32	33	37
Bankruptcy or total inability to supply	72.6	68	70	79	63	75	79	71	79	69	72	75	64	62	86
Quality failed to match pre-award samples	70.2	68	70	73	56	71	82	71	75	66	71	69	75	57	74

An unprompted answer was "significant product development" with 1% of respondents proposing it.

Space was allowed for respondents to denote reasons new products were found unsatisfactory and nine of the respondents took the opportunity to record them. They were quality (3 responses), adverse drug reactions (2 responses), any (2 responses), out of specification (1 response) and packaging/formulation etc. (1 response).

Table 9.55 shows that a large majority of respondents favour retendering when suppliers give poor service or deliveries (74%), bankruptcy or total inability to supply (73%) and quality of drug not matching pre-award samples (70%). Moderate majority approval was given for retendering if price increase request was unacceptable (61%) and product subsequently shown not to specification (58%). The other categories attracted minority support. As seen the companies adopt a constructive, ethical approach to behaviour expected of competitors, and implicitly of themselves, once awarded a contract.

The poor service/deliveries criterion for retendering showed a significant (0.0385) response for country of origin of company. Foreign owned companies give more weight to supplier service than do British ones, with United States manufacturers being more conscious of this factor than European ones. Reasons for this significant result might be speculated on. It could be thought that because of their non-British dimension, foreign firms therefore feel at a disadvantage and so try harder to please the customer. Alternatively it might be a reflection of the respective home markets where more emphasis might be given to service in America and Europe than in Britain.

The unsatisfactory new product requirement for retendering is significantly related to method of delivery. The significance is 0.0336.

Companies who supply via wholesalers consider unsatisfactory new products as warranting retender more than do those who supply direct with the least support being given by those who supply in both ways. No satisfactory explanation for this finding can be provided. Product not to specification as a requirement for retendering was found to significantly relate to type of products produced by the company. The significance is 0.0307.

Proprietary manufacturers give significantly more weight to drugs conforming to specification than do their generic manufacturer counterparts. Proprietary manufacturers have long claimed that they rather than generic firms give more emphasis to quality of products and the above finding gives support to that assessment.

The arrival of a new significant drug showed a significant relationship to three criteria of companies. They were (i) relative value of hospital sales, (ii) type of products and (iii) distribution method. Table 9.55 points to the significant (0.0344) relationship between relative sales and views on arrival of new significant drugs. For those companies which rely heavily on hospital sales 75% of their respondents feel that the arrival of a new significant drug does not warrant retender whereas a majority of those whose business is not biased toward hospitals feels that such a development does warrant retender. Clearly companies resent the threat posed by new drug developments and the potential loss of business likely to manifest itself.

Table 9.55 shows the significant (0.0187) relationship between those two variables, category of products and views on arrival of new significant drug. Generic manufacturers feel very strongly that such a new drug does not require retendering, whereas the other companies have mixed feelings on the subject. As in the previous section those relying on hospital business, in this case the generic firms, resent the intrusion into the market of newcomers.

Table 9.55 shows the significant (0.0386) relationship between distribution method and opinions on arrival of new drug. No valid reason for the finding can be promulgated.

Views on significant change in prescribing habits were found to bear, if raw chi-square is used, a significant relationship (0.0280) to type of products. Corrected chi-square shows a lower significance of 0.0589.

Generic manufacturers feel very strongly (94% against 6%) that significant changes in prescribing should not require retendering whereas proprietary manufacturers express the same view much less strongly (66% against 34%). Again, as shown previously, resentment is aroused against new arrivals or prescribing changes which are strongly resisted by those with most to lose, such as generic manufacturers.

Question 21 viewed the retender process in price increase terms with specific price increase ranges denoted. As in the previous question reference in the question to "competitors" was deliberately made to encourage objective opinions. The results are seen in Table 9.56. A majority, 64%, felt that price increases of up to 10% should be tolerated before retendering occurs. Further examination of the responses shows that non-proprietary manufacturers were generally more inclined to allow price rises of greater than 20% than any other category of company.

(vii) Methods of reducing prices

Restrictions on Health Authorities as a means of reducing prices were referred to in Question 24 in which specific points were listed and respondents were asked to express their degree of acceptance of them by allowing no price reductions, up to 10% and over 10%.

By their nature the price reductions are mutually exclusive, and so ticks in more than one column were replaced by the highest price discount ticked in all cases, except the category "none", where more than one tick was replaced by that for the lowest price discount marked. The responses are shown in Table 9.57, and summarised in Table 9.58. Thus a guaranteed drug quantity uptake would be most popular with the industry, being welcomed by 76% of companies. Almost as welcome would be a reduction in delivery points showing 68% response, less frequent deliveries at 62%, and reduced number of buying points with 58%. Opinion was more divided over payment at the beginning of the financial year, in other words before delivery, (49%), and two year rather than one year contracts (49%).

If the topic is looked at from the viewpoint of scope for price reductions rather than popularity as above then a slightly different picture emerges and this is shown below.

More than 10% Reductions

Payment before delivery	9.5%
Guaranteed drug quantity uptake	7.1%
Less frequent deliveries	6.0%
Reduced number of delivery points	6.0%
Two year rather than one year contract	3.6%
Reduced number of buying points	2.4%

TABLE 9.56: MAXIMUM PRICE INCREASES TO BE TOLERATED BEFORE RETENDERING OCCURS

Maximum price increase	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
1 to 3%	6.0%	3	5	9	7	-	9	7	4	6	4	13	-	10	9
4 to 10%	58.3	65	55	55	48	50	73	61	63	53	63	38	71	43	57
11 to 20%	19.0	16	25	18	22	29	9	18	21	19	19	19	14	24	20
> 20%	4.8	7	-	6	4	8	3	4	4	6	3	13	4	10	3
No response	11.9	10	15	12	19	13	6	11	8	16	10	19	11	14	11

TABLE 9.57: PRICE REDUCTIONS POSSIBLE IN RESPONSE TO RESTRICTIONS ON HEALTH AUTHORITIES

Guaranteed drug quantity uptake	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
0 reduction	31.0%	29	35	30	30	17	42	50	21	22	35	13	25	43	29
< 10%	38.1	39	30	42	44	38	33	32	42	41	38	38	36	38	40
> 10%	7.1	13	5	3	4	8	9	11	-	9	7	6	11	5	6
No response	23.8	19	30	24	22	38	15	7	38	28	19	44	29	14	26
Reduced number of buying points															
0 reduction	36.9	42	40	30	41	25	42	50	38	25	37	38	29	52	34
< 10%	19.0	16	-	33	19	21	18	14	17	25	19	19	18	24	17
> 10%	2.4	7	-	-	-	8	-	4	-	3	3	-	4	-	3
No response	41.7	36	60	36	41	46	39	32	46	47	41	44	50	24	46
Reduced number of delivery points															
0 reduction	31.0	29	40	27	30	13	46	32	33	28	28	44	25	38	31
< 10%	31.0	36	10	39	37	42	18	36	29	28	35	13	32	43	23
> 10%	6.0	10	-	6	-	8	9	11	4	3	7	-	7	10	3
No response	32.1	26	50	27	33	38	27	21	33	41	29	44	36	10	43

Boxed-in results are significant ($p < 0.05$)

TABLE 9.57: PRICE REDUCTIONS POSSIBLE IN RESPONSE TO RESTRICTIONS ON HEALTH AUTHORITIES (CONTINUED)

		Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
	All Respondents (n=84)	U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Less frequent deliveries															
0 reduction	32.1%	29	40	30	37	21	36	39	25	31	32	31	25	38	34
< 10%	23.8	29	10	27	30	25	18	21	38	16	28	6	21	29	23
> 10%	6.0	7	-	9	4	8	6	4	4	9	6	6	7	5	6
No response	38.1	36	50	33	30	46	39	36	33	44	34	56	46	29	37
Payment before delivery															
0 reduction	15.5	13	15	18	22	13	12	14	17	16	15	19	14	19	14
< 10%	23.8	23	25	24	26	21	24	36	21	16	27	13	29	29	17
> 10%	9.5	13	-	12	-	13	15	11	13	6	12	-	18	10	3
No response	51.2	52	60	46	52	54	49	39	50	63	47	69	39	43	66
Two year rather than one year contract															
0 reduction	34.5	36	30	36	30	29	42	25	33	44	34	38	39	33	31
< 10%	10.7	10	20	6	11	4	15	14	8	9	12	6	11	14	9
> 10%	3.6	7	-	3	4	8	-	7	-	3	4	-	-	-	9
No response	51.2	48	50	55	56	58	42	54	58	44	50	56	50	52	51

TABLE 9.57: PRICE REDUCTIONS POSSIBLE IN RESPONSE TO RESTRICTIONS ON HEALTH AUTHORITIES (CONTINUED)

		Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
	All Respondents (n=84)	U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
All															
0 reduction	8.3%	10	10	6	11	17	-	11	8	6	9	6	7	5	11
< 10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
> 10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No response	91.7	90	90	94	89	83	100	89	92	94	91	94	93	95	89
None															
0 reduction	13.1	13	10	15	7	17	15	11	21	9	13	13	7	19	14
< 10%	4.8	-	5	9	-	4	9	11	-	3	6	-	7	5	3
> 10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No response	82.1	87	85	76	93	79	76	79	79	88	81	88	86	76	83

TABLE 9.58: SUMMARY OF PRICE REDUCTIONS POSSIBLE

Restriction	No reduction in price (n=84)	Price reduction ⩽ 10% (n=84)	Price reduction > 10% (n=84)
Guaranteed drug quantity uptake	31.0%	38.1	7.1
Reduced number of buying points	36.9	19.0	2.4
Reduced number of delivery points	31.0	31.0	6.0
Less frequent deliveries	32.1	23.8	6.0
Payment before delivery	15.5	23.8	9.5
Two year rather than one year contract	34.5	10.7	3.6
All	8.3	-	-
None	13.1	4.8	-

Up to 10% Reductions	
Guaranteed drug quantity uptake	38.1%
Reduced number of delivery points	31.0%
Less frequent deliveries	23.8%
Payment before delivery	23.8%
Reduction in number of buying points	19.0%
Two year rather than one year contract	10.7%

What emerges clearly is that if health authorities were prepared to pay for drugs, the usage of many of which could be readily predicted, before delivery at the beginning of the financial year, then considerable savings would accrue. Obviously accountants' advice would be sought but it would appear to be a source of substantial savings to the NHS. Even if some unknown factor militated against that measure the mere guarantee of buying specific uptakes would result in savings from over 7% of companies and those savings would be more than 10%.

Whereas those companies with the largest absolute hospital sales do not appear interested in giving more than 10% discounts in response to guaranteed uptakes or payment before delivery, medium sized and smaller firms would do so in 8 to 9% of cases for guaranteed uptake and 13 to 15% of cases for payment before delivery. Those two factors, guaranteed uptake and payment before delivery at the beginning of the financial year pose no cost implication problems to the NHS and so it is suggested that the matter be given considered but urgent attention by the health authorities. Those companies in the medium and small hospital sales' category represent 36% by value of hospital sales. Assuming that implementation of either payment before delivery or guaranteed uptake occurred and resulted in savings of only 10%, probably an underestimate, from 10% of those companies the result would be the release of about three quarters of a million pounds from the drug bill to other pressing needs. Similarly other savings are possible but they may have cost implications.

Reduction in frequency of deliveries may require investment in greater stocks and storerooms; reduction in number of delivery points may require investment in buildings for stores; reduction in number of buying points may require re-deployment of buying staff; and implementation of two year rather than one year contracts may have cost implications that have not previously been quantified.

It is suggested that all those factors be investigated scrupulously. Statistical analysis pointed to a significant relationship, at $p = 0.0405$, between relative sales and opinion on guaranteed drug quantity uptake as a means of reducing prices. A large proportion (50%) of community sellers would offer no reduction in price whereas fewer (21 or 22%) mixed or hospital sellers view price reductions for guaranteed uptake in that way. This response reflects the relative perception by sellers of the importance of the hospital market, and the fact that a company, however large or small, that is less heavily dependent on hospital sales will be less adversely affected by failure to take up the estimated demand. Those companies most likely to offer savings of more than 10% for guaranteed drug quantity uptake are U.S. based (13%), medium sized (8%), small sized (9%), community suppliers (11%), hospital sellers (9%), and those distributing via wholesalers (11%).

There was found to be a significant relationship ($p = 0.0334$) between country of origin and views on reduction of buying points to reduce prices. 33% of European-based companies compared to the average of 19% suggest they are likely to reduce prices by up to 10%. There is a suggestion, though not marked, at 7%, that United States based companies in general appear most prepared to offer reductions of greater than 10%.

British companies, while welcoming such a change are more cautious in the scale of price reductions they are prepared to offer and apparently are not prepared to offer any reductions. Medium sized companies appear willing to offer greater than 10% reductions in 8% of cases.

Reduction in delivery points would be more likely to produce discounts of more than 10% from community sellers (11%) and United States based concerns (10%).

Less frequent deliveries would encourage discounts of more than 10% from European and hospital supplying companies (9%).

Payment before delivery apparently would result in price falls of more than 10% offered by U.S. based companies (13%), European ones (12%), medium sized concerns (13%), small companies (15%), average sellers (13%), proprietary suppliers (12%), and companies distributing through wholesalers (18%).

Lengthening contract duration (for those regions retendering each year) would result in offers of more than 10% discount made by U.S. based companies (7%), medium sized companies (8%), community sellers (7%)

and direct distributors (9%).

As seen a profile could be built up to demonstrate the pharmaceutical manufacturer most likely to respond to efforts to reduce prices. The responses show considerable scope for such savings which would readily be achieved.

(d) Patents

Patents were discussed in questions 27 and 28. The former sought information on how useful contract awards were considered for patented drugs compared with unpatented ones. The latter listed specific benefits which the respondent could tick if considered applicable to patented drugs governed by a contractual purchase agreement.

The results of those responses are shown in Table 9.59 and Table 9.60 respectively.

Examination of Table 9.59 shows that for drugs under patent, inclusion in a contract would be of little use, with some 10% noting it as being of use. To that figure must be added the 49% responding that a contract award was of use for both types of product. But the balance is in favour of contract award being of more use for unpatented drugs with a 37% response.

Company characteristic analysis provides little further information on this topic.

The specific benefits for patented drugs being included in a contract are shown in Table 9.60 with "brand loyalty encouraged" showing 76% of responses, "G.P. sales indirectly encouraged" and "obviates need for individual price negotiation at hospital level for each drug" both showing a 63% response. Next in popularity is "predictable usage of drug and so needs are more easily satisfied" with 46% of responses. Less popular are "standardised deliveries" and "standardised pack sizes" both with 17% of responses and "standardised labelling" showing 11% responses.

Additional subjects written in by respondents were, with 1% response for each, as follows:- consistency of treatment between hospital and community, encourages direct buying, reduces unnecessary involvement of wholesalers, product endorsed/correctly used early in life cycle, and indicates confidence in the therapeutic use of product which G.P.'s value.

