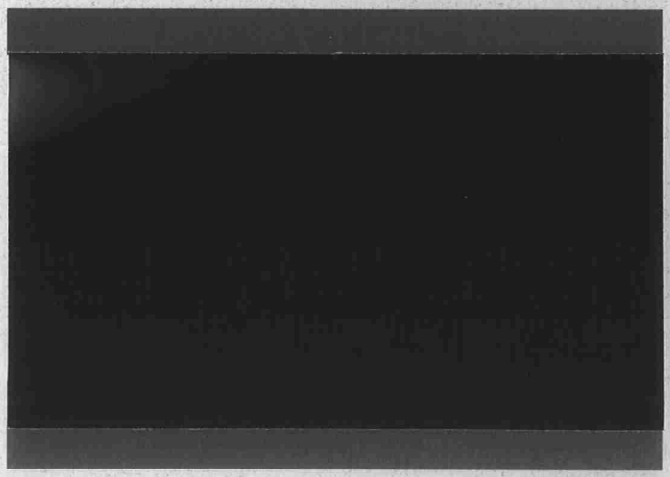

ERNST & YOUNG

Structural Review

of the

National Blood Transfusion Service

A review of the Role and Functions

of a Central Organisation in the Blood Transfusion Service

in England and Wales

Ernst & Young

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MANAGEMENT SUMMARY

1. Major and fundamental changes are being made to the management and organisation of the National Health Service. Given the unique nature of the National Blood Transfusion Service and its strategic importance to the NHS as a whole, it was important to consider how these changes were likely to affect the NBTS and, in particular, to investigate whether there is a role for a central organisation for the BTS. Ernst & Young were commissioned by the National Directorate of the NBTS to study these issues.

2. We undertook the study with no pre-formed ideas as to the need for or the nature of a central organisation for the NBTS. Instead we began by considering, with BTS management and other interested parties, the key relationships within the blood transfusion framework:

- those with donors
- those with purchasers
- those with fractionators of plasma
- those between Regional Transfusion Centres

3. From this we identified a number of key activities which it was essential or cost-beneficial to be carried out centrally. The most significant of these were:

- the maintenance of donor confidence through nationwide donor selection standards
- the presentation of an attractive and coherent image of the BTS to donors
- the need, through accurate comparisons of performance and promotion of best practice, to ensure a cost-effective service for purchasers
- the need, through quality audits which complement the work of the Medicines Inspectorate, to guarantee a consistently high quality product for purchasers
- the critical requirement to address the provision of blood and its products in a comprehensive way; recognising, and taking into account for the benefit of the NHS as a whole, the cost relationships which exist between plasma on the one hand and cellular products on the other
- the need for cost-effective mechanisms to balance local short term supply and demand variations
- the need for longer term planning regarding the size, shape and nature of the BTS

4. We described a range of eight possible organisational arrangements through which the above requirements could be met and measured each of them against four key criteria:

- the effects which they would have on the confidence of donors

- the extent to which they would create a coherent and comprehensive service meeting the needs of purchasers and the NHS as a whole

- the level of competition which they would introduce into the NBTS

- the authority or "clout" which they would provide to ensure that, where necessary, central decisions were implemented locally

5. Resulting from this review we identified two possible arrangements which met the criteria and would deliver the required range of activities:

- A Central Contracting Authority (a unified National Directorate and CBLA) which would obtain cellular components and plasma from Regional Centres. This would remove the current artificial separation of responsibility between these two aspects of whole blood. The Contracting Authority would establish competitive contracts with Regional Centres, and perhaps non-BTS suppliers, in order to meet the NHS requirement for blood and plasma as economically as possible. The new authority would additionally contract with fractionators to ensure that the plasma was used effectively to meet NHS needs. Regional Centres would remain managerially independent of the central Contracting Authority.

- A Centrally Managed Service with direct line management reporting from the head of a central authority to Regional Transfusion Directors This authority would combine and extend the current functions of the National Directorate and the CBLA. With careful management the links between RTCs and their Regional users could be maintained whilst developing coherent national policies.

6. We considered that both options offered advantages in terms of qualitative benefits but that the Contracting Authority introduced an element of competition into the BTS Framework.

7. We did not consider that a "No Change" option would meet our criteria; nevertheless, we compared the financial costs and benefits of these two options with those flowing from "No Change". We concluded that the staffing, systems and set-up costs of both options exceeded those of "No Change" but that those of the Central Contracting Authority were very much lower than those of the Centrally Managed Service under all three headings.

8. We identified substantial scope for financial savings from both options - very little of which could be expected to be realised through "No Change". We are confident that these savings would, on a year-on-year basis, more than meet the costs of the establishment and maintenance of a central authority.

9. Based on this analysis we conclude that there are strong financial and qualitative arguments in favour of the creation of a new unified central authority for the NBTS and CBLA and that, based on financial cost/benefits, the most appropriate form for this body to take is the central Contracting Authority described above.

10. We therefore recommend that a Contracting Authority is the most appropriate central organisational arrangement for the Blood Transfusion Service and that early action should be taken to investigate the precise means and timetable for its introduction.

SECTION 1 BACKGROUND

1.1 The National Blood Transfusion Service for England and Wales was established in 1946. Regional Transfusion Centres (RTCs) operated in the major cities and these were financed and managed by the Ministry of Health.

