

Commercialization of health services: implications for the laboratories

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Abstract

The commercialization of health services has wide ranging implications for all medical specialties as well as for patients. Factors that must be considered include not only the financial implications, but also questions of quality and academic interests such as teaching and training. Laboratories must provide a service that the purchaser wishes to buy and must be successful in overcoming competition from the private sector. Each component part of the overall service must be analyzed in order that the laboratory is efficiently structured to provide an optimum service. A good understanding of management issues and a flexible approach are paramount in the provision of efficient, cost-effective and quality service for the ultimate benefit of the patient.

Key words: Health services, commercialization, laboratory management

INTRODUCTION

The commercialization of health services has wide ranging implications for all medical specialties as well as for patients. Although the financial considerations are perhaps the most obvious, various other factors must be considered including quality of health provision and academic interests which include research and training. The relative importance of each of these factors will be perceived differently by the various medical specialists whether they be private practitioners, government hospital employees or academic medical staff. I will examine each of these factors in turn from the viewpoints of both the providers and users of laboratory services.

Purchasers and providers

Recent changes in the structure of the National Health Service in the United Kingdom share some similarities with the changes occurring in Malaysia. In the UK, although health care is still free for the patient, individual services including laboratory tests must be bought and sold. The buyers and sellers are usually referred to as the purchaser and the provider and these terms are equally applicable in Malaysia. To understand the implications of commercialization we must examine the relationship between the purchasers and the providers. In the context of this article the purchasers are the customers of the laboratory services e.g. hospital specialists and general practitioners and the providers are the pathology laboratories whether they be clinical chemistry, haematology, histopathology or microbiology.

The fundamental question is why should the customer buy a service from the providers? This seems rather a mundane thing to ask but there are probably several answers; 'helping the patient get better, relief at not having to treat that patient again, additional financial income, giving the patient the impression you are doing something and protection from the threat of negligence. Obviously the first reason is the most important. We should also examine the reasons for the providers to offer the laboratory services. These include the following; helping the patient to get better, financial reward, academic interest and training of staff. The relative importance of these factors will be judged differently depending on the nature of the laboratory. A purely commercial laboratory will have little interest in the academic value of its services and training of staff. A laboratory in a university teaching hospital will value these factors highly and there may be important financial implications.

I have established some of the reasons why a customer wishes to purchase laboratory services and it will be obvious that some customers will be altruistic in their purchasing decisions whereas others will be more business-orientated. Whatever the reasons we know that services will be bought and sold. It is now possible to examine the relationship a little further.

Buying and selling laboratory services

The customer is the individual with the ability to choose whether or not to buy a service. The provider must obviously have a service that the purchaser wishes to buy and the laboratory must

be organized in such a way as to provide the optimum service. In industrial organizations the various organizational activities which lead to the desired product are known by managers as the marketing mix and are usually described under the following headings of Product, Price, Place and Promotion.² This analysis may also be used to examine the various components involved in provision of laboratory services,¹ and I shall use this format as described below.

Product issues

These are concerned with the range and quality of services on offer. A laboratory with a larger range of tests will probably have an advantage over its competitors. Flexibility of product range is important. Laboratories may need to offer individualized packages of tests for specific users. The freedom of the laboratory to make its own decisions about the suitability of certain tests may be curtailed. In the past it has been common practice for laboratories to ignore some of the tests requested by the clinicians when they were felt to be inappropriate. Should antibiotic sensitivities be reported for every organism isolated? As a microbiologist I believe that the answer is no, but now that tests are being bought and sold on contract this answer becomes less clear. The laboratory may even benefit from doing needless tests as a small financial profit may be made. The ethics remain uncertain but it would appear in my mind to be poor medical practice. Quality of service is a difficult entity to define and is perceived differently by the purchasers and the providers. I will discuss the concept of quality in further detail later in this paper.

Diversifying the range of services beyond those that are purely medical is an option for some laboratories. In some parts of the UK there is now open competition between medical laboratories and veterinary laboratories to provide diagnostic services to GPs. If they feel they have the expertise there is no reason that medical laboratories shouldn't perform tests for veterinarians. Some National Health Service microbiology laboratories in the UK have also attempted to enter the field of industrial microbiology in an attempt at income generation, for example sterility testing of cosmetics or testing new antimicrobial agents for pharmaceutical companies. Food microbiology is another option. A decision to expand to a field beyond the expertise of a conventional diagnostic laboratory should not be taken lightly since a large capital investment may be required in order to buy equipment, train staff and satisfy the

necessary quality assurance standards. The legal implications and cost of appropriate insurance would also need to be investigated.