Brand loyalty encouragement is significantly related to three

TABLE 9.59: USE OF CONTRACT AWARD FOR PATENTED OR UNPATENTED DRUGS

Contract award of most use for	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Patented drugs	9.5%	7	10	12	11	17	3	4	17	9	10	6	7	10	11
Unpatented drugs	36.9	36	40	36	41	33	36	32	50	31	37	38	36	33	40
Both types of drugs	48.8	52	50	46	44	42	58	64	29	50	50	44	50	52	46
No response	4.8	7	-	6	5	8	3	-	4	9	3	13	7	5	3

TABLE 9.60: BENEFITS FOR PATENTED DRUGS OF CONTRACT AWARD

Benefits of contract award	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Brand loyalty encouraged	76.2%	87	55	79	82	75	73	89	83	59	85	38	79	81	71
G.P. Sales encouraged	63.1	68	40	73	59	75	58	82	75	38	71	31	68	81	49
Standardised deliveries	16.7	13	15	21	11	29	12	21	17	13	19	6	7	29	17
Administrative saving	20.2	13	15	30	15	25	21	25	29	9	24	6	18	24	20
Standardised pack sizes	16.7	13	15	21	19	21	12	18	21	13	18	13	11	19	20
Standardised labelling	10.7	3	10	18	-	21	12	14	13	6	10	13	7	19	9
Predictable usage	46.4	42	40	55	37	50	52	61	38	41	50	31	54	57	34
Obviates individual hospital price negotiation	63.1	71	40	70	52	79	61	75	58	56	65	56	57	62	69

Significant results ($p < 0.05$) are in a single box

Very significant results ($p < 0.01$) are in a double box

characteristics. These are (i) Company country of origin (ii) Relative value of sales and (iii) Products.

(i) The relationship of country of origin is at a significance level of 0.0286. United States companies respond 87% compared with 55% for U.K. firms and 79% for European ones. Clearly foreign companies tend to understand promotional sales to hospitals and the benefits of encouraging G.P. prescribing through consultant referral, even though it may require lower selling prices under a contractual arrangement to hospitals.

(ii) Brand loyalty encouragement is significantly related to relative value of sales, the significance being 0.0157. Those companies whose products are sold preferentially to general practice record a response of 89%, compared with 83% for average sellers and 59% for those selling preferentially to hospitals. This result may be predicted given the emphasis to brand loyalty prevalent in the general practice sector of the NHS.

(iii) Brand loyalty encouragement is very significantly related to products sold with a significance of 0.0002. Proprietary producers respond 85% to generic suppliers 38%. This is a predictable result, points to the validity of the subjective decision on products taken at the outset, and shows that responses are realistic and accurate. Generic suppliers are little interested in brand loyalty and wish to see it curtailed, whereas proprietary suppliers with a high investment in branded products seek to recoup costs by encouraging brand prescribing.

Encouragement of G.P. sales shows considerable variation in popularity depending on company characteristics. It is seen to be significantly related at 0.0454 to company country of origin and distribution at 0.0424 and very significantly related to both relative value of sales at 0.0006 and products at 0.0081. With a 73% response European firms are most likely to consider G.P. sales encouragement as a benefit of contract award for patented drugs compared with a slightly smaller response, 68%, by United States based suppliers and a much smaller response 40% by U.K. firms. Foreign firms appear to have a better developed appreciation of the total U.K. drugs market than their British counterparts.

Relative value of hospital sales shows a similar relationship to "G.P. sales encouraged" as it did to "brand loyalty encouraged" with

82% response from community sellers, 75% from average sellers and 38% from hospital sellers. This result was predictable, as was that for relationship to products. Proprietary producers respond 71% as opposed to the 31% of generic suppliers. Direct suppliers are considerably less likely to consider G.P. sales' encouragement as a benefit than other companies. The responses were 49% as opposed to 68% for companies utilising wholesalers and 81% for both routes. A possible reason for this relationship is that the presence on a wholesaler's shelves of a brand of drug may influence the wholesaler to encourage its dispensing in general practice. This may be a topic worthy of further exploration.

The advantage of absence of need for individual hospital price negotiation on patented drugs if included in contracts was related significantly at 0.0492 to country of origin of respondent company. Foreign companies at 70 or 71% responses are more likely to feel this to be a benefit than United Kingdom firms which responded at 40%. The conclusions to be derived from this finding are similar to those presented previously. The apparently greater awareness on the part of non-U.K. companies of the total drug market makes the loss of personal contact with hospitals of little concern to those foreign firms. They suggest the advantages of inclusion of their patented drugs in a contract heavily outweigh those personal contact losses. Scrutiny of Table 9.60 and comparison with Tables 9.23 to 9.30 which showed the results of question 7, provide insights into convictions on patented and unpatented drugs.

Although it may not immediately be apparent, the benefits listed in question 28 for patented drugs are identical to those included as applying for drugs generally as shown in question 7, but their sequence within the questions was deliberately altered. The scores for those who felt the specific item to be very important, important or marginally important in question 7 are shown in Table 9.61 against those noting it as a benefit in question 28.

Generally, as predicted from question 27 (Table 9.59), a higher score is derived for all drugs than patented ones. A notable exception is brand loyalty which appears of almost equal consequence for patented and all drugs.

It is suggested that the brand loyalty engendered among prescribers is a major preoccupation for drug manufacturers. Inclusion of a patented drug for which there is no competing brand is likely to

TABLE 9.61: BENEFITS OF INCLUSION OF DRUG IN CONTRACT AND RESPONSES FOR PATENTED AND ALL DRUGS

Benefits of Contract	All Drugs	Patented Drugs
Brand loyalty	77.5%	76.2%
G.P. Sales encouraged	80.9	63.1
Standardised deliveries	47.7	16.7
Administrative saving	59.6	20.2
Standardised pack sizes	40.5	16.7
Standardised labelling	29.8	10.7
Predictable usage	72.6	46.4
Obviates hospital negotiation	75.0	63.1

provide for the supplier loyalty to their brand which can only mean spin-off benefits in general practice. This is alluded to in the relatively high score for patented drugs under the description "G.P. sales encouraged".

Those findings confirm the previously mentioned ones and serve to place patents in the appropriate context of NHS drug sales as a whole, rather than the more limiting arena of hospital drug supplies.

(e) Deliveries

Servicing of a contract was included in the survey for two reasons; firstly to determine any influence of delivery on contract operation, and secondly to validate or disprove the questionnaire responses since the method of delivery was accurately known. Questions 29 and 30 asked for preferences of delivery method, and, if that varied, those factors influencing one or other type of delivery. The results are tabulated in Tables 9.62 and 9.63.

Scrutiny of Table 9.62 shows a majority, 61%, claiming to deliver direct, 19% through wholesalers and 18% variable. Breakdown into categories shows the predictable result which helped validate the survey. Delivery route subjectively preferred and responses according to route objectively derived were related very significantly. The level of significance was 0.0000. In other words there is a certainty of more than 99.99% that those two are related not by chance. The questionnaire responses were therefore validated.

Question 30 analysed reasons for particular delivery routes.

Table 9.63 shows the responses which point to small order size and inaccessibility of hospital heavily favouring wholesaler routes. On the other hand product limited shelf life and extremely high unit cost favour direct delivery.

Other unprompted responses were as follows:-

Favouring direct delivery

Products under major promotion

Product range and local factors

Special pricing

Large orders

Use of specialised product

TABLE 9.62 NORMAL DELIVERY ROUTE

Delivery route	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Direct	60.7%	65	60	58	74	50	58	61	58	63	63	50	21	62	91
Wholesaler	19.0	16	20	21	11	29	18	21	21	16	21	13	54	5	-
Variable	17.9	16	20	18	15	17	21	18	17	19	15	31	21	29	9
No response	2.4	3	-	3	-	4	3	-	4	3	2	6	4	5	-

Boxed-in results are very significant ($p < 0.01$)

TABLE 9.63: REASONS FOR DELIVERY ROUTE

Reasons for delivery route	All Respondents (n=84)	Ownership			Absolute Hosp. sales £ millions per yr.			Relative importance of sales			Manufacturer		Pattern of Distribution		
		U.S. (n=31)	U.K. (n=20)	Europe (n=33)	>2.5 (n=27)	1-2.5 (n=24)	< 1 (n=33)	G.P above Average (n=28)	Average (n=24)	Hosp. above Average (n=32)	Mainly Patented Drugs (n=68)	Mainly Generic (n=16)	> 66% Wholesaler (n=28)	Mixed (n=21)	> 66% direct (n=35)
Small order size direct	6.0%	7	5	6	-	13	6	14	4	-	7	-	-	10	9
Small order size wholesaler	31.0	32	25	33	30	38	27	25	38	31	29	38	36	43	20
Inaccessible hospital direct	3.6	3	-	6	-	8	3	11	-	-	4	-	-	10	3
Inaccessible hospital wholesaler	27.4	32	25	24	30	33	21	25	38	22	29	19	29	33	23
Limited shelf life direct	20.2	19	5	30	15	29	18	36	21	6	24	6	11	38	17
Limited shelf life wholesaler	6.0	7	10	3	4	8	6	4	4	9	6	6	11	-	6
Extremely high unit cost direct	19.0	19	15	21	7	33	18	29	25	6	21	13	7	38	17
Extremely high unit cost wholesaler	3.6	7	-	3	4	4	3	4	4	3	4	-	11	-	-

Boxed-in results are significant ($p < 0.05$)

Favouring wholesaler delivery

High transport costs (e.g. heavy low cost items)

Identical competitor product

Stock shortages

Product range and local factors

Urgent delivery

As seen "Product range and local factors" included in both lists was in fact one response favouring neither route in particular but obviously varying. Unfortunately the respondent failed to identify which products and which local factors would favour use of one route or the other.

Statistical analysis of the results showed a significant relationship between objective route of sales and subjective responses of route for extremely high cost items. The significance was 0.0112. Of those objective wholesaler users, 7% favoured direct deliveries (companies generally responded 19%) and 11% wholesalers (compared with companies generally at 4%).

Objective direct delivery firms responded 17% for direct deliveries against none for wholesalers. Objective mixed routes firms responded 38% in favour of direct routes against none for wholesalers. This was a predictable relationship pointing to the consistency of the responses and adding to the perceived validity of the questionnaire replies.

There appears to be a role for both direct deliveries and wholesaler routes. It is suggested that the question of use of wholesalers could with benefit be scrutinised in greater depth. In particular it may prove beneficial to perform a detailed cost comparison of direct deliveries against normal wholesaler supplies against prime vendor wholesaler contracts as seen in the United States. The long-term viability of the wholesaler operation must be adequately deliberated in any investigation.

Question 31 sought further information on delivery strategy. The advantages created by a wholesaler delivery system were the speedier service, more frequent deliveries, cheaper delivery for small orders, more local siting of stocks, knowledge of customers on the part of wholesalers, less administrative effort, fewer phone calls from hospitals, less complaints from buyers and more streamlined service.

The suggested reasons for preference of direct deliveries were cost savings (wholesaler franchise reduces manufacturers' profits), feedback of information on the influence of promotion on sales, objection to wholesalers being in a position in which they can make prices known to third parties for example retailers, more accurate monitoring and stock control, standardised accounting procedures, better production planning and more efficient deliveries.

Clearly the reasons for route of servicing preferred are varied and in some cases contradictory. Whereas one route may be reasonable to one company for a particular drug, another firm may legitimately feel the other route beneficial. Given the wide variation in character and size of companies such opinions are hardly surprising. Both routes appear to possess applicability, and the prospective role of the wholesaler in the strategies and undertakings of manufacturers seems assured.

CHAPTER 10

PRIMARY RESEARCH FINDINGS AND THEIR INTER-RELATIONSHIPS

In order to attempt to derive most benefit from the data generated by the surveys and analyses the conclusions are summarised below under specific subject headings. Those are

1. Organisation (i) Authority level
   (ii) NHS personnel and influence
   (iii) Dissonance and concordance within each RHA
   (iv) Stages in contract award process
   (v) Changes over last five years
   (vi) Duration of contract
   (vii) Variation between RHA's
2. Attitudes towards drug contract organisation
   (i) Interest of companies in hospital sales
   (ii) Satisfaction with current procedure
   (iii) Disadvantages of contracts
   (iv) Advantages of contracts
   (v) Beneficiaries
   (vi) Improvements suggested
3. Pricing, tendering and negotiation
   (i) Inter-regional variation in prices
   (ii) Factors affecting price
   (iii) Price discussions
   (iv) Estimates of uptake
   (v) Communications
   (vi) Retendering
   (vii) Restrictions on buyers to allow price reductions
4. Patents
5. Deliveries

and 6. Political control

1. Organisation

(i) Authority level

In general contracts are at Regional level but there is in addition a small role for District/hospital, multi-Regional/Regional, and multi-Regional/Regional/hospital contracts (Table 8.1).

The RHA's serve an array of populations with a dispersion of pharmacy numbers situated in a range of geographical areas.

(ii) NHS Personnel and Influence

There will be a declining role, a view more strongly held by pharmacists than supplies officers, for those supplies officers formerly classed as area supplies officers and this reduced input meets the ideal expectations of NHS staff. There is forecasted an increasing role for Regional Supplies Officers, meeting the ideal of respondents (Tables 8.2 and 8.3).

There is a predicted greater involvement of pharmacists than five years ago though less than at present and that role reflects the ideal. Those views reflect a high degree of parallel thinking among the two relevant disciplines. Compared with present arrangements there will be an enlarged role for Regional Pharmaceutical Officers but reduced role for other grades of pharmacist (Tables 8.4 & 8.5). At all stages of the historical scene and ideally, the pharmacists play a bigger part than supplies officers. Pharmacists generally see themselves as more important than supplies officers think of themselves, with some evidence to suggest supplies officers seeing a greater importance for pharmacists than supplies officers, and pharmacists thinking supplies officers less important than pharmacists. There is some support for thinking that consultant medical staff will play a bigger part in contract organisation in the future.

There is greater involvement of quality control pharmacists now than in the past but this is predicted to diminish in practical terms as well as ideally. Attitudes toward quality control involvement show little difference between the two categories of respondent pointing to the concern of both disciplines for quality assurance (Table 8.6).

The most influential discipline in contract organisation and award appears to be the pharmacist at all stages of the historical timescale. Supplies officers are generous in suggesting a greater influence of pharmacists than themselves in contract organisation and award. No pharmacist thought the supplies officer should be the most influential discipline in contract award and organisation. Each of the two main disciplines see their own influence waning and the other's increasing slightly in contract organisation (Tables 8.7-8.9).

(iii) Dissonance and concordance within each RHA

There was a large measure of agreement between respondents of the two disciplines in each RHA. Out of a maximum dissonance score of 60 the

responses ranged from 6.6 to 16.8. Those results reflect the scenario in twelve of the fourteen RHA's of England. No assumptions can be made regarding the remaining two (Table 8.10).

The largest measure of disagreement within RHA's arose on the topics of the most influential discipline in contract award and whether or not there should be the option to retender when a drug comes off patent.

(iv) Stages in contract award process

All RHA's conform to the set guidelines with no price negotiation pre- or post-award and no requests for cost breakdown submitted to potential suppliers.