1.2 The national service existed until the formation of the National Health Service in 1948. Although the name of the service was retained,The managementof RTCs was devolved to the newly created Regional Hospital Boards (RHBs). There was an RTC in each of the fourteen regions with the exception of South East and South West Thames which were serviced by one Centre. There were two central laboratories, the Blood Products Laboratory (BPL) and the Blood Group Reference Laboratory (BGRL), managed by the Department of Health or its nominee until the creation of the Central Blood Laboratories Authority (CBLA) - a special health authority in 1982.

1.3 Over the years, the "National Service" was, at best, a loose federation of 14 RTCs trying to provide a uniformly efficient service of high standard. Attempts to co-ordinate their work came from a Committee of Regional Transfusion Directors (RTDs) which had no formal or statutory authority and, between 1974 and 1988, two Central Co-ordinating/Advisory Committees. These were desiigned to advise the Department of Health on national matters concerning the activities of RTCs. They had limited success due to the fundamental authority of RTCs and their Regional Health Authorities (RHAs).

1.4 The activities of the Service were becoming more complex and it had an increasingly national role in the supply of plasma to BPL. The NBTS grew unevenly, dependent upon arrangements concluded by RTDs with their RHBs, and after 1974 their RHAs, who allocated varying priorities to their RTCs and who had no obligation to carry out nationally agreed policies.

1.5 On two occasions, in 1973 and 1986, RTDs pressed the Department of Health to consider a central management for the NBTS. On both occasions organisational change was rejected. However, after an investigation by NHS Management Consultants in 1987, the National Directorate of the NBTS was formed and a National Director was appointed to co-ordinate the activities of RTCs. RTCs continued to be managed by RHAs and the role of the National Director was advisory only.

1.6 The introduction of cross-charging for plasma and the sale of BPL products to users began in April 1989. The loss of Crown immunity and the consequent licensing arrangements required for BPL products and manufacturing processes and manufacturing processes in RTCs took place from April 1991. These changes have introduced a new dimension into the work of RTCs and its relationship with the CBLA.

1.7 Currently, major and fundamental changes to the management and organisation of the NHS are being made. Given the unique nature of the NBTS and its strategic importance to the activities of the NHS as a whole, it is important to consider how these changes are likely to affect the NBTS. In particular, this entails an investigation into whether there is a role for a central organisation within the service and, if so, what that role should be. Ernst & Young was commission by the National Directorate to consider this question.

SECTION 2 METHOD OF WORKING

2.1 The terms of reference asked us to study whether, in the new NHS environment, there was an essential role to be played by a central body or bodies in the Blood Transfusion Service. If so, to establish the nature of that role and to investigate the most appropriate organisational arrangements within which that role could be discharged most cost-effectively.

2.2 We have undertaken this study in three stages :

- **Stage One: Identifying the Need**

2.3 We held discussions with individuals within the BTS and with an interest in BTS products and supplies to establish how well key BTS relationships operated. We also sought and received a number of written contributions.

2.4 In these discussions we focussed on four critical relationships, illustrated in the diagram at Figure 1:

1. The relationship between a Transfusion Centre and its donors. We considered in particular the key factors in donor recruitment and retention

2. The relationship between a Transfusion Centre and the Districts, Hospitals and Trusts that purchase the Centre's supplies of whole blood, red cells and platelets (and, in some cases more specialised products). We considered in particular the purchasers' need to be confident about the quality and safety of the products supplied and the cost-effectiveness with which they were produced, and therefore the price at which they were offered.

3. The relationship between Transfusion Centres and the Bio-Products Laboratory (BPL) which is currently the sole purchaser of the Centres' outputs of recovered and apheresed plasma. We considered in particular the BPL requirement for quality supplies and the impact of the BPL price for plasma on the price of red cells and platelets charged by Centres to their Regional customers.