Price issues

Price issues are considered by many to be the most important factor when considering whether to purchase or not. One major question is whether price should equal cost. In a commercial laboratory price will obviously be greater than cost but this may not be true in the setting of a university hospital laboratory. A hospital laboratory may wish to offer its services to the hospital clinical staff at cost price or less, but charge more to private customers. Costs may be extremely difficult to calculate. Use has been made of performance indicators such as the Welcan unit in the UK to help estimate cost.^{3,4,5} Apart from the cost of reagents and laboratory staff many other factors must be considered. Laboratory overheads include training, research, accreditation, quality control, information technology, administrative personnel, telephone costs, phlebotomy, transport and portering. It can be seen that a commercial laboratory in the private sector will have many advantages over a hospital based laboratory that has a commitment to training and research. Private laboratories offering higher salaries may even be able to poach staff who have received expensive training within the public sector. Other overheads include energy, water, heating, building size, and maintenance. The chances are that these overheads will again be cheaper in the private sector. A hospital based laboratory may also have other hospital-incurred expenses as a result of financial contributions to administration, personnel, estates office, engineering, cleaning services and laundry.⁶

There are major differences in costing between the different pathology disciplines, haematology being much easier to cost than microbiology. To the purchaser the price of a test will be a major consideration in the choice of whether to use a particular laboratory's services, but it must not be the sole criterion. The quality of the service is the most important consideration and I will discuss this in more detail later. Price can be used as a major weapon in marketing strategy by, for example, the use of loss leaders (selling your services at less than cost-value in attempt to gain a foothold in the market). Services may also be purchased in a variety of forms such as a block service contract for a specified period of time or as individual tests. The choice will depend upon various factors such as number and type of specimen.

As discussed earlier some microbiology laboratories in the UK have expanded their expertise beyond conventional medical services to include food and industrial microbiology. Laboratories that are successful in such endeavours have an advantage in that they can use the profits obtained to discount the price of the medical diagnostic services that they offer. Alternatively, university laboratories may wish to use any money so obtained as research funds. Corporatization of the universities now gives academic staff the opportunity of consultancy work outside the university thus giving such departments another form of income generation.

Promotion issues

Promotion issues cover the aspects of personal selling, advertising and public relations. The approaches adopted by laboratories may be various. It is unlikely that a hospital based laboratory in the newly corporatized health service will be able to or even wish to adopt the aggressive marketing tactics of some laboratories in the private sector. Laboratories in university teaching hospitals will be able to emphasize the quality of their services since they will view themselves as centres of excellence. Contact with purchases can be enhanced by the use of lectures and newsletters with topical information such as current antibiotic resistance rates. Laboratory publications describing the tests available, how to collect the specimen, turn-around time and interpretation of the results are now commonplace in the UK and usually highly valued by the users of the laboratory services.

Place issues

Place issues are concerned with the logistics of providing the overall service. These include factors such as how specimens are ordered and collected, how they are transported, where they are examined and how the results are returned to the purchaser. Even the simple process of ordering and collecting a specimen must be examined. Purchasers may wish to have their own personalized request form. Some may be happy to take specimens themselves whereas others may wish to send patients to the laboratory. In some areas of the UK laboratories now send phlebotomists to the GPs surgeries to collect samples. Near patient testing in the GPs surgery is another possibility for the future. Most laboratories in the UK now operate their own courier services to pick up specimens and also to return results. The rapid advances in information technology must not be neglected. It is

inconceivable that a laboratory will be able to compete satisfactorily without the latest computer technology. Requests may now be made directly by computer and results may be faxed or e-mailed. A private American pathology laboratory operating in the UK now has the facility to download laboratory results directly into the computerized patient notes held in the GP's surgery. Laboratories will have to adapt their working hours to suit the purchasers. A form of shift-work with laboratories staying open well after normal office hours will enable specimens to be received and results sent back to GPs during their evening clinics.

When pathology first developed as a medical specialty it was multidisciplinary in nature. With advances in medical science the separate specialties clinical chemistry, haematology, histopathology and microbiology evolved. The process is now in reverse. Some workers believe that more efficient service can be run with a single laboratory combining features of haematology, chemistry and microbiology. Why for example should several blood specimens be taken from a single patient and then farmed off to several different laboratories when a single specimen could have full chemical, haematological and serological analysis in one multidisciplinary laboratory? The end-product bought by the GP should be the same whatever the approach adopted, but it is likely that there would be an appreciable difference in cost. The benefits of this system are seemingly obvious and would be highly desirable to laboratories in the private sector but in the context of a teaching hospital difficulties as regards training and research and other academic issues become apparent.

Automation of services may also alter radically the practice of pathology. There now exist systems in Japan for example where bar-coded specimens leave the ward and travel automatically to a laboratory where robots perform the analysis. The tests are requested by computer and the results are disseminated by computer. The laboratory technician is made redundant.