(v) Changes over last five years

There is a considerable body of NHS opinion that there is now increased involvement of quality control pharmacists (14 RHA's represented), that contracts are now longer (9 RHA's represented), and more consideration is given to packaging (9 RHA's represented). The two main NHS disciplines give equal attention to supplier service and packaging. Eight RHA's were represented in the opinion that there are now fewer items included in contracts (Table 8.11).

Suppliers provided information to confirm the change in relative involvement of supplies officers and pharmacists (44% of respondents). Other major points of note were the changed duration of contract, noted by 51%, and different starting dates, remarked upon by 41% of respondents. Larger companies are more likely to note changed conditions and more complex form filling than their smaller counterparts (Table 9.1).

(vi) Duration of Contract

Pharmacists and supplies officers showed the general preference for two year contracts than those of one year duration in the ratio of 2.3 : 1. This does not reflect the reality in which six RHA's possess one year contracts and seven possess two year contracts. (Table 8.12). Table 9.2 shows that suppliers in a ratio of 2.5 : 1 preferred one year contracts. It is suggested that an objective assessment of administrative costs to the NHS be performed in the hope of determining the relative merits of the two contract durations.

(vii) Variation between RHA's

Suppliers were thought most likely to provide objective comments on this topic. They suggested a variation in starting dates (83%), variation in number of drugs on tender forms (73%), durations (70%), complexity of documents (66%) and relative officer involvements (61%). Given that the size, complexity, duration and staff involved are

contract characteristics which must have an ideal value, it appears hard to justify the existence of those differences between portions, albeit large ones, of a single NHS organisation. It is suggested that decision makers ponder on this topic and attempt to define the ideal arrangement. The results are depicted in Table 9.3 .

2. Attitudes towards drug contract organisation

(i) Interest of companies in hospital sales

More than 90% of companies questioned have tendered within the last two years. Direct distributors are more likely to have tendered than other companies. Out of a maximum of about nineteen tenders, a majority of companies have submitted sixteen or more. Larger firms submit more tenders than smaller ones. (Table 9.4). Compared with five years ago, about half of the respondents are submitting the same number of tenders, about 12% are submitting less, with 31% submitting more. Tendering is considerably less popular now than five years ago among community suppliers and those with mixed distribution methods. There is some evidence to suggest that companies who distribute through wholesalers are less interested now than five years ago in tendering (Tables 9.5 and 9.6).

(ii) Satisfaction with current procedure

Pharmacists expressed a less pronounced opinion than supplies officers on the degree of satisfaction felt towards current contract procedure. The majority view (54%) suggested "satisfactory" as the descriptive term to be applied to the contract procedure with 23% remarking "very satisfactory" and 23% remarking neither satisfactory nor unsatisfactory (Table 8.14). Table 9.7 shows that in contrast the suppliers showed responses toward the dissatisfied portion of the spectrum, with 36% dissatisfied and 21% satisfied. Of companies with large absolute volume of hospital sales 60% expressed a degree of dissatisfaction. Companies with relatively large hospital sales considered hospital sales very important (Table 9.8). In terms of sales relative to the community sector, it would appear that the RHA's are confronted with a considerable untapped reservoir of companies who sell little to hospitals, but which regards hospital sales as being generally of some importance.

(iii) Disadvantages of contracts

Regional Supplies and Pharmaceutical Officers consider that local needs or preferences not being satisfied, rigidity of contract (little or no freedom of choice), no drug cost saving, lack of

continuity of supply at the end of contract period, and costly administration are important disadvantages of contracts. The pharmacists in particular noted the concern for local needs and lack of flexibility so restricting choice.

Unprompted disadvantages volunteered were the inflexibility of the system, views particularly strongly held by pharmacists, poor utilisation of management information and communications within the NHS, views held particularly by supplies officers, lack of commitment to adhere to contracts, and problems created for the supplier.

A large majority (77%) of the pharmacists regarded the absence of positive negotiation as a disadvantage. By way of contrast supplies officers did not share that volunteered opinion. Since negotiation would logically require and utilise the skills of supplies officers preferentially, the absence of any strongly held expressed desire on the part of supplies officers to partake in negotiation must be noted.

A large body of opinion regarded too few delivery and ordering points as not a disadvantage at all. In particular supplies officers would wish to see a reduction in both those points (Tables 8.15 - 8.17).

Suppliers regarded the following as important disadvantages of contracts in descending order of importance:- no guaranteed uptake, bias of health authority, inflexibility, impersonal and paperwork.

By far "no guaranteed uptake" looms markedly within the expressed concern of suppliers. 45% of respondents noted it as the most important disadvantage of contracts (Tables 9.9 to 9.22).

Combining the views of both sides of the buying process the slogan "For all its guidelines the system does not guarantee supply or cheaper supplies to the user and business to the supplier" could be promulgated.

(iv) Advantages of contracts

The NHS survey suggests that the most noted unprompted advantages were "cost savings", remarked upon by 85% of pharmacists and 62% of supplies officers, "predictable quality", noted by 46% of each group, "the lack of need for individual hospital price negotiation" referred to by 46% of supplies officers, and the "continuity or guarantee of supply" noted by 38% of supplies officers. Following prompting in order of decreasing importance were "cost saving on drugs", then "obviates the need for individual hospital price negotiation", followed by "predictable quality" (Tables 8.18 to 8.21).

The suppliers list of advantages in descending order of importance is

"spin off sales in general practice" at 35% response rate, "encouragement of brand loyalty among prescribers" at 16%, "obviates individual hospital price negotiation" at 16% and "predictable usage allowing easier satisfaction of needs" with 12% of responses. "Standardised pack sizes", "standardised labelling" and "standardised deliveries" were not considered important. Those advantages considered of most importance by suppliers warrant deliberation in the context of hospital savings producing family practitioner price rises (Tables 9.23 to 9.35).

(v) Beneficiaries

NHS senior staff felt both the NHS and suppliers derived benefit from contracts (58% of responses), with small minorities opting for the NHS deriving most benefit (19% of responses) and the supplier (8%). Given that both parties must derive benefit for the system to work well, the survey results point to a reasonable view of suppliers' needs adopted by NHS staff generally, with almost equal concern being shown by the pharmaceutical and supplies officer disciplines (Table 8.22). Examination of Table 9.36 shows that by way of contrast the majority of suppliers, 55%, perceive the NHS as most benefiting, with a further 40% suggesting neither party. 4% feel the supplier is the most benefiting party. Clearly the industry considers itself at a distinct disadvantage. This must be regarded as an indictment of the system and demonstrates the need for greater emphasis to be placed upon the mutual benefits which contracts can and should confer upon both parties. When asked for reasons for those responses the general message was that they felt they were unfairly treated and in return for a more equitable system and more flexibility they would be prepared to lower prices.

(vi) Improvements suggested

Spontaneously derived responses on the topic of suggested improvements to the contract system ranged over the whole spectrum of contract facets.

The NHS staff referred to the need for more flexibility in the system (46% of pharmacists and 23% of supplies officers). A smaller percentage would wish to see more commitment to the contract (23% of supplies officers and 8% of pharmacists). Other suggested improvements included more utilisation of staff skills, and improved management information (Pages 217-8).

Whereas pharmacists are more likely to desire a more flexible approach, supplies officers are more likely to wish for a more rigid commitment. Apparently supplies officers have mixed feelings about a more flexible framework for contracts despite the enhanced utilisation of their skills which that change would confer. Suppliers suggested many improvements including standardisation, information, clarification, simplification, more flexibility in certain matters and less flexibility in others (Pages 276-7).
It is suggested that those improvements proferred be investigated in depth. In the absence of such analysis it is suggested that contracts could be improved by the NHS guaranteeing to buy fixed quantities of applicable drugs or moving from tender to negotiation. Since the latter would require a deviation from government regulations it would require further investigation.

3. Pricing, tendering and negotiation

(i) Inter-regional variation in prices

Differential pricing is confirmed by suppliers, with 29% of respondents admitting to it and 58% knowing or believing others to do it (Table 9.37 and 9.38).
In the statements of NHS officers the information is put forward that prices charged are not systematically compared with other Regions' prices. 69% expressed that answer whereas only 23% stated that prices are compared (Table 8.23).
Five RHA's were represented among those who do compare prices compared with eleven of those who don't. Pharmacists are slightly more likely to compare prices than their supplies colleagues.
No NHS officer considers his prices to be dearer than in other RHA's, a remarkable result bearing in mind the previously noted findings.
Data generated by secondary research highlighted some glaring differences in prices charged to the various R.H.A.'s, and primary research confirmed that finding with one RHA paying 15.3 times that of another for one drug. An objective observer would question such a variation within a National Health Service.
A comparison of actual price charged, shown in Table 7.2, and perceived price is shown in Table 10.1. Table 8.24 pointed to a more cautious perception of price on the part of supplies officers than pharmacists, with 46 per cent of those supplies officers refusing to estimate the relationship between prices paid by their own Health Authority and those applying elsewhere,

TABLE 10.1: ACTUAL AND PERCEIVED PRICES PAID BY RHA's

RHA arbitrarily numbered	1	2	3	4	5	6	7	8	9	10	11	12	13
Actual average price	91.3	98.3	101.4	93.8	101.6	95.7	137.2	102.5	96.2	81.1	105.2	95.8	106.8
Perceived average price	94	100	100	96	-	100	-	-	94	100	100	100	96

compared with some 31 per cent of respondent pharmacists. Most misapprehend the true price situation. The responses are depicted in the scatter diagram shown in Figure 10.1. If the perception of the respondents had coincided with the actual prices paid, the correlation coefficient would have a value of + 1 and, as shown, the regression line would be straight bisecting both axes at the 100 point.

Instead the scatter diagram produced shows a correlation coefficient, r, of 0.0216. There is therefore almost negligible correlation between actual and perceived price and this is further demonstrated by the significance value, p, attained 0.953. Hypothesis 2 (a) (xii) was validated.

The attitude adopted by DHSS toward one RHA comparing prices with others has been at least equivocal if not totally hostile and so it is not unreasonable to assume that prices would vary without full realisation by NHS staff.

What is of note appears to be the dogmatic assertion on the part of so many NHS staff that prices are no higher than elsewhere, in fact in some cases lower, when not in a position to prove or disprove that statement.

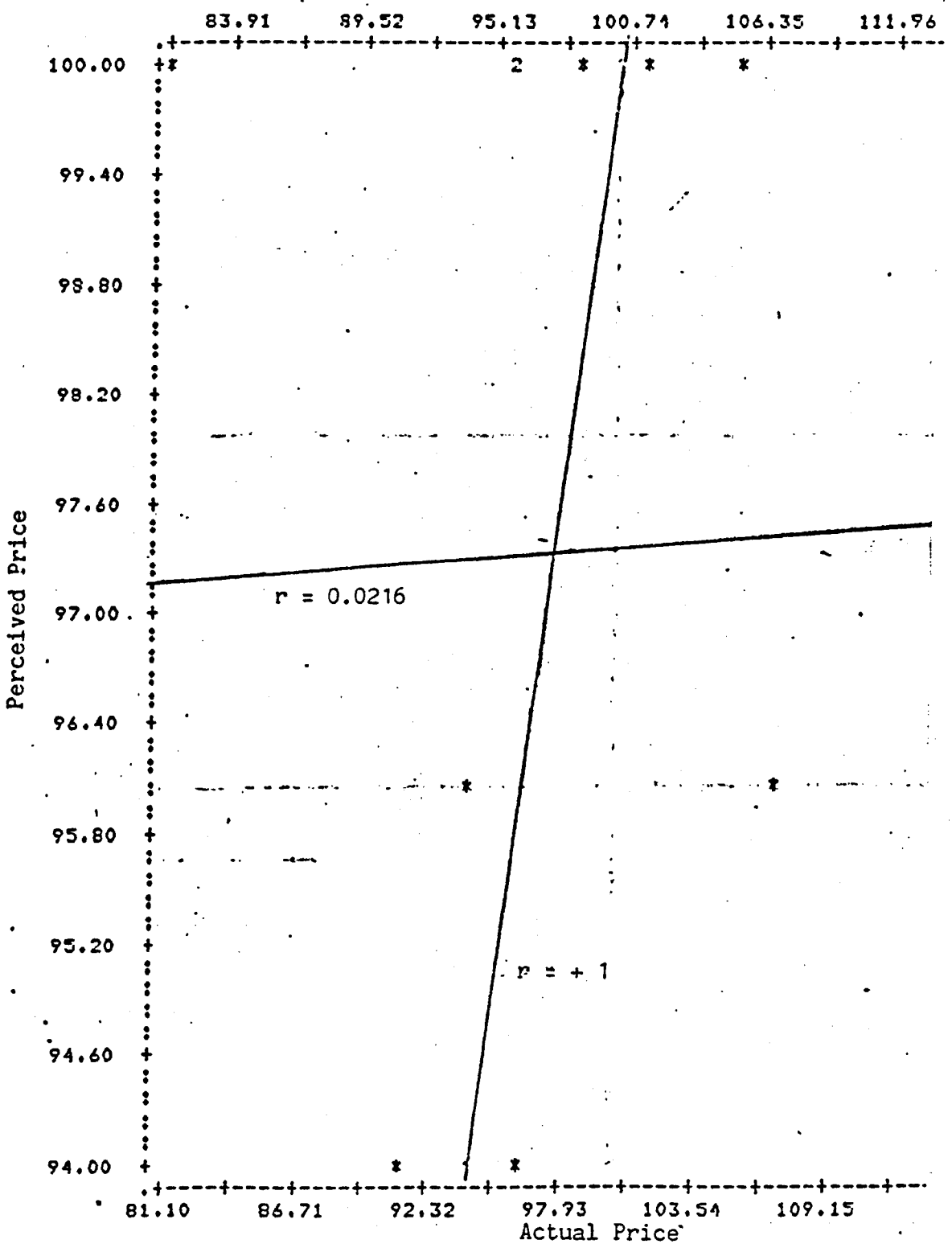
Respondents' perception of price paid is more a reflection of their desires than of reality.

The lack of confluence of the actual and the perceived price paid taken together with the wide inter-Regional price variation often seen gives support to the need for more interchange of price information between RHA's and adds force to the argument that more centralised control of contracts would provide greater harmony of prices charged throughout the NHS. Instead of the RHA's consolidating their influence they appear to act independently if not in competition with each other with the theoretical monopsony giving way in practice to oligopsony tending toward atomism.

(ii) Factors affecting price

The industry staff, having confirmed the presence of differential pricing, were very forthcoming in specifying those factors perceived as being considered in price offers to regions. They are, in order of mentions, estimated uptake 63%, duration 57%, total volume 52%, actual previous uptake 44%, number of delivery points 29%, number of buying points 21%, population served 8%, competition/market factors 8%, geographical spread of region 6%, need for business 4%,

FIGURE 10.1: PERCEIVED PRICE AGAINST ACTUAL PRICE



and type of packs ordered 2%. The large response for "estimated uptake" conflicts with the inaccuracy and relative lack of usefulness of contract estimates reported below (Tables 9.39 to 9.49).

Those factors perceived by industrialists as important in price offers were shown to bear no statistically significant relationship to price. Therefore hypothesis 2 (a) (xvi) is shown to have been validated.

When the prices paid by the various RHA's are compared to confirm or refute those stated influencing factors Table 7.3 shows there is little correlation between the drug price on one hand and, on the other hand, contract duration, number of delivery points, number of buying points, population served and geographical spread of region. Hypothesis 2 was shown to be validated by the research findings.

