OPTIONS FOR ECONOMIES

WITHIN THE S N B T S

1983/84

JDC/CSA/11/84/2

2/11/84

INTRODUCTION

The difficulties that a Blood Transfusion Service has in making measurable economies whilst at the same time responding to developments in other sectors of the Health Service which are outwith its control have been discussed previously. In the main there has been no change in this position, although recent circumstances have arisen in which a substantial improvement in dialogue between certain Area Health Board colleagues has occurred. At the same time the rate at which new demands, are being made on the Service is such that economies achieved in one area are being used to meet new demands in other areas.

The Transfusion Directors remain committed to the concept that, in view of the current major restrictions on expansion within the Health Service, they have a responsibility to search for ways in which financial savings can be made which can be used to finance, in part or wholly, new developments in their sphere of health care. In the 1982/83 Report on Options for Economies examples were given of ways in which the Directors were responding to these challenges. The Sub-Committee requested that a further progress Report was made in 1983/84.

ACHIEVEMENTS IN 1983/84

1. Medicines Inspectorate

Action has now been taken by SHHD colleagues which resolves previous difficulties the Service has had with regard to the status of the Medicines Inspector's Reports and the activities of the Inspection Action Group. This development has been welcomed by the Transfusion Directors and will inevitably diminish pressure on limited revenue development monies. (Members may wish to note that no formal communication has been received from the Department on this topic and the advice given to the Directors (see Appendix I) is but an interpretation, by the NMD, of the relevant aspects of a meeting held in SHHD on 29th May, 1984.)

2. Quality Assurance/Blood Products Produced at RTCs

Directors have agreed to restrict severely the expenditure on

quality control measurements for blood and blood products prepared in RTCs. Members may wish to note that recent information received from the Council of Europe would indicate that the relevant SNBTS QA guidelines are closely in line with those which will be proposed by the Council of Europe. No savings will accrue from this work but the prevention of substantial future expenditure has been achieved.

3. Unit Cost at PFC

There have been very significant reductions in the unit costs at PFC, which will be the subject of a separate Report. These have arisen because of management decisions to increase batch sizes, technical changes which have improved production yields and the anticipated revenue benefits of previous investment in high technology, particularly in the area of engineering and chemical engineering. It is anticipated that further economies will emerge with the commissioning of the new process computing system and when the P & A Management study is fully implemented within PFC's data capture systems.

4. Appointment of Accountant within SNBTS HQ

Through the good offices of the Treasurer and Secretary there has been appointed an accountant (Mr John Francis) to the Treasurer's staff who is seconded full-time to the SNBTS HQ Unit and in day-to-day operational matters is directly responsible to the NMD. There have also been other supporting staffing adjustments, made by the Treasurer, in CSA (HQ). These developments, in the opinion of the author, probably represent the single most important step in 1983/84 towards improving the management of the SNBTS and should be regarded as an achievement which will influence much of our future quantitative and qualitative thinking in the area of options for economies.

5. Machine Plasmapheresis

Colleagues in the WBTS have, as planned, completed the work commissioned by the Transfusion Directors and have demonstrated that donors prefer machine plasmapheresis to the manual method. The way is now open to introduce this approach when 'software' costs have reduced to a level similar to existing manual procedures. This development now permits careful consideration of other potential changes: the reduction

of our routine donation collection. These options will be examined by the Directors in the light of the results of the Lapsley and Mitchell costing studies on donation collection, testing and processing (see below).

6. Antihuman Globulin (AHG) Reagent

Members are aware that the study, instigated by the Directors, and undertaken by Lapsley and Mitchell on the rationalisation of AHG production in the SNBTS was completed in 1983/84 and the recommendations implemented. As a result the production of this much used reagent is now carried out in the WBTS only, and its final packaging and quality assurance co-ordination undertaken by SAPU. More work will be required to persuade some of the major hospital blood banks in the SHS to use this excellent product as its unit costs are favourable with respect to products currently being purchased from commercial sources.

7. PFC Cell Culture Medium

Scientific staff of PFC have in 1983/84 completed the first of a major series of scientific studies which permit the conversion of a former waste product of plasma fractionation into a medium in which cells will grow ex vivo. This work has been partly supported by the British Technology Group and has been patented. It seems certain that this development will realise its intention - to permit the SNBTS to develop cell culture systems without the purchase of large quantities of commercial and expensive preparations based on foetal calf serum. It is also possible that the new technology may prove to be a significant source of revenue.

9. Machine Developments in Inverness

In conjunction with the Medical Physics Department at Raigmore Hospital staff of the Inverness Centre have completed the development of a semi-automated plasma separator and the reader system of a microtitre blood grouping machine. Both developments are being commercialised and in operational terms will reduce unit costs in the respective fields in which they will be introduced.

9. SAGM studied

The Transfusion Directors invited the SEBTS to undertake a study on the use of a new range of optimal additive solutions which were believed would permit increased plasma yields from donations and provide a higher quality of red cell concentrate. This work was completed in 1983/84 and the Directors have concluded that existing products are not sufficiently attractive to warrant their introduction at the present time. This decision has prevented a substantial demand on revenue monies.

