Consequences of the provision of laboratory services for the National Health Service by commercial firms: a view from the private sector

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No one will dispute that large university or NHS hospitals must have on site a comprehensive laboratory service embracing all disciplines of pathology. The many reasons for this have been clearly stated by Whitby *et al.*¹ Not only is this essential for patient care and consultation between pathologist and clinician but also for the teaching of medical students and the training of future pathologists and laboratory technicians. Post mortem examinations and frozen section histology cannot conveniently be done outside the curtilage of a hospital nor the urgent biochemistry needed for patients in an intensive care unit, although there is likely to be increasing use made of bed-side analysers ("black boxes").

What role can private laboratories play vis a vis the public sector? It cannot, nor should it, be an all-or-nothing relationship. Both the public and private sectors in clinical pathology share the same objective—to provide a service of the highest quality at the most economical cost.

Despite some increases in funding many public laboratories, both NHS and university, may lack the financial resources to keep pace with advances in methodology, equipment, and in communications technology. Benefits accrue, as has been shown in the United States, by constructive cooperation between the public and private sectors. By economies of scale large private laboratories can do many tests at a lower cost than a small one. Successful private laboratories have acquired administrative skills leading to more efficient management of manpower and resources. In some instances the public sector could with benefit adopt some of the lessons learnt in the private sector.

Several important factors are involved in achieving better use of resources and reducing costs.

Economy of scale

In virtually every field of routine pathology, with obvious exceptions, the unit cost per test is reduced in proportion to the number performed. This is particularly true in the use of major chemistry and haematology analysers, which are costly to acquire and maintain. Equipment must be carefully chosen, purchased, and used in relation to the volume of work. Unless there is the appropriate volume the start-up costs of big analysers are not justifiable. Equipment for radioimmunoassay or enzyme linked immunosorbent assays, where reagent costs are high and shelf life limited, may also be expensive to run for a small number of tests. It is uneconomical for

smaller laboratories to undertake a multiplicity of tests. A medium sized NHS laboratory may handle samples from less than 200 patients, including outpatients, a day. With a catchment of this size the number of samples for any one particular assay is inevitably small. Non-urgent tests could be performed more economically at a referral laboratory. The ability of the hospital pathologist to interpret the results and consult with the clinician is in no way reduced because the test has been performed elsewhere, provided, of course, that the quality of results from the referral laboratory is above reproach. Rationalisation of pathology services is widespread in North America and has substantially reduced overheads and the cost per individual test. Hence the charges for routine profiles are much lower than in the United Kingdom. The private sector has the finance and the experience to assist in the rationalisation of laboratory services in this country. This is already being implemented in the Birmingham area. The success of such reorganisation depends on the management expertise of those who are aiming to bring under one umbrella a number of hitherto autonomous pathology units.

Management skills

Although there are not many large private laboratories in the United Kingdom, the ones of standing have had to achieve good management skills to survive and sustain their development. Unless resources are spent wisely, machines carefully chosen and used to full capacity, and over-manning avoided, these laboratories will fail as has already happened to a number of smaller private laboratories, and to a larger one too. The private sector should be invited to contribute its experience and management skills to those NHS laboratories that need this help. This would not constitute a take-over, nor indeed privatisation, but a sharing of ideas and resources ensuring that some tests are referred when it is cost effective to do so. Referral of certain esoteric analyses already exists in the Supraregional Assay Service but to be successful the referral laboratory must give a speedy service, be able to substantiate any claims for quality control, be aware of the importance of rapid communication of results and be available to give informed comment by appropriately qualified staff. Some laboratories in the private sector achieve this service and to them speed of communication is second nature.

By contrast, when a private laboratory

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refers a specialised test to a university or NHS laboratory, it is the private laboratory's performance that is perceived as inadequate if the sample is lost or the result delayed because analyses are run infrequently due to staff shortages or there is a delay in communicating the result. The goal of service to patients and doctors must always be uppermost in the laboratory manager's mind, and work flow must be organised to achieve this. The implementation of staff flexitime may extend the "normal" working day and reduce payments for overtime and for being on-call.