4. The relationships within the BTS between Transfusion Centres. We considered in particular:

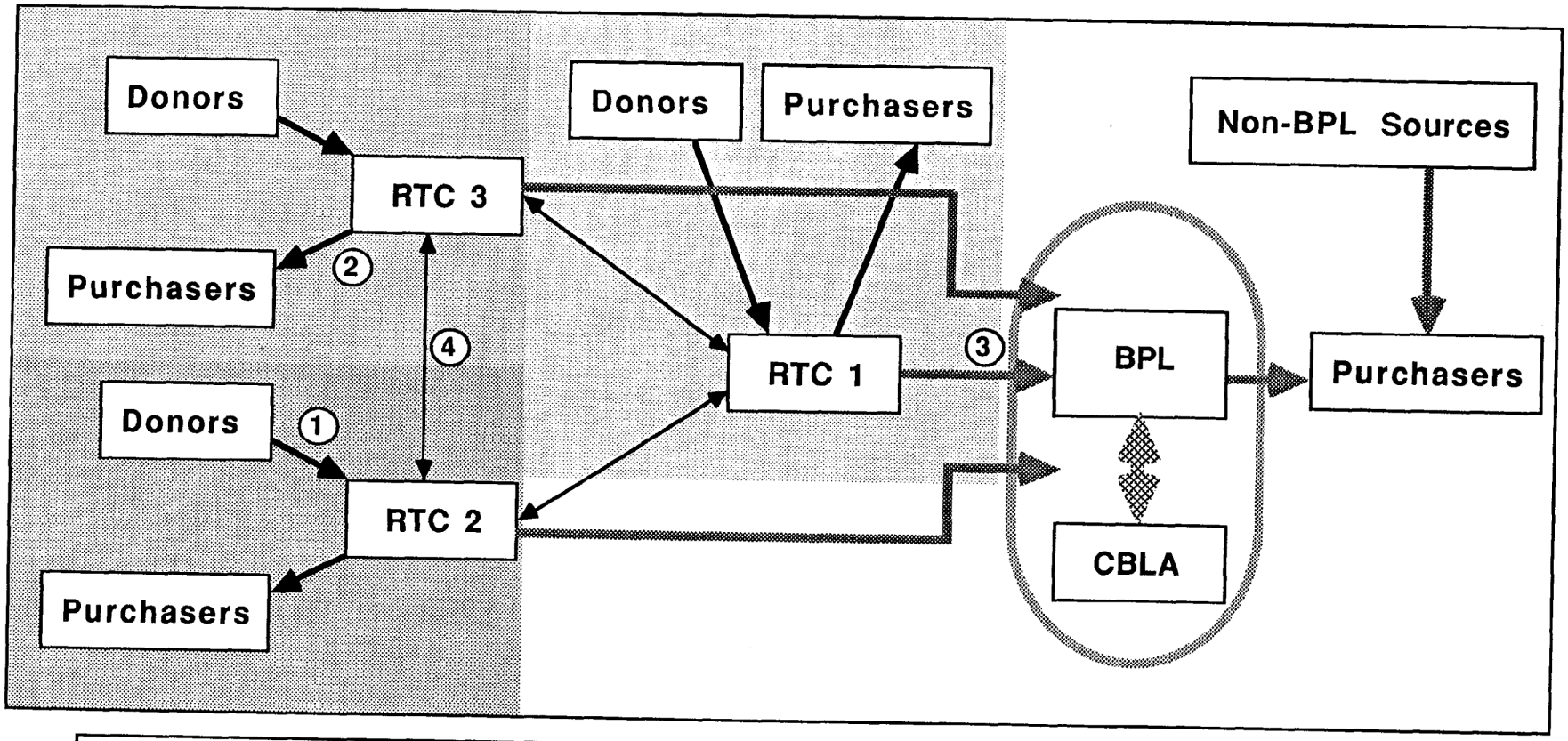
- The requirement to balance local peaks and troughs in supply with steady local demand through inter-Centre transfers of blood and blood products

- The requirement, on occasion, for a co-ordinated response to critical or emergency issues

- The requirement for a "policy" function within the BTS to consider such issues as long term planning, and Europe

- The requirement for development work to be carried out within the BTS (eg evaluation of novel test methods, development and evaluation of automated handling equipment)

Figure 1: The Blood Transfusion Framework



2.5 From these investigations and discussions we identified a number of functions which were either essential or highly desirable to be carried out centrally in the BTS. These functions are discussed in detail in Section 3 of this report.

- **Stage 2: Identification of Organisational Options**

2.6 In course of our discussions and based on our own consideration of the issues, we identified a wide range of organisational options to address the need to deliver the functions described in Section 3.

2.7 Each of these options were assessed against the extent to which they would support the delivery of the functions and against 5 basic criteria representing the necessary organisational components which would enable a central body or bodies to carry out their functions efficiently and effectively. These criteria were as follows :

- Coherence of the BTS
- Competitiveness within the new NHS market
- "Clout" in relation to those affected by the functions
- Confidence of donors
- Cost of establishing the arrangements

2.8 The options and the consideration of them against the above criteria are set out in Section 4.

2.9 Resulting from this work we were able to "short list" three options for detailed consideration.

- **Stage 3: Cost/Benefit Analysis of the Prime Options**

2.10 In this stage we looked in detail at how each of the remaining options would work in practice and were, as a result, able to refine our assessment of the performance of each option against the above criteria.

2.11 Based on this detailed assessment we have been able to draw conclusions as to the most appropriate of the organisational options and to make firm recommendations for the future development of the Blood Transfusion Service in England and Wales.

2.12 Our assessments, conclusions and recommendations are set out in Section 5.

SECTION 3 CENTRAL FUNCTIONS REQUIRED

1 The Relationship with Donors

3.1 The relationship between the BTS and its donors is central to the effectiveness of the service. It was impressed upon us in all of our discussions that this relationship should not be disturbed without very good cause. Approximately 2.2 million donors have a close personal attachment to their local region and a real pride in supporting their Centre's efforts to achieve its targets.

3.2 There are variable arrangements currently in place for managing relations with donors. Each arrangement in each Centre has developed in response to local conditions. For example, the South West Region is able to exploit the extensive Red Cross network in that part of the country to help them maintain links with donors in what is largely a small town and rural community; other, more urban regions make much more use of links with local large employers to gain access to donors.

3.3 With the wide variety of methods of contact and feelings across the country, we are in little doubt that, not only would there be no useful role in a managerial sense to be played directly by a national body or bodies but also that any obvious central managerial involvement could be actively detrimental to what is a fragile relationship depending on trust and understanding between donors and the Service.

3.4 Notwithstanding this general conclusion a number of issues have emerged from our discussions where there is general agreement that national rather than locally based activities are required to ensure the smooth operation of the RTC/Donor relationship.

Promotion Activities

3.5 It was emphasised to us at our local level discussions that national promotional campaigns have a significant beneficial impact on local collection performance. And that the current arrangements where national promotions are supported by local initiatives should be continued.

3.6 Given this requirement, it was seen to be important, both presentationally and from the point of view of individual donors that centrally and locally organised promotions dove-tail neatly and coherently and that, for this to be achieved some national co-ordination of the RTC's promotional efforts was required. It is generally agreed that this co-ordination function should involve the direct control of a central promotion budget and liaison with local Centres to ensure that efforts do not overlap or contradict each other.