At present the assumption is that hospital laboratories in Malaysia will continue to provide laboratory services for the clinicians in their own hospitals. In the UK this is not the case; in some situations specimens from, for example, Hospital A are processed in the laboratories of Hospital B, even though Hospital A has its own laboratories. This situation may arise because Hospital B is able to provide a cheaper service. Consequently National Health Service hospital laboratories are competing against other National Health Service

hospital laboratories and not only against the purely commercial organizations. The rationale for creating such a situation is deeply rooted in the political dogma of governments that follow monetary policies. The assumption is that competition driven by market forces produces a more efficient and cost-effective service. Needless to say, a belief in such philosophy is not shared by all, especially when applied to the provision of health services. The politics that generate such beliefs and the ethical problems that arise will, no doubt, be discussed well into the future.

Quality of Service

Quality is a difficult concept to describe; it has been defined as what the customer perceives it to be, not what the engineer, or marketer or general manager says it is.⁷ Others have suggested that it is a continuous effort by all members of an organization to meet the needs and expectations of patients and other customers.⁸ Whatever it is, quality of service is often perceived differently by purchasers and providers. To the purchaser price or value for money may be paramount. Other factors considered may include turn-around time of results or efficient transport of specimens. It is common practice in the UK for laboratories to make surveys of their users attitudes to the service provided.⁹ This is a valuable exercise as it may highlight problems in the service that are not obviously apparent and it is also beneficial to customer relations. Issues that can be discussed include the design of request forms, the collection and transport of specimens, format and delivery of reports, value of interpretation of results, the ease of getting emergency specimens processed, the ease of obtaining specialist advice. The laboratory must be willing to accept constructive criticism from the purchasers and be willing to adapt its practices accordingly - after all, the customer is always right. Even the telephone manners of the laboratory staff must be investigated. A surly and rude laboratory worker can do untold damage to a laboratory's credibility. Many UK laboratories have realized the great importance of the interaction of their staff with their customers. Receptionists with highly polished manners are employed and written protocols exist describing how to behave on the telephone!

A more objective measure of quality is that of laboratory accreditation. The purpose of accreditation is an external audit of a department's organization and quality assurance programme. Accreditation schemes have been in existence in

the USA, Canada, Australasia and the UK for several years. Defined standards of practice are independently confirmed by peer review and approved departments are therefore able to offer reassurance to users and provide a hallmark of performance.¹⁰ So far a laboratory accreditation scheme does not exist in Malaysia or Singapore but I believe that it will be an inevitable occurrence and it should be welcomed by providers and purchasers alike. It is interesting to note that the National University Hospital in Singapore has recently obtained accreditation from the highly regarded College of American Pathologists. Although accredited laboratories are likely to be more expensive than unaccredited laboratories the reassurance that that laboratory is up to scratch should be a compensation. There may also be medicolegal implications.

Health Maintenance Organizations

Much interest has been generated by the relatively recent appearance of Health Maintenance Organizations (HMOs) in Malaysia. HMOs act as middlemen in the relationship between purchasers and providers of health. In this context the providers are the general practitioners and the purchasers are groups such as employers or insurance companies. How the existence of HMOs will affect the relationship between purchasers and providers of laboratory services is as yet unclear. It is likely that GPs signed up with HMOs will be restricted to the services of a laboratory that has contracted to provide the services for the HMO in question and the tests that the GP is allowed to order may also be limited by the HMO. The GP's freedom to shop around for the best deal in laboratory services will be curtailed with possible financial repercussions and the health of the patient may also suffer as a consequence. Some practitioners may see the role of HMOs as advantageous but there are many other factors that must be considered. The possible risks and benefits of such an arrangement have been reviewed recently by Dr Michael Khor, the President of the Federation of Private Medical Practitioners' Associations of Malaysia."

Doctors must be managers

I hope that the analysis of laboratory services described above has given both providers and purchasers an insight into the potential implications that may arise. I am sure that most users of laboratory services will already have a clear understanding of what they want but it is evident that both the purchasers and the providers

must now have management skills to fully appreciate the new healthcare market place and many of these skills will only be learned through experience. The purchasers are in the driving seat and it is up to the laboratories to provide the services that the purchasers want. Competition between different laboratories will be to the benefit of the purchaser but he/she too must be aware of the strategies used by the providers.

Conclusion

Commercialization will have profound changes in the organization of laboratory services. The laboratories that will survive will be those that are able to adapt their services to meet the needs of the various purchasers of their services. A good understanding of management issues and a flexible approach will be paramount in the provision of efficient, cost-effective and quality service for the ultimate benefit of the patient.

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