Information technology

No laboratory can give good service and meet the fundamental requirements of accuracy and speed without first class computerisation. Some NHS laboratories comprise a number of autonomous departments which may not work together—indeed, there may be intellectual or financial rivalry—nor see themselves as part of a whole. Consequently computerisation has often been introduced piecemeal. Private laboratories usually develop as a corporate whole with well motivated staff and their computer programs have been centrally planned from the outset. From this stems the great advantage that the systems were designed to meet all needs. In addition to laboratory work sheets, reports, and statistical and financial information, a host of management aids are available, such as work-flow organisation, lists of work uncompleted, "on line" results and instant access to laboratory information by authorised staff.

J S Pathology is currently investing in new computer technology using fourth generation language. This has the advantage of long term storage, simpler programming, and ease of communication with outside users. It will allow information about technical advances and teaching programmes to be disseminated readily to clients, perhaps in partnership with companies already in this field.

Costing and funding

Costing in the NHS, to date, has mostly been rudimentary and unsophisticated. It is essential to know the true cost of a test, taking into account salaries, reagents, capital expenditure, use of general services, depreciation, insurance and all the other overheads that running any business incurs. For NHS laboratories to sell their services at uneconomical prices in the private sector may generate income but in the long term is not making the best use of public funds. It would be more sensible for NHS laboratories to reduce costs by greater efficiency than by trying to generate a small income from a limited private sector.

Private laboratories are perforce experienced in costing and build in an appropriate profit margin which is essential to attract good staff, replace equipment, develop new techniques and constantly update their information technology. The NHS could well draw on this expertise.

Quality and accreditation

Many commercial laboratories have an excellent quality assurance record for their results. Work referred to another laboratory, whether public or private, always raises the question of the quality of the result done at the site of referral. Herein lies the importance of introducing a national laboratory accreditation scheme. At present Good Laboratory Practice (GLP) is the only scheme recognised by our Department of Health and, outside the United Kingdom, by the Food and Drug Administration in the United States of America and other international bodies. GLP sets standards not easily reached, and at the time of writing J S Pathology is believed to be one of only two or three clinical laboratories in the country to be claiming GLP compliance, although a number of animal and toxicology laboratories have been accredited for many years. The preparatory work required for GLP recognition is time consuming and expensive. It involves writing detailed protocols for every procedure, documenting training schemes, logging equipment maintenance, verifying raw data from the computer and performing many other requirements. The Royal College of Pathologists has initiated a pilot study with a view to introducing an accreditation scheme for both public and private laboratories. In their first report 15 out of the 24 laboratories inspected were found to have deficiencies of differing importance.²

Staff motivation

This is a key area in which private laboratories can share their experience with public ones. It is difficult for NHS laboratories to meet increasing demands in the face of financial stringency and shortage of trained staff. The contribution of Medical Laboratory Scientific Officers (MLSOs) is vital. Their work requires intelligence, skill, dedication and a well developed sense of responsibility. Many are the unsung heroes and heroines of the NHS but few have had the management training with which to motivate others. Improving their morale and job satisfaction increases productivity and reduces overheads. In general, motivation is higher in the private sector than in the public sector, not solely due to marginally higher remuneration. Although they may work longer hours in private laboratories, MLSO career prospects and opportunities of rising to management level are considered to be better than in NHS laboratories. With good sympathetic leadership they have pride in, and loyalty to, their own laboratory or company.

Changes must come in the administration of pathology laboratories to increase their efficiency and overall standards. It would be sad if the lessons learnt and the expertise available in the private sector were ignored by the NHS in shaping the changes to come.

- 1 Whitby LG, Bird CC, Collee JG, McDicken WN. Consequences of the provision of laboratory services for the National Health Service by commercial firms: a view from the University sector. *J Clin Pathol* 1990;43:441-4.
- 2 Royal College of Pathologists. United Kingdom pilot study of laboratory accreditation. *J Clin Pathol* 1990;43:89-91.