Donor Mobility

3.7 A second key issue to emerge centred on the mobility of donors between the fourteen BTS regions in England and Wales. It should be noted that mobility levels are far from consistent across the country with the urbanised regions (especially those in and around London) being most affected and those with a more rural population less so. Nevertheless, all regions are to some extent impacted on by mobility and the impact, across the country, is increasing.

3.8 Donor retention is as vital an issue for the BTS as donor recruitment and it is important that the physical movement of donors from one region to another should not result in their loss to the service. Two factors are significant in achieving this:

- Donors should "feel", when they move from one region to another, that they are still within the same overall service. The "image" of the BTS needs, at a broad level at least to be consistent across the country. This image must therefore be established and maintained at national rather than local level.

- Donors considered acceptable by one region should, as a rule, be acceptable to all. Without such consistency in donor acceptance criteria, a number of detrimental effects are likely :

  - Otherwise good and reliable donors could be lost to the service because of possibly arbitrary local differences in selection criteria

  - Donors finding themselves accepted by one region but rejected by another (on medical grounds, for example) will very quickly become concerned about the standards operated in the BTS

There is therefore, on these grounds, as well as on "product quality" grounds discussed below, a strong argument for consistent, national donor selection criteria established maintained and enforced from a national level.

Conclusions

3.9 Based on the above assessment of the BTS's relationship with its donors we believe that the following conclusions can be drawn :

(i) The fundamental tasks of recruiting and interacting with donors should essentially be local functions

(ii) National promotion campaigns are valuable and should be continued but must also be fully co-ordinated with local promotional initiatives

(iii) It would be highly desirable for the BTS to set and maintain a nationally coherent "image" of itself to donors

(iv) It would be highly desirable for the BTS to establish and maintain consistent standards set and enforced nationally for the acceptability of donors

2 The Relationship with Purchasers

3.10 Transfusion Centres are responsible for providing their regional purchasers with red cells, platelets, some special products and such other special services as are agreed within the Region. It is necessary to explore the supplier/purchaser relationship in more detail based on the nature of the product or service.

- **Red Cells**

The pressure on Centres to provide plasma for fractionation (see below) over recent years has led the BTS to "educate" its local medical purchasers to require concentrated red cells rather than "whole blood" (blood from which plasma has not been recovered) for their surgical work. As well as the obvious advantages of this approach for plasma production, there are sound medical reasons why concentrated red cells should be preferred. As a result of this most Centres have reduced significantly their supply of whole blood to their regional purchasers.

Red cells have a relatively limited "shelf life" (some 35 days) and their transportation is expensive; it is therefore both more efficient and more effective to ensure that, wherever possible, regional needs for red cells are met by their own Regional Transfusion Centre.

- **Platelets**

Platelets, which are required to correct blood clotting and are another "by-product" of the processing of whole blood, have an even shorter "shelf life" (no more than 5 days) than red cells. It is therefore impractical in other than the most urgent of cases and outside London (where inter-Regional distances are relatively short) for purchasers to be served other than by their local Centres.

- **Special Products**

There is a limited need for some specialised products from the BTS - these incluse specific antibody plasmas such as rabies, varicella, CMV and anti-D. Because of the limited demand it is not economic for them to be produced in all Centres. Certain Centres have developed a particular expertise in the identification and collection of these products which are sent to BPL for fractionation and subsequently made available by them for purchase in all regions. No Centre has a complete monopoly, nor need it be required to achieve regional self-sufficiency in the production of these special products.

- **Special Services**

The skills of the staff in Transfusion Centres have led their Regions to see them as the natural focus for various special services (eg ante-natal work, tissue-typing, etc). There is no consistency from Region to Region as to which, if any of the Services are managed within the Transfusion Centre structure and, as a rule the services are provided on an entirely intra-Regional basis.

3.11 The effect of these various arrangements is that, for the very considerable majority of the products of the BTS, there is no competition for supply within a Region. Given the reasons for the arrangements ("shelf life", transportation costs, donor base, etc) there will be limited scope for changes, even as a result of the new business arrangements within the NHS.

3.12 In this position, purchasers will wish to be confident that :

- The service they receive and the price they are charged represent good value for money
- The products they purchase are produced to an appropriate quality level

Cost Effectiveness

3.13 For any market to operate successfully, there must be sufficient information available to enable the purchaser to judge value for money. For this information to be collected, processed and made available it is necessary that :

- The calculations of cost and price are set and maintained consistently across the players in the market (this is not the case at present)
- Some central organisation exists with the necessary resources and skills to collect process and make available that information
- That the central operation has the necessary influence to ensure that calculation standards are adhered to and that the base data from the suppliers is provided regularly and accurately

Quality

3.14 Purchasers, in this market in particular, are unlikely to have the necessary expertise to ensure that the product they receive is of an acceptable quality (moreover any loss of quality in this area can lead to disastrous results). Therefore purchasers need to be able to base their trust in the product on a set of quality standards which are seen to be enforced.