10. National Statistical Returns

The Directors have completed, in 1983/84, their work on the first part of a new statistical return in relation to workloads. Formal implementation will begin in April 1985 and it will provide a database, which will be co-ordinated by Dr Whitrow and Mr Francis, upon which more effective management decisions are made. During the preparative work leading up the formulation of these new returns several Centres have instituted changes which will lead to economies.

11. Commercial Interface

In 1983/84 the Agency has, in response to the long-standing concern of the Directors, created a mechanism by which products produced by the SNBTS, but which are surplus to the needs of the NHS, can be made available to organisations outside the NHS. In achieving this aim the Agency has also created a mechanisms by which industrial concerns can enter into agreed joint research and development ventures with the SNBTS. These developments now await implementation. They may well provide a key to achieving substantial economies (in terms of NHS funds) in the research and development costs of the SNBTS.

WORK STILL IN PROGRESS

1. Plasmapheresis

Studies in the SEBTS are currently underway to assist a British manufacturer to develop a plasmapheresis machine. It is hoped that this development, if successful, will provide a strong market influence leading to low cost machine plasmapheresis.

2. Tear Down Bag System

Colleagues at PFC and WBTS are now in the final stages of the development of a new blood bag system which it is believed will reduce substantially the unit costs of plasma pack stripping at PFC and also reduce the bacterial contamination of plasma entered for processing (thus reducing batch quality assurance failure and reprocessing costs).

3. Plasma specifications

Considerable progress has been made with the development of specifications for plasma destined for fractionation at PFC. The specification for fresh frozen plasma has been completed and this will provide the foundation upon which others will emerge. There is little doubt that this work will result, in the long term, in reducing the unit costs of both plasma procurement and fractionation.

4. Computing

Further progress is being made now in all Centres and economies as a result of improved management are anticipated.

5. Reagent Production

The Directors have invited Dr Mitchell to prepare a Report on the immunohaematology related reagent production in the SNBTS with a view to developing a programme of rationalisation, enhancement of product quality and reducing unit costs of reagent procurement and use. This study is well underway.

6. SNBTS Crossmatching Procedure

The Directors have invited Dr Urbaniak to undertake a survey of the crossmatching procedures currently being used within the SNBTS with a view to rationalisation against a background of reducing unit costs and improving quality. This work is currently at an advanced stage and may well represent an area in which economies will be achieved.

7. Microtitre Blood Grouping Equipment

Colleagues in Inverness are now developing an automated dispenser which will be linked with the developed microtitre reader. If successful this work will represent further progress towards reducing the unit

costs of automated blood grouping and antibody detection.

8. Monoclonal Antibody Production

WBTS and SEBTS staff are actively engaged in this biotechnology development. Links are being forged with the production capacity and expertise of PFC. It is anticipated that this development will lead to the availability of lower cost reagents and therapeutics.

NEW PROJECT STARTS

1. Lapsley and Mitchell Study

This study, which was requested by the Transfusion Directors, will involve all RTCs and is concerned with the costing of blood collection, testing and processing. It is certain that when completed it will provide operational management staff with a substantial database upon which to consider options for economies in those areas of the work of the SNBTS which consume so much of our revenue allocations. Mr Francis will be directly involved in this work with a view to establishing on-going databases and assisting Directors and their staff to examine operational options for economy.

2. Donation Mixing: Inverness

The Directors have invited Dr Whitrow to establish a study, and report, on the feasibility and value of introducing constant weighing and mixing devices in the donor withdrawal area. This development, widely introduced in North America, may have significant revenue consequences to the SNBTS.

3. BTS Immunologist Consultant Post, WBTS

Discussions are currently going on with the Greater Glasgow Health Board and the University of Glasgow which may lead to the transfer of transplant immunology services, formerly undertaken by Professor Dick, to the WBTS. If such a development takes place then it is likely to represent a major first move towards the rationalisation of clinical transfusion expenditure in the largest part of the SHS.

4. Clearing House System

Studies have been commenced which are designed to link all SNBTS

Centres on a much closer basis with regard to effecting the transfer of blood from one region to another in times of shortage. It is probable that this development will have much benefit in terms of public relations and may also be an area for economies.

5. Plasmapheresis

Dr Urbaniak has agreed to explore, with colleagues at PFC, whether membrane plasmapheresis is likely to provide fresh plasma of a higher quality for fractionation than other machine methods. This work could well have a significant bearing on the type of machines the SNBTS purchases for its evolving machine plasmapheresis programme and thus reduce the overall unit costs of plasma product production.

6. Centre Staffing

Recent discussions with the Secretary and Treasurer should lead to the development of a system of management in which Centre Directors are encouraged to look for more flexible approaches in the area of staff deployment.

CONCLUSIONS

The SNBTS Directors and their staff are engaged in a number of exercises which seek to maximise the funds made available by central Government for transfusion purposes. In these endeavours increasing support is acknowledged from colleagues in the Agency's HQ Unit.

The implementation of change, based upon the results of option appraisals, particularly in the field of economies, requires a management structure in which management personnel are permitted to manage. The SNBTS Directors await with interest the Agency's deliberations on the Griffiths Report.