Table 7.6 depicts a high degree of positive correlation between number of firms contracting nationally and the standard deviation of price paid, that relationship being statistically significant. The more competition seen nationally the greater the spread of prices charged.

In terms of local competition within a specific RHA there is evidence to suggest (Table 7.7) that price variation is directly related to the number of firms tendering for an individual drug though that association is not statistically significant. The local picture mirrors the national one and lends support to the view that the desire for business is a major, if not sole, consideration of firms in price setting. Clearly those factors perceived by industrialists as being of consequence in price determination do not coincide with the reality of the system. Research findings demonstrate that drug price bears little relation to those elements combining to determine delivery charges, and there is a negative though not significant correlation between price and the degree of divergent thinking on the part of the senior RHA pharmacy and supplies staff. There is a negative correlation between price and number of hospital pharmacists, but it is of low magnitude and of little statistical significance. Those are depicted in Table 7.3.

Low price of contract drugs is spearheaded by generic manufacturers who play a disproportionate part in this NHS cost saving exercise, whereas higher priced contract drugs often represent the products of the patent holders. The purchase of the latter represents a residual brand loyalty resulting from dearth of competition or concern for quality. Tables 7.4 and 7.5 illustrate that point.

Drug prices under contractual agreement are significantly lower than trade price but the lower price is more significant in a multi-source

supply environment than in a monopoly market. Sometimes the contract price is so much lower than trade price that it must be suspected as being uneconomic within the narrow hospital market perspective but obviously not uneconomic within the broader NHS context (Table 7.10) With the modal number of local tenderers being 3 in a range from 1 to 6 and that of the number of contractors being 2 in a range of 1 to 5, the oligopoly is confirmed (Tables 7.7 and 7.6).

(iii) Price discussions

The NHS officers thought that they spent on average slightly over six man days per year in negotiation or discussion on prices with potential suppliers before contract award. That average value conceals a wide variation ranging from zero to 30 with pharmacists suggesting slightly less effort than supplies officers (Tables 8.25 to 8.26).

A considerable body of opinion suggested that price discussion effort was too little or about right. None thought it too much. There was evinced a clear desire on the part of members of both disciplines to see more negotiation and discussion with potential suppliers so as to improve the service and prices charged. No apparent relationship between perceived time spent on price discussion and its considered adequacy was highlighted (Table 8.27).

Suppliers presented a distorted reflection of that picture, with, on average, a little less than four man days effort expended by each company in price discussions with each Health Authority in a year. The range extended from zero to 30. The company profile most likely to favour more price discussion is a United States based, proprietary manufacturer which distributes direct to hospitals, not through wholesalers (Table 9.50). Tables 9.51 and 9.52 show that majority supplier opinion suggested that the effort expended was about right with a slight tendency towards the opinion "too little". Suppliers generally shared the views of the NHS officers. As with the NHS staff, no apparent relationship between perceived time spent on price discussion and its considered adequacy was highlighted.

In both surveys effort must be presumed to include all stages of the contract process since no real negotiation occurs, and there is some evidence of considerable in-house price formulation effort on the part of companies.

That conclusion is derived by examination of companies' exertions. The effort of the 84 respondent companies in discussing contract prices with each Health Authority in a year is about 325 man days.

An assumption can be made that the total for about 100 companies discussing prices with 14 RHA's is about 5600 man days.
This must be contrasted with the NHS officers' responses. Even if one assumes that all the efforts expended by pharmacists and supplies officers are independently performed, a weak assumption, the total effort would amount to merely 280 man days per year. Clearly the industrialists either indulge in hyperbolic fantasies in their perceptions of price discussions or expend considerable energy in formulating prices prior to contact with the Health Authorities. The latter is thought the more likely.

(iv) Estimates of uptake

Some 62% of industry staff respondents describe estimates as "inaccurate" or "very inaccurate" as contrasted with 33% suggesting them to be "accurate" or "very accurate". In view of the large amount of time, admittedly unquantified but nevertheless known to be substantial, expended by NHS staff in gathering and collating such data, those responses must serve as a major criticism in that there is a waste of scarce human resources.
Despite the inaccuracy of estimates 62% of manufacturers claim them to be "very" or "fairly useful" as against 35% noting them as "not of much use" or "of no use at all". Of respondents who find estimates accurate a larger than expected proportion feel them useful and of those who suggest that they are useless a significantly larger than expected number find them inaccurate (Tables 9.46 to 9.49).

(v) Communications

Manufacturers felt that the period allowed to complete tender forms is about right, that there is too long a gap until the offer is accepted or rejected, and once the award is made the time period before the award winner is informed is about right with some feeling that it is too long (Table 9.53).
To create the ideal the deliberation process needs to be speeded up and the winner informed more speedily. This confirms verbal comments that sometimes hospitals order under contract before the award winner itself is aware of the adjudication decision. The ideal time scale promulgated is four to five weeks to complete tender document, four weeks for the Health Authorities to collate and deliberate on the information and award the contracts, and within two to three weeks the award winner would be informed (Table 9.54).
Passage of years has, for a typical RHA, resulted in a diminished

time allowed to companies to complete tender documents yet has increased considerably the time allocated to its own staff to deliberate upon the data submitted by the firms.

It is hoped that this information may be of help to those Health Authorities who might feel able to remedy the more traumatic episodes claimed to have been experienced by some companies.

(vi) Retendering

Almost all responding NHS senior officers feel that poor service or deliveries and an unacceptable request for a price increase are good grounds for retendering. Of slightly less prominence as justification for retendering was the category "product subsequently shown not to specification". Supplies officers considered that situation of more importance than pharmacists. Various other responses were provided suggesting the general opinion that there should be scope to change or cancel contracts. As regards unacceptability of requested price rises no clear consensus was apparent to define that percentage price rise which should require retendering, though 31% would allow price rises of up to 10% before retendering would be instituted (Tables 8.28 and 8.29).

Suppliers felt that retendering would be justified when suppliers give poor service or deliveries (74%), bankruptcy or total inability to supply (73%) and quality of drug not matching pre-award samples (70%). Moderate majority opinion supported retendering if a price increase was unacceptable (61%) or the product subsequently shown not to specification (58%).

The companies adopt a constructive, ethical approach to behaviour expected of competitors, and implicitly of themselves, on award of contract. Foreign owned companies attach more weight to supplier service than British ones. Proprietary manufacturers give more weight to product conforming to specification than generic producers. For the criterion "arrival of a new significant drug" the companies more likely to require retendering were community sellers, proprietary manufacturers, and companies using wholesaler or mixed distribution methods (Table 9.55).

Significant change in prescribing habits is thought to require retendering, more so by proprietary manufacturers than generic ones. A majority of firms felt that price increases of up to 10% should be tolerated before retendering occurs (Table 9.56).

(vii) Restrictions on buyers to allow price reductions

Buyers in the NHS consider payment at the beginning of the year

unacceptable. A reduced number of buying points would be an acceptable restriction with 85 to 92% responses. Almost as acceptable was a reduction in number of delivery points (73 to 81%), less frequent deliveries (62 to 73%), and a two year instead of a one year contract (77 to 81%). Most pleasing would be, in decreasing order, two year contracts (54%), reduction in buying points (42%), reduction in delivery points (31%), guaranteed uptake (23%), and less frequent deliveries (8%) (Table 8.30).

Consideration was given to a statistical analysis of a Region's views on acceptability of restrictions and the prices paid. The small number of Regions which displayed a strong view on this subject prevented such analysis being performed. Perusal of the 2 x 2 contingency table (Table 10.2) shows no apparent relationship between degree of acceptance of restrictions and price paid. Hypothesis 2 (a) (xiv) was validated by the research findings.

TABLE 10.2: POPULARITY OF RESTRICTIONS AND PRICE PAID

	PRICE PAID		TOTAL
REGION VIEWS OF RESTRICTION	HIGH	LOW	
Rejector	3	2	5
Acceptor	2	2	4
TOTAL	5	4	9

Suppliers would be prepared to offer price reductions of over 10% for payment before delivery (10%), guaranteed uptake (7%), less frequent deliveries (6%), reduced number of delivery points (6%), two year rather than one year contracts (4%), and reduced number of buying points (2%). (Table 9.57).

Many companies felt able to offer price reductions of up to 10%. For example, guaranteed uptake attracted 38% of responses, reduced number of delivery points 31%, less frequent deliveries 24%, payment before delivery 24%, reduction in number of buying points 19%, and two year rather than one year contracts 11% of respondents. The profiles of companies most likely to offer price reductions for those restrictions can be identified from examination of the detailed results. In order to assess the relationship between price formulation policies and potential for price reductions correlation coefficients

were calculated.

There appears to be little correlation between those factors volunteered by companies as being considered in price formulation (Table 9.39) and those elements which, if acceptable to buyers, would result in reduced prices (Tables 9.57 and 9.58).

The correlation coefficient for elements likely to reduce prices by up to ten per cent was - 0.487 with a significance of <0.6. For those elements likely to reduce prices by more than ten per cent, r = 0.266 with a significance of <0.8.

Since those factors perceived by suppliers fail to coincide with the reality of the price structures it is not really surprising that those perceived factors bear little relationship to those promulgated in this section.

While sounding a note of caution it must be suggested that there is some scope for savings which would satisfy both manufacturer and NHS officer.

4. Patents

Manufacturers generally believe that contract inclusion is of more use for unpatented than patented drugs (Tables 9.59 and 9.60). Table 9.61 shows the greatest benefits received as a result of a patented drug being on contract are "brand loyalty encouraged" (76%), "G.P. sales indirectly encouraged" (63%), "obviates need for individual price negotiation at hospital level" (63%). Brand loyalty appears of equal consequence for patented drugs and drugs generally, and companies obviously seek to have their branded products included in contracts for the spin-off benefits of general practitioner prescribing. This factor must be borne in mind when health authorities receive cheap offers which exceed those expected from economies of scale. There is evidence of some companies selling products to hospitals at a loss. It must be concluded that any savings made by health authorities as a group are reflected in price rises to the family practitioner sector as a consequence of the method of price regulation which the government currently adopts. This subject is ventilated elsewhere.

5. Deliveries

Delivery route, as predicted, varied with some 61% claiming to deliver direct, 19% through wholesalers and 18% by both routes. Small order size and inaccessibility of hospital favour the wholesaler route, whereas product limited shelf life and extremely high unit cost favour direct delivery.

Unprompted additional factors favouring direct delivery were products under major promotion, special pricing, large orders and use of specialised orders.

Wholesaler delivery would be preferred in the case of high transport costs, identical competitor products, stock shortages and urgent deliveries (Tables 9.62 and 9.63).

Clearly both routes play a part in ensuring that the drugs reach the patient but it is suggested that it may prove beneficial to examine in detail cost comparisons between direct deliveries, wholesaler supplies and prime vendor wholesaler contracts.

6. Political control

Secondary research demonstrated the number and depth of guidance notices issued by central government. It is hypothesised that there is an inverse relationship between the degree of centralised political control, as represented by political party in power, and the emphasis given to locally organised drug contract. In order to strictly test the hypothesis a comparison should be made between the monetary value of national/Regional/local contracts.

Unfortunately a dearth of such data makes such fine testing of the hypothesis unrealistic. Nevertheless some subjective judgements can be applied to the topic by noting any reference in public material to a recommendation on the administrative level of buying and relating that to the political party in power at that time. It may be assumed that a high degree of centralised political control would be a characteristic of a Labour government whose philosophy would be a strong involvement of central government in all aspects of society whereas a low degree of control would be expected of a Conservative government whose political platform supports maximum delegation to local level with restricted involvement of central government.

An examination of the advice issued to health authorities shows that since the inception of the NHS more than sixty papers referring to purchasing in general or drug purchasing in particular have been issued. This considerable amount of guidance creates a quasi-legal framework within which drug purchasing has evolved. Many of the documents referred to have no bearing on the hypothesis but those that do, about 35 per cent of the total, were tested to determine if they reflect the political climate prevailing at that time. The advice issued takes the form of circulars, memoranda,

letters or reports. Their differentiation is related more to the length of the communication than to the actual importance of their information.

Table 10.3 demonstrates the numbers of directives with the differing degrees of emphasis and the political party in power at that time. Those communications which merely cover publication of reports but which themselves have no impact on the administrative level of drug purchasing have not been included in the table.

Table 10.3 portrays the findings from which the inference must be drawn that the administrative level of purchasing of goods generally, and drugs in particular, by health authorities follows closely the political thinking at the time. Hypothesis 5 must be considered as validated. Chi-square was inapplicable due to paucity of data.

It is not suggested that with a change of government there has been a reversal of attitude toward purchasing, but clearly there have been over the years major shifts of emphasis with little time being allowed for a system to prove itself efficient, or otherwise, before a change of direction occurred. The result of this could well have been a decrease in NHS buying efficiency.

It is to be expected that the government of the day decides on the allocation of resources to the health service and how it should be distributed, but should it involve itself with constantly changing modes of administration? It should be possible to decide on the most appropriate level of purchasing using sound economic reasoning and for the arrangement to be divorced from the prevailing political environment at Westminster. The recently created NHS Supply Council provides such a decision - making body and, given the goodwill of health service staff and suppliers and an absence of interference from politicians, the Council should be able to formulate policies based on economic grounds.

The author's examination of the political influences upon health authority drug purchasing was published elsewhere.

TABLE 10.3: DIRECTIVES ISSUED AND POLITICAL PARTY IN POWER

Political party in power and years in office	Number of publications and administrative level to which emphasis in buying is given: Local	Neither	Central
Labour 1948-1951	0	1	2
Conservative 1951-1964	4	1	0
Labour 1964-1970	0	0	2
Conservative 1970-1974	1	2	0
Labour 1974-1979	0	1	4
Conservative 1979 to present	4	1	0
Total Conservative	9	4	0
Total Labour	0	2	8

CHAPTER 11

SUMMARY

The research effort provided an insight into the system. The secondary data established a foundation and the primary work defined, clarified, extended, confirmed or refuted, and explained the derived information. A complex bureaucratic conformation manifested itself. The realistic system bears little resemblance to that which is stated or implied, and, in order to facilitate comparison, the two systems are presented in Table 11.1. Identification of many possible associations between the practical and theoretical schemes was prevented by paucity of data, and so, by default, the startling contrasts are seen. The picture depicted is that of a scheme meandering, changing direction on the road towards an obscure goal, hampered by an absence of suitable published data on which judgments can be passed, and consequent incapacity to perform the role required of it. Portrayed is a contrivance of passive, bureaucratic, risk-reducing purchasing by individual, independently-acting NHS segments, and marketing by companies practising opportunistic pricing. It could be said that NHS staff, by participating in the scheme, are performing a marketing exercise on behalf of drug firms.

The research project clearly helped to establish a body of knowledge applying to the topic under investigation. What has emerged is a picture of NHS hospitals buying drugs under contracts organised by the Regional Health Authorities (pages 191-2). Those RHA's show considerable organisational (pages 232-4) and demographic disparity (pages 170-2), but their contract systems slavishly follow national guidelines with no evidence of any major attempts to exploit the bargaining power of the NHS to the full (pages 199, 220-2, 291-6). There is however, some variation in detail, with some Regions having altered the contract duration, length and format (pages 199, 201, 202, 232-4), and estimates' collation and utilisation (pages 94, 199, 287-91).