3.15 The Transfusion Centres are now subject to licencing by the Medicines Control Authority (MCA) and to inspection by the Medicines Inspectorate. In addition, the licence issued to the Bio-Products Laboratory (BPL) for the fractionation of plasma, places a responsibility on BPL to ensure that the whole of its production process meets appropriate standards - this includes the production of its raw material by BPL's suppliers (the Transfusion Centres). Given the nature of the plasma recovery process, this responsibility includes many of the early stages in the production of other BTS products (eg donor selection)

3.16 However, it is the clear view of BTS professionals that the MI inspections are complemented by the work of the National Directorate in its reviews of the key processes involved in Transfusion Centre work. The National Directorate of BTS has, in recent years, taken a lead in developing standards in this area and in promoting a "quality audit" approach through which Centres are inspected by their BTS peers. All of those to whom we spoke are keen to see these important and valuable developments continued but most urged that some means should be found to give more authority to ensure that action is taken on the results of these "audit" reports.

3.17 Thus, in the quality area, there is a clear view that the MCA licencing process will be a major support for the assurance of quality to the purchaser but that, this notwithstanding, there are complementary aspects of quality which must be standardised, monitored and enforced by some central function with BTS-specific skills.

Establishment of Need

3.18 In circumstances in which much of the output of each Centre is taken by its own Region, it is vital, from both sides' points of view, that a clear understanding is established between them regarding demand for the products. The BTS is unable to turn up or down its supply of cellular products from voluntary donors. It takes each Centre a considerable period to build up a group of reliable donors and then, if necessary, to reduce them as demand reduces. Therefore, if shortages of supply are to be avoided or unwanted product not to be produced, it is vital for the closest possible relationship to be established and maintained between Centres and their various intra-Regional purchasers and for long term plans (covering, ideally, three years in a rolling programme) to be discussed and agreed. The Diagram at Figure 2 describes illustratively the impact of rapid changes in demand on Transfusion Centre management.

3.19 In this area, it is clear that local relationships represent the most effective means of establishing need, but that central involvement could have a beneficial impact in helping to meet those needs.

Special Products

3.20 In the area of Special Products the demand is so limited that it appears unnecessary to modify the current arrangements; however, the more business oriented approach of the new NHS environment could lead to some Centres seeing the production of Special Products as a useful additional source of income. Whilst there is no reason why such ventures should not be encouraged, there is a need to avoid massive over-supply in some areas and under-supply in others. There may therefore be a central function to monitor Special Products needs and production and encourage or discourage Centres accordingly.

Special Services

3.21 Special Services, on the other hand, are essentially intra-Regional activities which will, no doubt, be the subject of specific contracts between Centres and their Regions. We have found no evidence to suggest that central involvement in this area would be beneficial or required.

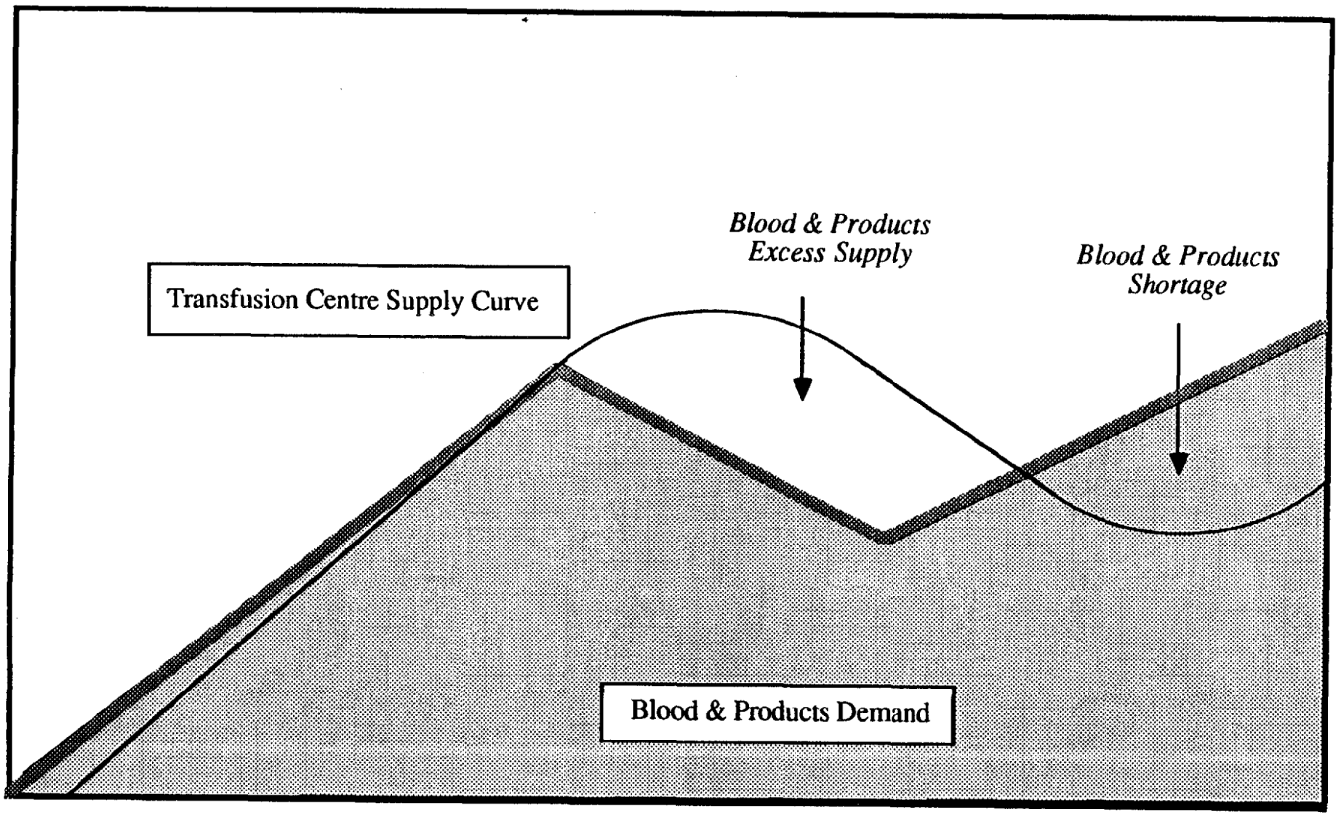
Conclusions

3.22 Based on the above assessment of the BTS's relationship with its purchasers, we believe that the following conclusions can be drawn:

(i) It would be highly desirable for the BTS to establish and enforce standards for cost calculations and for there to be a central function with the authority and capability to collect, process and make available comparative price and product information to purchasers

(ii) It is considered essential that some central BTS body exists to set quality standards monitor adherence to those standards and ensure that, where necessary, changes are made within Centres to comply with them (this function, it is felt would be an essential complement, rather than a replication, of the work of MCA and the Medicines Inspectorate)

Figure 2: Illustrative Diagram of Impact of Demand Changes on BTS



(iii) The key role of developing and maintaining long term relationships with purchasers, especially in respect of establishing the need for cellular products (within, ideally, a three year rolling programme) must continue to be discharged locally.

(iv) It would be helpful if a central function existed to monitor and advise on the need for and production of Special Products

(v) There is no case for central involvement in the relationship between Centres and their Region in the area of Special Regional Services

3 The Relationship with the Bio-Products Laboratory (BPL)

3.23 BPL is the purchaser of the recovered and apherised plasma prepared by the Transfusion Centres. Currently, it is the operational arm of the Central Blood Laboratories Authority (CBLA) a Special Health Authority.

3.24 BPL fractionate the plasma they receive to produce specific products (notably Factor VIII and Albumin). These products are then sold to NHS purchasers. Plasma and its products have a very much longer "shelf life" than other blood products and are relatively easily transported. There is, as a result an active international market in these products - and in fresh frozen plasma itself - with the prime producers being the United States (using predominantly paid donor plasma), France, Belgium and the Netherlands.

3.25 BPL must seek to compete in this market for the sale of their products and to price their products accordingly. At present both United States and many European plasma products are understood to be cheaper than those produced by BPL. One of the reasons for BPL's current price disadvantage is the cost to them of their raw material (plasma from the Transfusion Centres) for which two fixed prices exist (one for recovered plasma and the other - higher - for apheresed plasma which is more expensive to collect). Thus BPL have a natural desire to see the price for the plasma they receive from the Centres reducing. In an environment in which more competitively priced products are available, the effect of BPL selling less products would be to reduce the requirement of plasma from the Centres.

3.26 In addition to this, we understand from our discussions with Touche Ross (who are currently advising the CBLA) that there appears to be a real prospect of BPL becoming an increasingly commercial operation (perhaps loosening their links with CBLA). In these circumstances BPL can be expected to place still more stress on the price of their raw materials and the need to change their level of demand for plasma more frequently.

3.27 This very brief resume of the BPL relationship with the BTS highlights four main areas of concern which have been identified to us in the course of our review.

Commercial Exploitation of Blood

3.28 Although it is clear that the collection, processing and fractionation of blood and plasma are activities to which considerable costs attach and which should therefore be recovered, the donor population is not expected to be able easily to discern the difference between the recovery of costs and the commercial exploitation of their freely donated blood. There is considerable concern within the BTS that an increasingly commercial stance by the BPL could have a significant impact on donor morale and therefore on the volume of blood they will be prepared to donate.

Variations in Volume Requirements

3.29 As is noted above, it is difficult for the BTS to react to frequent and significant changes in the volume of plasma they need to collect. This is particularly the case in respect of apheresed plasma (the collection of which requires the development of an especially good relationship with donors and carries substantial capital investment costs). Transfusion Centres are concerned that irregularity in demand from BPL could have considerable implications in terms of :

- Their ability to cover their costs
- Their ability to meet demand should it increase quickly

- the potential wastage of, particularly the more expensive apheresed, plasma

The Price paid for Plasma

3.30 Plasma, red cells and platelets are all recovered from the same basic commodity - whole blood. If transfusion Centres are to cover their costs, any reduction in the price they receive for plasma from processing whole blood must be met by an increase in the price of the other components - primarily red cells and platelets. As is discussed above, the short "shelf life", transportation difficulties and availability of these two latter products means that, to a very large extent, each Transfusion Centre has a virtual monopoly in the supply of them within their Region. Thus it can be expected that as prices for plasma are reduced so purchaser within Regions will be obliged to pay more for their red cells and platelets.

3.31 There is concern amongst all of those to whom we have spoken that such a key decision as reducing plasma price- which would in effect transfer significant costs from the users of BPL to medical and surgical specialties - should not be taken purely on the basis of BPL's market position and the decisions of other National Authorities abroad regarding the relative pricing of plasma and red cells/platelets. Instead, decisions need to be taken on a national basis, taking into account:

- The market position in respect of plasma and plasma products
- An appropriate cost to medical and surgical specialties for red cells/platelets

National Self Sufficiency

3.32 The availability of plasma and plasma products in the international market means that it is possible for purchasers to meet their needs from outside the UK. If this occurs, significantly less plasma production will be required in this country. In these circumstances, Transfusion Centres will be obliged to reduce their collection of plasma. This will significantly increase the cost of blood and red cells. Additionally, if foreign sources of plasma and plasma products become more expensive or more limited in the future it will be difficult for Centres quickly to regain their previous levels of plasma supply Thus a significant reliance on foreign sources may be expected to limit the UK's capacity for self sufficiency.