Members of two disciplines, pharmacists and supplies officers, are primarily responsible for the organisation of contracts (pages 191-8). The schemes owe their conception to the initiative of pharmacists (page 59), who have retained the pre-eminent role (pages 195, 197 and 198) despite the establishment and consolidation of the specialist supplies officer calling (pages 64-78). Those disciplines appear

TABLE 11.1: STATED OR IMPLIED AND REALISTIC MODELS OF CONTRACT DRUG PURCHASING SYSTEM

ASPECT		STATED OR IMPLIED		REALISTIC
Objective	1	Drugs of adequate quality are bought.	1	Drugs are bought but quality is not guaranteed to be adequate. Sometimes quality standards that are established are too stringent.
Reason	1	The resources of Health Authorities are judiciously spent.	1	There is evidence that the system saves RHA's money, but some are more successful in their endeavours than others.
	2	By extension those of the NHS are well spent.	2	No evidence that the NHS saves money.
	3	The resources of society are similarly well spent and the efficiency and viability of the pharmaceutical industry are ensured.	3	The Scheme conflicts with the government's encouragement of research based pharmaceutical companies through the PPRS and patent protection. There is no evidence that society as a whole benefits from the scheme.
	4	The operation is cost-effective, that is the savings of the scheme are not outweighed by administrative costs.	4	No information is available on the administrative cost of the scheme.
	5	Savings would be the maximum attainable.	5	No examination has taken place to determine whether savings could be increased by negotiation or purchase through wholesalers or prime vendor buying.
	6	Savings made by the managed sector of the NHS should not result in increased costs to the family practitioner sector.	6	As a result of the method in which the PPRS operates those companies whose profits are reimbursed under PPRS may and do recoup losses from the managed sector of the NHS by increasing prices to the family practitioner sector.
	7	Prices charged are related to recognised demographic and organisational variables so that a model can be built up defining the means of minimising prices.	7	Prices charged bear no statistically significant relationship to any of the demographic or organisational variables tested so no model of minimum price variables can be defined. Opportunistic pricing prevails. Companies differentially price.
	8	All RHA's are aware of prices being charged to other RHA's and can therefore buy from the cheapest source.	8	Although DHSS is aware of inter-Regional price variation RHA's are not, and Regions are discouraged from comparing prices. Even if RHA's were aware of cheaper sources, unless those companies tender cheaper prices cannot be taken advantage of.
	9	Public accountability is satisfied.	9	Public accountability is not necessarily satisfied by the scheme.
Method	1	An ideal framework for organisation exists defining the number of drugs to be included or the threshold value for purchases, usefulness of estimates' collation, and complexity of documentation.	1	There is considerable variation in the organisation between RHA's. No ideal method of operation has been defined.
	2	System beneficial to both NHS and suppliers both being reasonably satisfied with its operation.	2	NHS officers feel the system can be improved and suppliers feel at a disadvantage. For example, time scales have been altered to make them more favourable to NHS but less favourable to suppliers. There is considerable dissatisfaction, particularly among those companies with a large volume of hospital sales.
	3	Scheme guarantees supplies to the NHS at a fixed price.	3	No guarantee of supply to the NHS exists and prices are not fixed.
	4	Scheme guarantees business to the supplier with quantities fixed.	4	No guarantee of business to the supplier exists. Quantities are not fixed and estimates of uptake are inaccurate.
People	1	To ensure maximum efficiency, minimal conflict and speedy decision-making, one expert person organises the contract.	1	No one expert in both buying and pharmacy exists, so the role is shared between a supplies officer and a pharmacist. The members of those two disciplines have historically, and, to a lesser extent currently, competed for the status and responsibility associated with the operation. Locally there is a high degree of co-operation. The actual decision making is by committee which might delay and obfuscate the scheme's mechanism.
	2	There are in existence full data of the energy expended in organising the contract so as to permit full costing.	2	No data on the manpower implication of contracts exist.
Place	1	The contract is organised at that administrative level which is consistent with responsiveness to local needs, using manpower effectively and resulting in minimal duplication of effort.	1	Advice on administrative level has varied depending upon the prevailing political climate, with contracts now organised Regionally. However no study of administrative levels has been performed to establish clearly the ideal model arrangement.
	2	The scheme ensures local needs are satisfied.	2	A remote organisation is less likely to satisfy local needs than a more localised arrangement.
Time	1	The scheme ensures speedy supply and local deliveries.	1	No guaranteed time of delivery is provided.
	2	The duration of contract ensures maximum benefit to both parties, NHS and supplier, at minimum cost.	2	Formerly the duration was one year. Now contracts are mainly of one or two year duration. No definitive work exists which has examined critically the advantages and disadvantages of the various contract durations and defined the best arrangement.
	3	An ideal framework exists for starting dates and time scales.	3	No ideal time factors have been formulated.

to enjoy an amicable working relationship at a local level (pages 198-200), but there is apparently an underlying tension between them nationally (pages 191, 193-8), reflecting the undefined boundary between their respective roles (pages 64-73) as well as the under-utilisation of some of their skills (pages 204, 206, 217, 218).
Although not apparent at the outset of the research project, the crucial role of the PPRS soon materialized. Price Regulation Schemes arose because the cost of the NHS was greater than expected and the drug bill was considered a major factor. The first Price Regulation Scheme, introduced in 1957, sought to regulate industry profits by control of prices of individual drugs. The Scheme was modified in 1961 and 1964 but it was not until 1969 that overall company profits were examined rather than individual drug prices (pages 108-110).
Prior to 1969 lower prices agreed with hospitals would have decreased the Government's drug bill, but after 1969 any lower prices in the hospital sector would be counteracted by correspondingly higher prices in general practice, producing no change in the Government's drug expenditure.
Any reductions in company income resulting from one product or in one sector of the NHS are submerged in company profitability from all products sold in all portions of the Health Service (pages 110, 124, 127). Thus PPRS and contracts fundamentally conflict.
A second conflict manifests itself in that the Scheme endeavours to encourage research-based industry (pages 115, 125), whereas contract savings emanate particularly from generic or "copier" companies rather than from the original patent holders (pages 177-9).
In theory, therefore, the two schemes, PPRS and contracts conflict provided PPRS is functioning as intended. There is a lingering suspicion that PPRS, with the wider scope, is not working as efficiently as possible, so improvement in the Scheme must be considered of greater urgency than improvement in contracts (pages 124-8).
Hypothesis 1, namely that prices of contract drugs are significantly lower than trade prices, was validated by the research findings shown on page 187. Also on that page hypothesis 1(a), that the variation in price will be greater in multi-source situations compared with single (monopoly) supply situations and in both cases lower than trade price, was validated.

At first sight the apparent savings seem startling (pages 187-8), but in the context of the NHS market as a whole those savings pale into insignificance. The financially restricted hospital sector is subsidised by the NHS sector with the open-ended budget, the family practitioner service (pages 126-7).

The NHS funding system differentiates between those two sectors, each receiving its own allocation. Staff in the hospital service, faced with budgetary constraints and the need to save resources, pay little attention to overall NHS cost implications in their decision making.

General practice prescribing of branded drugs at the disproportionately higher price is encouraged by pharmaceutical manufacturers (pages 107, 125, 312-318). Unwittingly, by indulging in the fantasy of saving money by buying on contract, the RHA's are essentially competing with each other (pages 180, 183-6, 277-80).

Employees of individual RHA's, aware of their own Region's budgetary constraints, welcome opportunities for drug cost savings and disregard the wider ramifications including likely expenditure increases elsewhere. In a similar fashion DHA staff concern themselves with their own DHA's restricted resources and pay little regard to the broader consequences of their activities having an impact on other Health Authorities.

A formidable array of Regions presents itself to the shrewd marketing executives of the industry, and the irrationality of the exercise is compounded by the differing starting dates of Regions' contracts (page 94). Firms easily adjust prices on the basis of previous contract adjudications. The NHS buyers luxuriate in a bureaucratic, long-winded contrivance, the administrative cost of which is unquantified but undoubtedly considerable (pages 104-5). The consequence is a range of prices (pages 172, 173, 183-6), which defies any satisfactory explanation (pages 174-6). Whereas there is little evidence of price collusion between suppliers (page 180), individual firms indulge in a pricing policy which may be described as expediency (page 177). Thus hypothesis 2, which stated that in relation to the demographic/industrial/attitudinal variables tested there is a random distribution of prices, was validated, as seen on page 333.

Subsidiary hypothesis 2 (a) specified the variables tested and all were validated. They were (i) physical size of area served, (ii) population served, (iii) population density, (iv) number of hospital pharmacists and (v) pharmacies, (vi) buying points, (vii) delivery points, (viii) delivery point density, (ix) manufacturers, (x) industry employees, and (xi) contract duration.
All are referred to in the text on page 176. Additionally variables (xii) price perception by NHS staff (page 331), (xiii) divergence of opinions between pharmacist and supplies officer (page 176), (xiv) popularity of restrictions among NHS staff (page 337), (xv) price paid by diverse RHA's (page 186), and (xvi) factors perceived by industrialists as major price determinants (page 333) were validated.
Hypothesis 3, namely that there is a direct relationship between the spread of contract prices and the number of sources of supply, was validated as shown on page 180.
In addition to those hypotheses, as presented in Chapter 5, which concern prices, and which are summarised above, those dealing with the organisation were validated by the research findings. Those were that:

(i) there is no relationship between perceived time spent on price discussion and the considered adequacy of that time in the view of both buyers and suppliers (Hypothesis 4, pages 220 and 294);

(ii) there is an inverse relationship between the degree of centralised political control and the emphasis given to locally organised drug contracts (Hypothesis 5, page 340);

(iii) the weighting of criteria considered important in purchase of drugs has altered over time (Hypothesis 6, page 201);

(iv) the importance allotted to certain purchase criteria is a function of the relationship between the pharmacists and supplies officers involved in the purchasing process (Hypothesis 6 (a), page 210).

Hypothesis 4 demonstrates the lack of definitive knowledge of the importance of price discussion and to a large extent the lack of concern. Price discussion occurs, not in response to need, but due to other circumstances. Clearly absence of true price negotiation finds expression in the unrelated perceived time and adequacy of

price discussion. A less restricted buying system with a defined role for price discussion might ensure the relevance of the need for time to be allocated to price discussion.

Hypothesis 5 points to the implications for buying of party political thinking. The intrusion of politics into Health Service buying is demonstrated.

Hypothesis 6 shows the dynamic role played by contracts despite the severe restraints posed by public buying systems.

Hypothesis 6(a) illustrates the role played by the personalities and professions involved. Whatever the state of a system it is markedly affected by the character and behaviour of the individual participants.

The research identified more efficient purchasing methods which might encourage firms to offer their products at lower prices. Payment before delivery, though unpopular with buyers, would probably lead to lower prices. Guaranteed uptake, though not very popular with NHS staff, would also lead to lower NHS expenditure. Other means of reducing prices identified by the research were less frequent deliveries, reduced number of delivery points, reduced number of buying points and two year rather than one year contracts. Those changes would be acceptable to many NHS staff (pages 224, 226-7, 304, 309-10).

Many disadvantages of contract purchasing were demonstrated by the buyers' responses. Local needs or preferences are not satisfied by contracts and the system is too rigid allowing little or no freedom of choice. Some respondents questioned whether the scheme produced costs savings, several noted the costly administration and several referred to lack of continuity of supply at contract end (pages 204, 206-9). Suppliers made reference to no guaranteed uptake, bias of Health Authorities, inflexibility of the system, its impersonal nature and the paperwork involved (pages 242-57).

Several improvements in the scheme were identified by the research. NHS staff referred to the need for more flexibility in the system, more commitment to the contract, more utilisation of staff skills and improved management information (pages 217-8). Suppliers noted standardisation, information, clarification, simplification and changes in flexibility (pages 276-7).

CHAPTER 12

CONCLUSIONS

A dearth of definitive data on the sums expended on contract purchases as well as an absence of documentary findings on administrative costs of the systems have placed a restriction on the quantitative inferences which could be drawn. An improvement in the level of management information in the NHS would make the drawing of such inferences an attractive proposition.

A major casualty of the "confidentiality" ascribed to drug prices paid by NHS Authorities was the incompleteness of reliable information for all RHA's. Whereas "confidentiality" was adduced as an over-riding necessity, it must be thought that some RHA's were reluctant to expose to scrutiny details of those prices paid in the belief, now shown to be misplaced, that price paid might be regarded as a direct measure of their efficiency in purchasing.

It is recommended that contracts should be viewed and examined in the context of the PPRS and the total NHS expenditure. The potential advantages or otherwise of negotiation or prime vendor purchasing should be explored.

Contract procedure should be altered to take advantage of price reductions offered by firms. Consideration should be given to the immediate discontinuation of contract awards for drugs under patent, because in monopoly supply nominal hospital savings are likely to be outweighed by costs of contract administration and increased sales and expenditure in general practice (pages 92 and 107).

The DHSS should give active encouragement to the freer flow of price information between RHA's (pages 134-9) and ensure that appropriate action is taken on the findings. The optimal administrative level of contract organisation should be decided on the basis of objective economic criteria, not party political dogma or historical power centres. That contracts are at present Regionally organised does not necessarily imply that they are best organised at that level.

With regard to deliveries, it is recommended that the DHSS or Health Service Supply Council support the initiation of a detailed cost/benefit comparison of direct, wholesaler and prime vendor wholesaler supplies, and take appropriate action on the derived conclusions. That analysis should fully take into account the

cost to the NHS of drugs' stockholding and warehousing facilities. To summarise it is recommended that consideration should be given to the following:-

1 Improvement of management information. The administrative costs of contracts must be calculated and published. Each RHA must be informed of prices paid elsewhere.

2 The secrecy, euphemistically termed confidentiality, shrouding the system should be examined to ensure that NHS buyers are in possession of adequate information on firms, prices and quality on which to make decisions.
The divulging to competitor firms of accepted price offers is governed by confidentiality constraints. An examination should be conducted into the possible consequences of a relaxation of such constraints.

3 An examination should be conducted into the NHS funding system. The separate hospital and family practitioner budgets, the former limited the latter open-ended, create an artificial competitive framework for drug purchases reducing NHS efficiency. The possibility of combining those budgets for each NHS Region should be explored.

4 Discussions should be initiated between the DHSS and suppliers to achieve realistic drug prices related to production and distribution costs, and purchase quantities.
Contracts should guarantee quantities purchased.

5 The Pharmaceutical Price Regulation Scheme should be reappraised.

6 An examination of and comparison of direct buying, wholesaler buying and prime vendor purchasing should be conducted to assess the potential advantages or otherwise of those types of supply.

7 The administrative level at which contracts are organised should be scientifically evaluated. The political or historical factors, while being recognised, should not take precedence.

8 The fundamental basis on which public purchasing is conducted, namely tendering, should be reappraised to determine if a role should be found for negotiation.