3.33 A current national aim is self sufficiency in blood and products. Without some central involvement in the process, it is possible that it will no longer be achievable. If such an outcome may occur, it is important that it does not do so without consideration being given to its wider implications.

Conclusions

3.34 The above analysis suggests strongly that the relationship between Transfusion Centres and the purchaser of their plasma is one which is central to the operation and performance of the BTS. Indeed, that it has significant implications for the NHS as a whole. We believe that it would be inappropriate for the plasma pricing relationship to develop independently of a broader consideration of its implications on red cells and other products.

3.35 There is a very strong feeling within the BTS and amongst others to whom we have spoken that a stronger central and BTS-wide function is required to ensure that the way in which the costs of plasma collection, processing and fractionation are met are considered alongside the broader requirements of the BTS and the NHS as a whole.

4. Internal BTS Relationships

3.36 Within the BTS itself, we have identified a number of areas in which central functions are required.

Balancing Supply & Demand

3.37 The phasic nature of demand for BTS products and the dependence on voluntary donors for the provision of blood means that, from time to time, individual centres experience periods of over and under supply, particularly in relation to specific blood types (eg it is possible for a Centre to have an over-supply of Type A blood but to be unable to meet demand for Type O).

3.38 The National Directorate of the BTS have developed a simple but effective information system (based on daily fax communications) through which these over and under supplies can be identified and balanced by the transportation of relatively small amounts of blood between centres. All centres would be concerned to see this cheap but very valuable central function discontinued.

Planning Functions & Policy

3.39 Many of the issues described above have indicated a need for some small central planning and policy function. In addition to these areas concerning the relationships with donors, purchasers and the BPL, the following requirements have been identified to us :

- Providing a BTS "spokesman"
- Reacting to and providing information for Ministers, Ministers Cases, PQ's, Chief Executive of the NHS Management Executive, etc
- Relationships with Europe and the European Commission (an increasingly significant area of activity)

3.40 Aside from these specific tasks, there is a general recognition within the BTS that faced with changes in the "technology" of medicine, the current BTS structure of Centres and their coverage is likely to require modification in coming years. These changes include :

- Alterations in surgical practice, moving away from invasive surgery towards more non-invasive techniques, therefore reducing the demand for blood
- The development of synthetic haematological products, therefore reducing the need for plasma based products

3.41 Leaving aside these prospects for major change, issues such as those arising from the effect of BTS boundaries not matching those of the NHS as a whole will need to be addressed.

3.42 There is a strong feeling that issues such as those mentioned above will be dealt with much more effectively and coherently if they are addressed from the point of view of the BTS as a whole by a central body rather than piecemeal in the fourteen RTCs.

Reaction to Emergencies

3.43 The recent Gulf War demonstrated the need for a rapid and co-ordinated response to national emergencies requiring the increased availability of blood and products. Throughout the BTS there was a general recognition that this function could most effectively be carried out centrally.

Development Work

3.44 In some areas of the BTS, major developments are required to improve the efficiency or effectiveness of the collection and processing processes. Without some central functions, it is likely that Centres will progress independently leading to many "reinventions of the wheel" and consequent waste of resources. A central function would, for example, be to ensure the appropriate allocation of capital and development resources.

3.45 There are however a number of significant aspects of the BTS in which it is felt that central involvement would not be beneficial. Primarily these are:

- The day to day management of Centres. Here it is felt that local management, responsible perhaps to a management board, are more likely to provide services which are sensitive to local needs and responsive to local circumstances.

- Many Centres have excellent relationships with their Regional management from whom they receive valuable support in such areas as :

  - Personnel Management
  - Industrial Relations
  - Financial Management

Centres in these circumstances wish to be sure that, whatever organisational arrangements are put in place, it will remain possible for them to continue to receive this support from local sources.

SECTION 4 : ORGANISATIONAL OPTIONS

Introduction

4.1 We have identified eight organisational options as follows :

- The abolition of all central BTS functions (National Directorate and CBLA)
- No Change to current practice
- A "Franchising" option through which the National Directorate (ND) franchise the operation of local Transfusion Centres
- An extension to the "franchising" option incorporating the CBLA as the national purchaser of plasma
- A "Licencing" option which extends "franchising" further to give the ND full licencing authority for the collection and production of blood and products
- A "Price Setting" option through which a single central body (a unified National Directorate and CBLA) sets the prices for all blood and products
- A "Contracting Authority" option through which a central body (a unified National Directorate and CBLA) becomes the single contracting authority for blood and plasma and contracts with Districts and Trusts for its supply
- A "Direct Management" option through which a single authority (a unified National Directorate and CBLA) takes direct line management responsibility for all Transfusion Centres