9 Those disadvantages and potential improvements highlighted by the research should be examined critically.

10 Contracts should not be awarded for drugs from monopoly suppliers.

11 An examination should be performed to determine the ideal contract duration, starting dates, timescales, format and threshold value for inclusion in a contract.

Whereas much has been achieved, the challenge of those facets not examined by this research study will doubtless serve as a stimulus to future research workers who should be able to build upon the foundations constructed by this work. The satisfaction to be derived from the realization that scarce health resources would probably, as a consequence, be more judiciously spent will hopefully encourage others to tackle the outstanding tasks.

13.1 Abbreviations

APPENDIX 1

A.B.P.I.	Association of the British Pharmaceutical Industry
A.G.M.	Annual General Meeting
A.H.A.	Area Health Authority
A.Ph.O.	Area Pharmaceutical Officer
A.S.O.	Area Supplies Officer
B.G. or B.O.G.	Board of Governors
C. and A.G.	Comptroller and Auditor General
D.H.A.	District Health Authority
D.H.S.S.	Department of Health and Social Security
D.Ph.O.	District Pharmaceutical Officer
D.S.	Dear Secretary Letter
D.S.O.	District Supplies Officer
E.C.	Executive Council
Ed.	Editor
F.P.C.	Family Practitioner Committee
G.H.P.	Guild of Hospital Pharmacists
G.P.	General Practitioner
H.C.	Health Circular or House of Commons Paper
H.M.	Hospital Memorandum
H.M.C.	Hospital Management Committee
H.M.S.O.	Her (His) Majesty's Stationery Office
H.N.	Health Notice
H.R.C.	NHS Reorganisation Circular
H.S.C. (IS)	Health Service Circular (Interim Series)
ibid.	In the same book etc. in the reference immediately preceding
I.C.C.	Inter Company Comparisons
M.O.H.	Minister (or Ministry) of Health
N.E.D.C.	National Economic Development Council
N.E.D.O.	National Economic Development Office
N.H.S.	National Health Service
Op. cit.	In the work cited
O.H.E.	Office of Health Economics
p.	page
P.A.C.	Public Accounts Committee
para.	paragraph
P.P.R.S.	Pharmaceutical Price Regulation Scheme
R.H.A.	Regional Health Authority
R.H.B.	Regional Hospital Board
R.Ph.O.	Regional Pharmaceutical Officer
R.S.O.	Regional Supplies Officer
S.C.C.	Supply Council Circular
S.I.	Statutory Instrument
V.P.R.S.	Voluntary Price Regulation Scheme

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October 198

Dear

We are writing to you in connection with a research project being undertaken in the Mersey RHA. The work involves an examination of the contract system of drug purchase in England and results already obtained suggest that the project will be of benefit on a national scale. The work is being undertaken by a hospital pharmacist, Mr David Wolfson, and when complete will be offered in part fulfilment for a higher degree of the C.N.A.A.

In preliminary survey work, Mr Wolfson was offered the services of a market research organisation. The initial survey of regional pharmaceutical and supplies officers provided useful information but a higher response rate and participation would clearly have been more satisfactory. It was considered that a questionnaire totally independent of any commercial interest would elicit considerably better response and to this end we enclose such a postal questionnaire.

We should be most grateful if you would help by completing and returning it as soon as possible in the pre-paid reply envelope. The information we seek is confidential. It is concerned with respondents attitudes to the contract system. There is no wish to identify any respondent and absolute anonymity both of respondent and of the related region is guaranteed. No identification of source will be provided in any thesis or publication.

We are aware that the completion of any questionnaire is tedious. If you would prefer to answer questions posed verbally, this can be arranged if you complete and return the enclosed card. This approach, together with the objectives of the exercise, have been discussed with officers of the Health Service Supply Council who have expressed their interest in the results.

We shall be most grateful for your co-operation with this project.

Yours sincerely

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Pharmacy Practice
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B B Riley,
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QUESTIONNAIRE ON CONTRACT DRUG PURCHASING

This Questionnaire has been designed for easy completion. In most cases, only a tick is required in the appropriate box(es).

Q1 Thinking of your existing drug contracts, in general terms, at what authority level(s) are these currently organised?

Multi-regional	☐
Regional	☐
Multi-area	☐
Area	☐
District	☐
Hospital	☐
Other (Please specify)	☐

Q2 The stages in the organisation of a contract are defined as follows:-

1. Preparation for tender including definition of specifications.
2. Invitation to tender.
3. Opening and assessment of tenders.
4. Award of contract.

Does you authority differ substantially from the above procedures by the addition of any further stages?

Adheres to standard procedures (as above)	☐
Incorporates procedures additional to standard procedure.	☐

Q2a If additional stages are incorporated please give standard procedures.

.....

.....

.....

.....

.....

.....

Q3 In your opinion, how satisfactory is the current procedure, in general terms, for drug contract organisation within your R.H.A.?

Very satisfactory	☐
Satisfactory	☐
Neither satisfactory nor unsatisfactory	☐
Unsatisfactory	☐
Very unsatisfactory	☐

Q4 Please give the reason for this degree of satisfaction.

.....

.....

.....

....

Q5 In what ways, if any, does the present organisation of drug contracts compare with that existing 5 years ago, in your R.H.A.?

Increased involvement of quality control pharmacists	☐
Smaller number of items on contract	☐
Longer duration of contract	☐
Shorter duration of contract	☐
More formalised RHA staff involvement	☐
More consideration given to packaging	☐
More consideration given to supplier service	☐
Others (Please state)	☐

Q6 Thinking of 5 years ago, which specific disciplines and grades of staff were involved in drug contract organisation for your R.H.A.?

- Onearea Supplies Officer
- Several area supplies officers
- One Area Pharmaceutical Officer
- Several Area Pharmaceutical Officers
- Regional Supplies Officer
- Regional Pharmaceutical Officer
- Consultant medical staff
- Lay member of Authority
- Others (Please state)

Q7 Which single discipline, if any, do you feel had the most influence on drug contract organisation five years ago?

- Supplies Officer
- Pharmaceutical Officer
- Consultant medical staff
- Others (Please state)

Q8 Which specific disciplines and grades of staff are currently invdved in drug contract organisation for your R.H.A.?

- One area Supplies Officer
- Several area supplies officers
- One Area Pharmaceutical Officer
- Several Area Pharmaceutical Officers
- Regional Supplies Officer
- Regional Pharmaceutical Officer
- Consultant medical staff
- Lay member of Authority
- Others (Please state)

Q9 Which single discipline, if any, do you believe has the most influence on drug contract organisation for your R.H.A.?

Supplies Officer	
Pharmaceutical Officer	
Consultant medical staff	
Others (Please state)	

Q10 Thinking of 5 years ahead, which specific disciplines and grades of staff do you feel are likely to be involved in drug contract organisation for your R.H.A.?

One Area Supplies Officer	
Several Area Supplies Officers	
One District Pharmaceutical Officer	
Several District Pharmaceutical Officers	
Regional Supplies Officer	
Regional Pharmaceutical Officer	
Consultant medical staff	
Lay member of Authority	
Others (Please state)	

Q11 Which single discipline, if any, do you feel will have the most influence on drug contract organisation, five years from now?

Supplies Officer	
Pharmaceutical Officer	
Consultant medical staff	
Others (Please state)	

Q12 Which disciplines and grades of staff, in your opinion, should ideally be involved in drug contract organisation for your R.H.A.?

- One area Supplies Officer ☐
- Several area Supplies Officers ☐
- One Pharmaceutical Officer ☐
- Several Pharmaceutical Officers ☐
- Regional Supplies Officer ☐
- Regional Pharmaceutical Officer ☐
- Consultant medical staff ☐
- Lay member of Authority ☐
- Nursing Staff ☐
- Others (Please state) ☐

Q13 Which single discipline, if any, do you feel should ideally have the most influence on drug contract organisation for your R.H.A.?

- Supplies Officer ☐
- Pharmaceutical Officer ☐
- Consultant medical staff ☐
- Others (Please state) ☐

Q13a Have you systematically compared those prices being charged to you by contractors with those charged to other Regional Health Authorities?

- YES ☐
- NO ☐

Q14 Using one of the comparisons listed below, denote how you believe prices being charged by drug contractors, for your region, compare with those of other regions?

Our prices are on average much cheaper (10% or more)	
Our prices are on average 2% to 10% cheaper	
Our prices are on average the same (plus or minus 2%)	
Our prices are on average dearer (2% to 10%)	
Our prices are on average much dearer (10% or more)	

Q15 What, in your opinion, are the main advantages offered, in general terms, by the existing drug contract system?

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Q16 Please denote, by a tick in the appropriate box, the degree to which each of those listed below is considered an advantage of the contract purchase system and if possible give reasons for your view.

ADVANTAGE	VERY IMPORTANT ADVANTAGE	FAIRLY IMPORTANT ADVANTAGE	NOT A VERY IMPORTANT ADVANTAGE	NOT AN ADVANTAGE AT ALL	REASON FOR STATED DEGREE
Administrative saving					
Continuity of brand for contract period					
Predictable quality					
Cost saving on drugs					
Predictable deliveries					
Manufacturer can predict usage and so more easily satisfy needs					
Standard pack sizes					
Appropriate labelling					
Obviates need for individual price negotiation at hospital level for each drug					
Others (Please state)					

Q17 Of the possible advantages please list, in order of importance, those three thought to be the most important.

MOST IMPORTANT .....

SECOND MOST IMPORTANT .....

THIRD MOST IMPORTANT .....

Q18 What, in your opinion, are the main disadvantages, in general terms, of the existing drug contract system?

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Q19 Please denote, by a tick in the appropriate box, the degree to which each of those listed below is considered a disadvantage of the contract purchase system and give the reasons for your view.

DISADVANTAGE	VERY IMPORTANT DISADVANT-AGE	FAIRLY IMPORTANT DISADVANT-AGE	NOT VERY IMPORTANT DISADVANT-AGE	NOT A DISADVANT-AGE AT ALL	REASON FOR STATED DEGREE
Quantity of order makes excessive demands on small storage space					
Too rigid i.e. little or no freedom of choice (at hospital level especially)					
No drug cost saving					
Does not satisfy local needs/preferences					
Unsuitable pack sizes					
Lack of continuity of supply at expiry of contract					
Irregular/unpredictable deliveries					
Costly to administer					
Reduced possibility of utilising deliveries					
Too few delivery points					
Too few ordering points					
Others (Please state)					

Q20 Of those possible disadvantages please list in order of importance, those three thought to be the most important.

Most important .....

Second most important .....

Third most important .....

Q21 What improvements, if any, would you like to see in any aspect of the existing drug contract system?

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Q22 Which single discipline is most influential in deciding on the award of a specific drug contract?

Supplies Officer ☐

Pharmaceutical Officer ☐

Neither ☐

Q23 Thinking of just the discussions with potential suppliers regarding prices prior to the awarding of a drug contract, it has been said that on average, six man days per year are spent on these discussions. Would you say this figure is above, below or about the same as the man days spent on these discussions in your Region?

Above that spent in my Region ☐

Below that spent in my Region ☐

About the same as in my Region ☐

Q24 Approximately how many man days, do you feel, are spent on discussing prices with potential suppliers, from your Region's point of view?

..... days

Q25 Do you feel that the amount of time spent by your Region negotiating prices with potential suppliers is too much, too little, or about right?

Too much ☐

Too little ☐

About right ☐

Q26 Please state your reason for the reply to question 25.

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Q27 Who, in your opinion, derives the most benefit from the drug contracts, the N.H.S. or the supplier?

N.H.S. ☐

Supplier ☐

Both equally ☐

Q28 Please state your reason for the reply to question 27.

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Q29 Of those below, tick the circumstances in which there should be the option to re-tender during an existing contract period.

If drug comes off patent ☐

If a request for a price increase is unacceptable ☐

If supplier is giving poor service/deliveries ☐

If a new product has been found unsatisfactory ☐

If product subsequently shown not to meet exact specification ☐

If a firm very likely to have been awarded contract failed to tender in time ☐

The arrival of a new significant drug ☐

A significant change in prescribing habits ☐

A change in price structures ☐

Tender documents lost or failed to arrive ☐

Others (Please state) ☐

Q30 Thinking about price increases by contractors during the contract period, what is the maximum percentage increase which, you feel, should be tolerated before re-tendering should take place.

1 to 3 per cent

4 to 10 per cent

11 to 20 per cent

More than 20 per cent

Q31 Given the choice, would you prefer a two or one year contract?

Two year

One year

No preference

Q32 Please state the reasons for your answer to question 31.

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Q33 Pharmaceutical suppliers have suggested, as a means of reducing prices, some restrictions. Please tick in column A those which you would be prepared to accept. Please tick those in column B which you would not accept at all. Please tick those in column C which you would be most pleased to accept.

	Column A	Column B	Column C
Guaranteed drug quantity uptake			
Reduced number of buying points			
Reduced number of delivery points			
Less frequent deliveries			
Payment for drugs at the beginning of the financial year			
A two year contract instead of a one year contract			
All			
None			

THANKING YOU FOR YOUR CO-OPERATION

This form, when completed, should be returned unsigned in the accompanying addressed envelope.

If you would like a summary copy of the results of this survey, please indicate below.

NAME: .....

POSITION: .....

ADDRESS: .....

.....

.....

.....

St. Helens & Knowsley Health Authority

Our Ref.: DJW/EM
Your Ref.: .....
051-428 1600

When telephoning or calling please ask for: .....

WHISTON HOSPITAL
PRESCOT
MERSEYSIDE
L35 5DR.

January 1983

Dear

I am writing for your assistance in connection with some research currently being undertaken into contract drug purchasing in the National Health Service.

This topic generates many strongly held views, but views which are also based on a paucity of scientific evidence. The present research is designed to remedy this situation by canvassing the views of both suppliers and purchasers as to the efficacy and efficiency of the present system.

In this connection could I ask you to complete the enclosed questionnaire? It has been specifically designed for your easy completion and should not take more than a few minutes. I enclose a stamped addressed envelope for your convenience.

I should stress that any information you may provide will be treated in strictest confidence. No individual or company will ever be referred to and data generated will be purely statistical. This survey is purely academic in pursuit of post-graduate qualification and is not financially supported by any vested interest. The joint supervisors are Dr P M Williamson, Department of Management Studies, Liverpool Polytechnic and Dr T G Booth, Pharmacy Practice Research Unit, University of Bradford. This approach, together with the objectives of the exercise, has been discussed with officers of the NHS Supply Council who have expressed their interest in the results.

May I thank you for your co-operation in this survey. If you would like a summary of the research results please indicate at the end of the questionnaire.

Yours sincerely

D. J. Wolfson

D J WOLFSON
Principal Pharmacist

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QUESTIONNAIRE ON CONTRACT DRUG SUPPLIES

This questionnaire has been designed for easy completion. In most cases only a tick is required in the appropriate box(es).

Q1 Has your company submitted tenders for an English Health Authority drug contract within the last two years?

Col 1

YES	1
NO	2

Q1 (a) If yes, could you give an estimate of how many have been submitted within the past two years?

Col 2

ONE OR TWO	1
THREE TO FIVE	2
SIX TO TEN	3
ELEVEN TO FIFTEEN	4
SIXTEEN OR MORE	5

Q2 Is your company currently submitting more, about the same or less tenders than say five years ago?

Col 3

MORE	1
ABOUT THE SAME	2
LESS	3

Q3 Generally how satisfied is your company with the drug contract system, as presently instituted?

	Col 4
VERY SATISFIED	1
SATISFIED	2
NEITHER SATISFIED NOR DISSATISFIED	3
DISSATISFIED	4
VERY DISSATISFIED	5

Q4 What changes have you noticed in the drug contract procedure in the past five years?

DIFFERENT RELATIVE INVOLVEMENT OF PHARMACISTS AND SUPPLIES OFFICERS	5
DIFFERENT CONDITIONS OF CONTRACT	6
MORE COMPLEX FORM FILLING NOW	7
LESS COMPLEX FORM FILLING NOW	8
DIFFERENT STARTING DATES OF CONTRACT	9
MORE DRUGS ON TENDER FORM NOW	10
FEWER DRUGS ON TENDER FORM NOW	11
CHANGED DURATION OF CONTRACT	12
OTHERS (PLEASE STATE)	13
.....	14
.....	15
.....	16
NONE	17

Q5 Does your company quote different prices to the various Regional Health Authorities?

	Col 1
YES	1
NO	2

Q5 (a) If your company does not undertake differential pricing

Do you know (i.e. have evidence) or believe that such practices of differential pricing take place among other companies?

	Col 2
KNOW IT TAKES PLACE	1
BELIEVE IT TAKES PLACE	2
NEITHER KNOW NOR BELIEVE THE PRACTICE TAKES PLACE	3

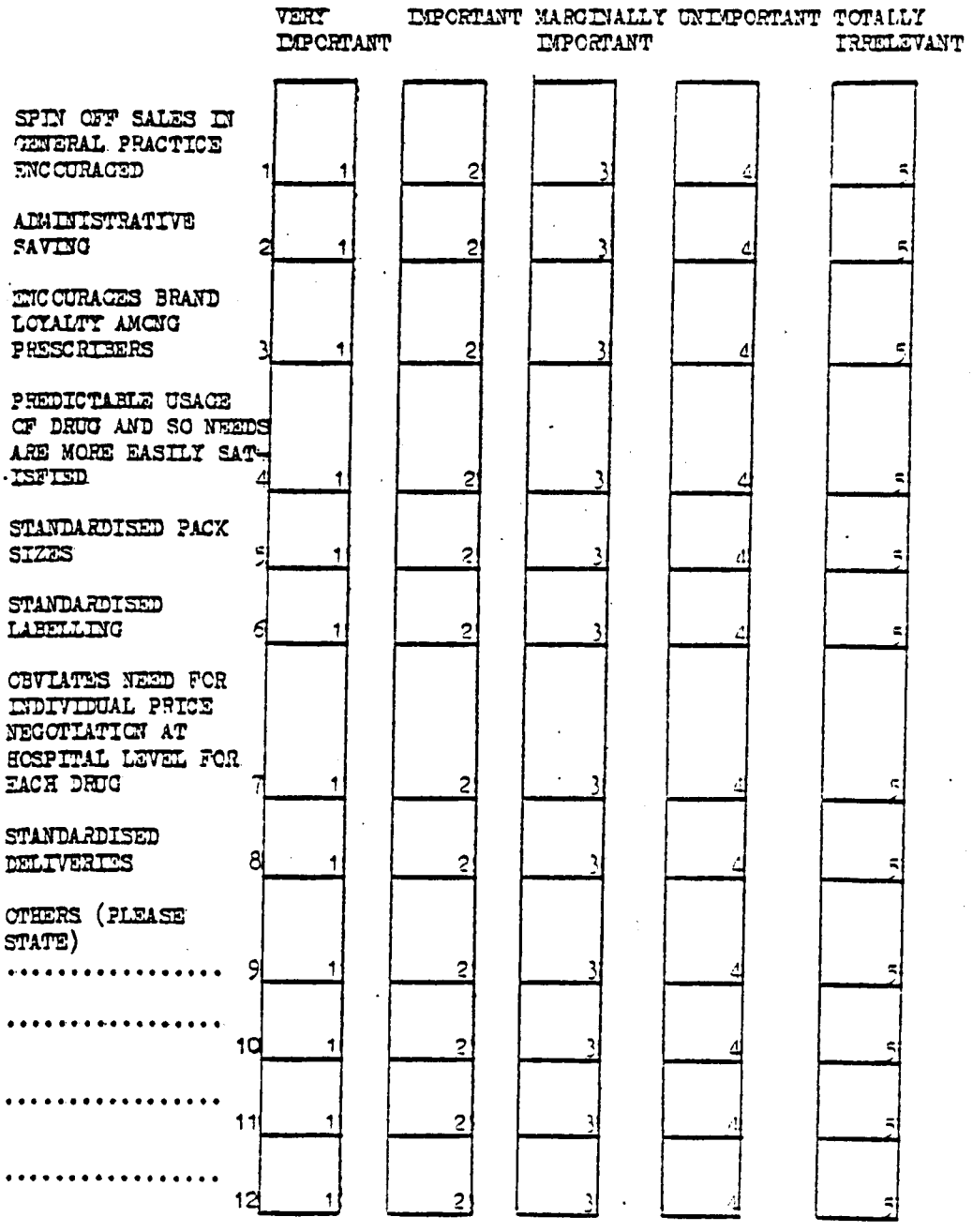
Q6 (a) Please tick those factors in column Q6(a) which are taken into consideration by your company in your offers to regions.

Q6 (b) Please tick one of those in column Q6(b) which is considered the most important.

		Q6(a) Factors considered (tick as many as appropriate)	Q6(b) Most important factor (tick one only) Col 15
TOTAL VOLUME OF SINGLE ORDER	3		1
NUMBER OF BUYING POINTS	4		2
NUMBER OF DELIVERY POINTS	5		3
POPULATION SERVED	6		4
ESTIMATED UPTAKE	7		5
DURATION OF CONTRACT	8		6
GEOGRAPHICAL SPREAD OF REGION	9		7
ACTUAL PREVIOUS UPTAKE	10		8
OTHERS (PLEASE STATE)	11		
.....	12		
.....	13		
.....	14		

&

Q7 Listed below are factors which might be considered as advantages to your company in having drugs included in a Health Authority contract. Please indicate the importance which each, in your opinion, warrants.



Q8 Of the possible advantages ticked in the previous question, please list in order of importance those three thought to be the most important.

FOR COMPUTER USE ONLY
Col 1

MOST IMPORTANT 1

SECOND MOST IMPORTANT 2

THIRD MOST IMPORTANT 3

Q9 Listed below are factors which might be considered as disadvantages to your company in having your drugs included in a Health Authority contract. Please tick those categories to which each, in your opinion, belongs.

		VERY IMPORTANT DISADVANTAGE	IMPORTANT DISADVANTAGE	MARGINALLY IMPORTANT DISADVANTAGE	NOT VERY IMPORTANT DISADVANTAGE	NOT A DISADVANTAGE AT ALL
TOO FORMAL	1	1	2	3	4	5
TOO MUCH PAPERWORK TO BE DEALT WITH	2	1	2	3	4	5
INFLEXIBLE	3	1	2	3	4	5
IMPERSONAL, LOSES CONTACT WITH INDIVIDUAL HOSPITALS	4	1	2	3	4	5
NO GUARANTEED UPTAKE	5	1	2	3	4	5
ADMINISTRATIVELY COSTLY	6	1	2	3	4	5
TOO MANY CONTRACTS NATIONALLY	7	1	2	3	4	5
TOO FEW CONTRACTS NATIONALLY	8	1	2	3	4	5
ORGANISATION OF CONTRACT BIASED IN FAVOUR OF HEALTH AUTHORITY	9	1	2	3	4	5
OTHERS (PLEASE STATE)	10	1	2	3	4	5
.....	11	1	2	3	4	5
.....	12	1	2	3	4	5
.....	13	1	2	3	4	5

Q10 Of the possible disadvantages ticked, please list in order of importance those three thought to be the most important.

FOR COMPUTER USE ONLY

Col 1

MOST IMPORTANT	1
SECOND MOST IMPORTANT	2
THIRD MOST IMPORTANT	3

Q11 Which party, the Health Service or the drug supplier, do you feel gains most benefit from the contract system?

Col 2

YES	1
SUPPLIER	2
BOTH EQUALLY	3
NEITHER	4

Q12 Please state the reason for the answer to the previous question.

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Q13 Please denote how many man days you feel are spent by your company in discussing contract prices with each Health Authority in a year.

Col 3

LESS THAN ONE DAY	1	
ABOUT ONE DAY	2	
TWO TO THREE DAYS	3	
MORE THAN THREE DAYS	4	- IF MORE THAN THREE DAYS PLEASE ESTIMATE NUMBER .....

Q14 Do you feel that the amount of time spent by your company in contract price discussions with Health Authorities is, from your point of view, too much, about right or too little?

Col 4

TOO MUCH	1
ABOUT RIGHT	2
TOO LITTLE	3

Q15 Please state your reason for the previous answer.

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Q16 From your experience how accurate generally are the figures of estimate of uptake provided by Health Authorities prior to tender?

	Col 5
VERY ACCURATE (± 5%)	1
ACCURATE (± 5% to 20%)	2
INACCURATE (± 20% to 50%)	3
VERY INACCURATE (± 50% or more)	4

Q17 How useful to you are Health Authority estimates of uptake?

	Col 6
VERY USEFUL	1
FAIRLY USEFUL	2
NOT OF MUCH USE	3
OF NO USE AT ALL	4

Q18 How adequate do you feel is the time between the following?

(a) From tender being received by you to it having to be returned

	Col 7
TOO LONG	1
ABOUT RIGHT	2
TOO SHORT	3

(b) From tender being returned by you to offer being accepted.

	Col 8
TOO LONG	1
ABOUT RIGHT	2
TOO SHORT	3

(c) From offer being accepted to you being informed of acceptance.

	Col 9
TOO LONG	1
ABOUT RIGHT	2
TOO SHORT	3

Q19 For each of these three stages, what would you consider to be an ideal time scale.

	TENDER RECEIPT TO RETURN Col 10	TENDER RETURN TO OFFER ACCEPTANCE Col 11	OFFER ACCEPTANCE TO NOTIFICATION OF ACCEPTANCE Col 12
ONE TO THREE WEEKS	1	1	1
FOUR TO SIX WEEKS	2	2	2
SEVEN TO NINE WEEKS	3	3	3
TEN TO TWELVE WEEKS	4	4	4
THIRTEEN TO FIFTEEN WEEKS	5	5	5
SIXTEEN OR MORE WEEKS	6	6	6

Q20 Listed below are some circumstances affecting a competitor awarded a contract. When do you feel there should be the requirement to re-tender during an existing contract period?

IF DRUG COMES OFF PATENT	1	
IF A REQUEST FOR A PRICE INCREASE IS UNACCEPTABLE	2	
IF SUPPLIER IS GIVING POOR SERVICE/DELIVERIES	3	
IF A NEW PRODUCT HAS BEEN FOUND UNSATISFACTORY (FOR THE FOLLOWING REASON(S) .....)	4	
IF PRODUCT SUBSEQUENTLY SHOWN NOT TO MEET EXACT SPECIFICATION	5	
IF A FIRM VERY LIKELY TO HAVE BEEN AWARDED CONTRACT FAILED TO TENDER IN TIME	6	
THE ARRIVAL OF A NEW SIGNIFICANT DRUG	7	
A SIGNIFICANT CHANGE IN PRESCRIBING HABITS	8	
A CHANGE IN PRICE STRUCTURES	9	
TENDER DOCUMENTS LOST OR FAILED TO ARRIVE	10	
BANKRUPTCY OR TOTAL INABILITY TO SUPPLY	11	
QUALITY OF DRUG FAILS TO MATCH PRE AWARD-SAMPLES	12	
OTHERS (PLEASE STATE)	13	
.....	14	

Q21 Thinking about price increases by your competitors during the contract period, what is the maximum percentage increase which, you feel, should be tolerated before re-tendering should take place?

	Col 1
1 TO 3 PER CENT	1
4 TO 10 PER CENT	2
11 TO 20 PER CENT	3
MORE THAN 20 PER CENT	4

Q22 Given the choice, what duration of contract would you prefer?

	Col 2
LESS THAN ONE YEAR	1
ONE YEAR	2
TWO YEARS	3
MORE THAN TWO YEARS	4
NO PREFERENCE	5

Q23 Please state the reasons for your answer to the previous question.

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Q24. Suppliers have suggested, as a means of reducing prices, some restrictions of buying procedures on Health Authorities.

Please tick those in column A which you would welcome but would result in little or no reduction in price.

Please tick those in column B which you would welcome and would result in a reduction in prices of up to 10%.

Please tick those in column C which you would very much welcome and would result in a reduction in prices of more than 10%.

	NO REDUCTIONS Col A	UP TO 10% Col B	OVER 10% Col C
GUARANTEED DRUG QUANTITY UPTAKE	3 1	2	3
REDUCED NUMBER OF BUYING POINTS	4 1	2	3
REDUCED NUMBER OF DELIVERY POINTS	5 1	2	3
LESS FREQUENT DELIVERIES	6 1	2	3
PAYMENT FOR DRUGS AT BEGINNING OF FINANCIAL YEAR	7 1	2	3
A TWO YEAR CONTRACT INSTEAD OF A ONE YEAR CONTRACT	8 1	2	3
ALL	9 1	2	3
NONE	10 1	2	3

Q25. What improvements, if any, would you like to see in any aspect of the existing drug contract system?

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Q26 In your dealings with the various Health Authorities in connection with drug contracts, are you aware of major variations in any or all of the following procedures?

VARIATION IN RELATIVE INVOLVEMENT OF PHARMACISTS AND SUPPLIES OFFICERS	1	
VARIATION IN COMPLEXITY OF THE DOCUMENTS USED	2	
VARIATION IN CONDITIONS OF CONTRACT	3	
VARIATION IN STARTING DATE OF CONTRACT	4	
VARIATION IN NUMBER OF DRUGS ON THE TENDER FORM	5	
VARIATION IN DURATION OF CONTRACT	6	
OTHERS (PLEASE STATE)	7	
.....	8	
.....	9	

Q27 Do you feel that the award of a contract is of more use for patented or unpatented drugs?

	Col 1
OF MOST USE FOR PATENTED DRUGS	1
OF MOST USE FOR UNPATENTED DRUGS	2
OF EQUAL USE FOR BOTH	3

Q28 For patented drugs, what benefits would your company expect to receive by being awarded a contract?

BRAND LOYALTY ENCOURAGED	2	
GENERAL PRACTICE SALES INDIRECTLY ENCOURAGED	3	
STANDARDISED DELIVERIES	4	
ADMINISTRATIVE SAVING	5	
STANDARDISED PACK SIZES	6	
STANDARDISED LABELLING	7	
PREDICTABLE USAGE OF DRUG AND SO NEEDS ARE MORE EASILY SATISFIED	8	
OBVIATES NEED FOR INDIVIDUAL PRICE NEGOTIATION AT HOSPITAL LEVEL FOR EACH DRUG	9	
OTHERS (PLEASE STATE)	10	
.....	11	
.....	12	
.....	13	

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Q29 When your company is awarded a drug contract how would you normally prefer to service the contract, through a wholesaler or direct from your company to the hospital?

	Col 1
PREFER TO SUPPLY TOTALLY DIRECT TO HOSPITAL	1
PREFER TO SUPPLY TOTALLY THROUGH WHOLESALER	2
IT VARIES ACCORDING TO CIRCUMSTANCES	3

Q30 If your method of supply varies according to circumstances, which of those below would tend to make you supply either directly or through a wholesaler?

		ENCOURAGING DIRECT DELIVERY	ENCOURAGING SERVICE VIA WHOLESALER
SMALL ORDER SIZE	2	1	2
INACCESSABILITY OF HOSPITAL	3	1	2
LIMITED SHELF LIFE OF PRODUCT	4	1	2
EXTREMELY HIGH UNIT COST	5	1	2
OTHERS (PLEASE STATE)	6	1	2
.....	7	1	2
.....	8	1	2
.....	9	1	2

Q31 Why specifically do you prefer this strategy?

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Q32 What degree of importance (irrespective of volume) do you attach to your hospital sales compared with your total sales?

	Col 10
HOSPITAL SALES ARE VERY IMPORTANT	1
HOSPITAL SALES ARE IMPORTANT	2
HOSPITAL SALES ARE OF MARGINAL IMPORTANCE	3
HOSPITAL SALES ARE OF LITTLE IMPORTANCE	4
HOSPITAL SALES ARE OF NO IMPORTANCE AT ALL	5

Q33 Please state the reasons for your answer to the previous question.

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THANKING YOU FOR YOUR CO-OPERATION.

Please return this questionnaire unsigned in the enclosed stamped addressed envelope.

If you would like to receive a summary of the research results please fill in your name and address on the tear-off slip below.

NAME .....

ADDRESS .....

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BIBLIOGRAPHY

ARTICLES IN PERIODICALS

Anon. Contract Journal 233, 4727, 1970, 425

" Daily Telegraph 40144, 1984, 5

" Drug and Therapeutics Bulletin 21, 20, 1983, 77

" " " " " 21, 25, 1983, 100

" J. Hosp. Pharm. 23, 1, 1966, 19

" Pharm. J. 183, 5010, 1959, 297

" " 204, 5563, 1970, 656

" " 213, 5790, 1974, 416

" " 215, 5834, 1975, 210

" " 225, 6104, 1980, 698

" " 227, 6147, 1981, 479

" " 227, 6154, 1981, 736

" " 228, 6177, 1982, 605

" " 231, 6239, 1983, 174

" " 231, 6243, 1983, 263

" " 231. 6249. 1983, 470

Anon. Public Pharmacist 5, 4, 1948, 87

" " " 7, 1, 1950, 7

" " " 9, 1, 1952, 13

" " " 10, 3, 1953, 77

" " " 11, 1, 1954, 17

" " " 12, 3, 1955, 89

" " " 13, 3, 1956, 149

" " " 14 1, 1957 40

" " " 15, 3, 1957, 164

" " " 16, 1, 1959, 17

" " " 16, 3, 1959, 162

" " " 16, 4, 1959, 227

" " " 16, 4, 1959, 232

" " " 16, 4, 1959, 247

" " " 16, 4, 1959, 248

" " " 17, 1, 1960, 40

" " " 18, 4, 1961, 181

" " " 19, 5, 1962, 278

Anon. Scrip 550/551, 1980, 5

Anon. The Times 60689, 1980, 17

Abramowitz, P.W. Am. J. Hosp. Pharm. 41, 2, 1984, 309

Bachynsky, J.A. Can. J. Hosp. Pharm. 23, 6, 1970, 229

Benfield, M. Brit. J. Pharm. Practice 3, 5, 1981, 9

Brown, B.T. Pharm. J. 229, 6205, 1982, 677

Bryan, G. Pharm. J. 220, 5586, 1983, 443

Campbell. A.W.C. Hospital Equipment and Supplies 27, 5, 1981, 33

Edwards, J. Hospital and Health Services Review 70, 10, 1974, 358

Fell, C.J. Pharm. J. 227, 6144, 1981, 379

Griffiths, G. The Health Services 42, 1983, 11

Housley, C. Dimensions in Health Service 53, 4, 1976, 16

Hyman, S. Hospital Equipment and Supplies 27, 4, 1981, 70

" " " " " " 27, 7, 1981, 43

Jenkin, P. Pharm. J. 225, 6100, 1980, 586

Lee, G.F., Bair, J.N. and Piz, J.W. Am. J. Hosp. Pharm. 39, 7, 1982, 1192

Levin, R. I. Pharm. M. Journal 2, 4, 1980/1, 14

Matthews, V. Financial Times 24998, 1969, 13

May, B.E. Daniels, C.E. and Herrick, J.D. Am. J. Hosp. Pharm. 40, 2, 1983, 263

McAllister, J.C. Am. J. Hosp. Pharm. 41, 6, 1984, 1171

Muller, C. and Krasner, M. Am. J. Hosp. Pharm. 30, 9, 1973, 787

Opit, L.J. and Farmer, R.D.T. Lancet 1, 7849, 1974, 160

Pollard, T. Hospital (J.A.H.A.) 51, 9, 1977, 89

Poole, H.H. Proceedings of the Guild 9, 1981, 31

Rix, C. Purchasing and Supply Management June 1982, 26

Robinson, C.W. Pharm. J. 228, 6181, 1982, 712

Rubin, H. and Keller, D.D. Am. J. Hosp. Pharm. 40, 1, 1983, 68

Schabracq, A. Health Care Canada 21, 1979, 46

Scott, P. Purchasing Journal March 1972, 80

Stahl, I. and von Grebmer, K. Pharm. J. 225, 6085, 1980, 145

Talley, C.R. Am. J. Hosp. Pharm. 36, 8, 1979, 1128

Taylor, P. Financial Times 28144, 1980, III II

Teeling-Smith, G. Pharm. J. 228, 6162, 1982, 182

Van Der Linde, L.P. Am. J. Hosp. Pharm. 40, 1, 1983, 72

Van Dyke, J.E. Roering, K. J. and Paul, R.J. Journal of Purchasing and Materials Management 11, 3, 1975, 27

Williamson, H. Hosp. and Health Services Review 76, 2, 1980, 49

Wooldridge, M.G. Hospital Administration in Canada, 19, 1, 1977, 42

BOOKS, PAMPHLETS AND THESES

ABPI. Annual Report 1953-4. ABPI. 1954

ABPI. The pharmaceutical industry and the nation's health. ABPI. 1980 and 1982

Ammer, D.S. Purchasing and Materials Management for health care institutions. Heath. 1975

Baily, P.J.H. Purchasing and Supply Management. Chapman and Hall 1969

Bain, J.S. Industrial Organization. John Wiley. 1968

Beynon, E.E. National Health Service Supplies IHSM. 1982

Calder, G and Parker A.K. Supply of Drugs to Hospitals in the National Health Service. 1981

Chapman, E. An examination of the purchasing of blood packs by the Yorkshire RHA. 1978

Chemical and Allied Products Industry Training Board. Manpower in the UK Chemical and Allied Products Industries 1981

Cooper, M.H. Prices and Profits in the Pharmaceutical Industry. Pergamon. 1966

Cooper, M.H. Innovation and the Balance of Payments, edited by Teeling-Smith, G. OHE. 1967

Egan, J.W. Higinbotham, H.N. and Weston, J.F. Economics of the Pharmaceutical Industry. Praeger. 1982

England, W.B. The Purchasing System. Irwin. 1967

Farrington, B. Industrial Purchase Price Management. Brunel University. 1978

Happold, F.H. Medicine at Risk. Queen Anne Press. 1967

Hartley, K. and Tisdell, C. Micro-Economic Policy. 1981

Hassan, W.E. Hospital Pharmacy. Henry Kimpton. 1967

Hyman, S. Supplies Management for Health Services. Croom Helm. 1979

ICC. Industrial Performance Analysis. 1979

" " " " 1982

" " " " 1984

ICC information via Prestel

ICC Pharmaceutical Manufacturers. 1982

Keynote. Pharmaceuticals. 1980

Lee. L. and Dobler, D.W. Purchasing and Materials Management. McGraw Hill 1977

Mitchell, J. Price Determination and Prices Policy. Allen and Unwin 1978

Municipal Publications. The Municipal Year Book 1982. Municipal Publications. 1982

Nie, N.H. Hull, C.H. Jenkins, J.G., Steinbrenner, K. and Bent D.H. Statistical Package for Social Sciences. McGraw Hill. 1975

Office of Health Economics. Hospital Purchasing. OHE. 1972

Office of Health Economics. Compendium of Health Statistics OHE. 1977

Oppenheim, A.N. Questionnaire Design and Attitude Measurement. Heinemann. 1979

Polanyi, G. and P. Competition, Risk and Profit in the Pharmaceutical Industry. ABPI. 1975

Reekie, W.D. Economics and Innovation in the Pharmaceutical Industry, edited by Teeling-Smith, G. OHE. 1969

Rice, G. Government Purchasing Behaviour and the implications for Marketing. University of Bradford. 1979

Robinson, F.A. and Amies, F.A. Chemists and the Law. Spon. 1967

Scherer, F.M. Industrial Market Structure and Economic Performance Rand McNally.1971

Teeling-Smith, G. Economics and Innovation in the Pharmaceutical Industry. OHE. 1969

Teeling-Smith, G. The Pharmaceutical Industry and Society. OHE. 1972

Turpin, C. Government Contracts. Penguin. 1972

Wade, O.L. Providing for the health services, edited by Black, D. and Thomas, G.P. Croom Helm. 1978

Webster, F.E. Jr. and Wind, Y. Organizational Buying Behavior Prentice-Hall 1972

GOVERNMENT AND OFFICIAL PUBLICATIONS

Committee of Public Accounts

Treasury Minute on the Fourth Report 1952-3

" " " " Third " 1962-3

Minutes of evidence 1963

Treasury Minute on the Third Report 1963-4

Minutes of evidence and Fourth Report 1964

Minutes 1965

Eleventh Report 1979-80

Twenty-fifth Report 1979-80

Tenth Report 1982-83

Comptroller and Auditor General Reports

1950, 1953-4, 1981-2

Health Circulars

HRC (73)5

HSC (IS)73

HC circulars (76)20, (76)28, (76)33, (78)21, (79)2, (80)1, (80)8, (80)12, (81)6

SCC circulars (81)1, (81)2, (81)3, (82)1, (83)3, (84)1

Health Letters

DS (Supply) letters 12/71, 34/71, 11/72, 18/72, 56/72, 26/73, 31/73, 57/73, 4/74, 11/74, 26/75

DS letters 19/73, 120/73

Health Memoranda

HMC memoranda (48)1, (48)2, (48)2a, (48)35, (49)72, (50)7, (53)12

HM memoranda (55)22, (56)7, (57)25, (58)17, (58)94, (59)43, (61)78, (65)22, (65)67, (65)90, (66)33, (66)69 (67)95, (70)21, (71)70

Health Ministry and Department Annual Reports

1959, 1961, 1962, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976

Health Reports

Aitken, J. Report of the Joint Sub-Committee on the Control of Dangerous Drugs and Poisons in Hospitals. 1958

Bradbeer, A.F. Report of the Committee on the Internal Administration of Hospitals. Central Health Services Council. 1954

Collier, A.J. Buying for the National Health Service. 1976

Ferguson, D.T. Outline Report on Supplies Organisation for the Mersey RHA.1974

Greenleaf, J.C. Report of the Pharmaceutical Procurement Advisory Group. Supply Council. 1982

Guillebaud, C.W. Report of the Committee of Enquiry into the cost of the NHS. 1956

Hall, Sir Noel. Report of the Working Party on the Hospital Pharmaceutical Service.1970

Hinchcliffe, Sir Henry. Final Report of the Committee on Cost of Prescribing. 1959

Hunt, J.F. Report of the Committee on Hospital Supplies Organisation. 1966

Linstead, Sir Hugh. Report of the Sub-Committee on the Hospital Pharmaceutical Service. Central Health Services Council. 1955

Linstead, Sir Hugh. Report of Sub-Committee on organisation of Hospital Pharmaceutical departments. Central Health Services Council.1958

Messer, Sir F. Interim and Final Reports of the Committee on Hospital Supplies. Central Health Services Council. 1957 and 1958

Pharmaceutical Supplies Subcommittee. Pharmaceutical Contracts Working Party Final Report. 1982

Sainsbury, Lord. Report of the Committee of Enquiry into the Relationship of the Pharmaceutical Industry with the National Health Service 1965-67. 1967

Salmon, B.L. Report of the Supply Board Working Group. 1978

Legal

Great Northern Rly. Co. v. Witham 1873

Percival v. LCC Asylums Committee. 1918

NHS Act. 1946

S.I. 1948. No. 60

Patents Act 1949

Emergency Laws (Re-enactments and Repeals) Act 1964

The Health Services and Public Health Act 1968

NHS Reorganisation Act 1973

S.I. 1973 No. 1286

NHS Act 1977

Patents Act 1977

RHB minutes

Joint meeting of hospital pharmacists and supplies officers, Liverpool. 1960

Standing Pharmaceutical Advisory Committee. Liverpool. 1959

" " " " " 1960

" " " " " 1963

Supplies officers meetings, Liverpool. 1964

RHB reports

Report of Liverpool RHB for year ended 31 March 1958

" " " " " " " " " 1959

" " " " " " " " " 1960

" " " " " " " " " 1962

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1961

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1962

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1963

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1969

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1970

Annual Report of the Liverpool Regional Hospital Pharmacists' Committee 1976

Unclassified

Appropriation accounts 1978-9

Consultative Paper on the structure and management of the National Health Service in England and Wales. 1979

Health and Personal Social Services Statistics for England.1978

Health, Ministry of. Hospital Equipment Information No. 15. 1965

" " " Hospital O and M Service Reports No. 9. 1966

Health Service Prices Index.1978

Intellectual property rights and innovation. 1983

McLean, R.D. Personal communication from DHSS. 1982

Minutes of Pharm. Tech and Supplies Sub Committee. 1974

Monopolies Commission. Beecham Group Ltd. and Glaxo Group Ltd., the Boots Co. Ltd. and Glaxo Group Ltd.: A report on the proposed mergers. 1972

Monopolies Commission. A Report on the Supply of Chlordiazepoxide and Diazepam. 1973

Nairne, P. Letter to chairmen of health authorities. 1980

Parliamentary Debates.1953-5, 1968-9, 1969 and 1982-3

Public Purchasing and Industrial Efficiency. 1967

Regional Trends.1984

Report of the Committee to Examine the Patent System and Patent Law. 1970

Second Interim Report on the Patents and Designs Act. 1946

Summarised Accounts of R.H.B.'s, B.O.G.'s, H.M.C.'s, E.C.'s and the Dental Estimates Board for England and Wales for the period ended 31 March 1949. 1949

The Placing and Management of Contracts for Civil Engineering and Building Work. 1964

Trade, Dept. of. Collusive Tendering. A Consultative Document. 1980

United States GAO Report PSAD-79-58A. 1979