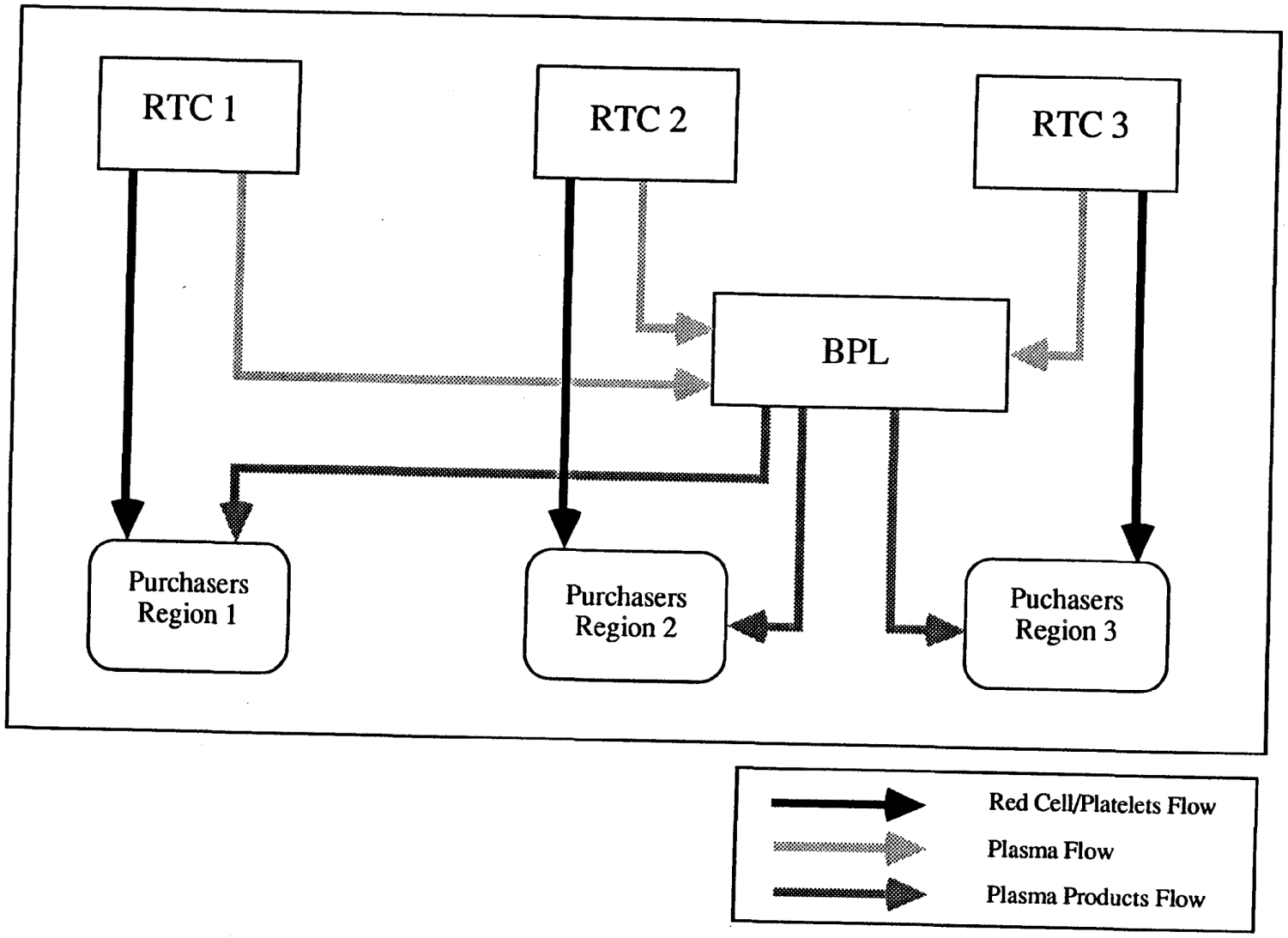
4.2 Each option is described and illustrated below and evaluated against criteria which we judge to be required if the Blood Transfusion Service is to function most effectively:

- Coherence of the BTS - permitting a comprehensive view to be taken on both blood and plasma supply
- Competitiveness within the new NHS market - providing appropriate market stimuli for the pursuit of an efficient and effective Service
- "Clout" in relation to those affected by central functions - ensuring that best practice in product quality and donor safety is applied consistently across the Service
- Confidence of donors - maintaining the local relationships between donors, Centres and users whilst at the same time reinforcing the image of a "national" Service
- Financial implications of the options - this is discussed in detail in section 5

Option 1: Abolish Central Functions

4.3 This option would result in no central influence being maintained, leaving the RTCs and the BPL without any coordinating body. The Option is illustrated by the diagram at Figure 3.

Figure 3: No Central Functions



- **Coherence:** Coherence of the service would be undermined, with no central direction of policy and planning for the service. For instance, there would be no mechanism for coordinating responses of RTCs to emergencies, emerging technology or directives issued by the Department of Health.

- **Competitiveness:** Competition between RTCs may occur, but would not be facilitated by accurate, consistent and regular information flows between RTCs, BPL and purchasers.

- **Clout:** None

- **Confidence:** The impact of this option will depend on whether the present "gentlemen's agreement" between Regional Centres on "non-trespassing" in each other's territory survives the loss of the central functions and the developing business environment in the NHS. If it does so then donor confidence is unlikely to be affected; if not then a "free for all" competition for donors is feared by many Centres. This latter outcome is expected to have a considerable adverse impact on donors and their confidence in the BTS. For reasons already explained this would tend to occur only at the periphery of existing regions but could be significant in the London area.

Option 2: No Change to Current Practice

4.4 RTCs would maintain their independent status and the National Directorate its advisory role. In these circumstances, there is concern within the Service that the new market imperatives will lead to increased divergence between RTCs This option is illustrated by Figure 1 in Section 3.

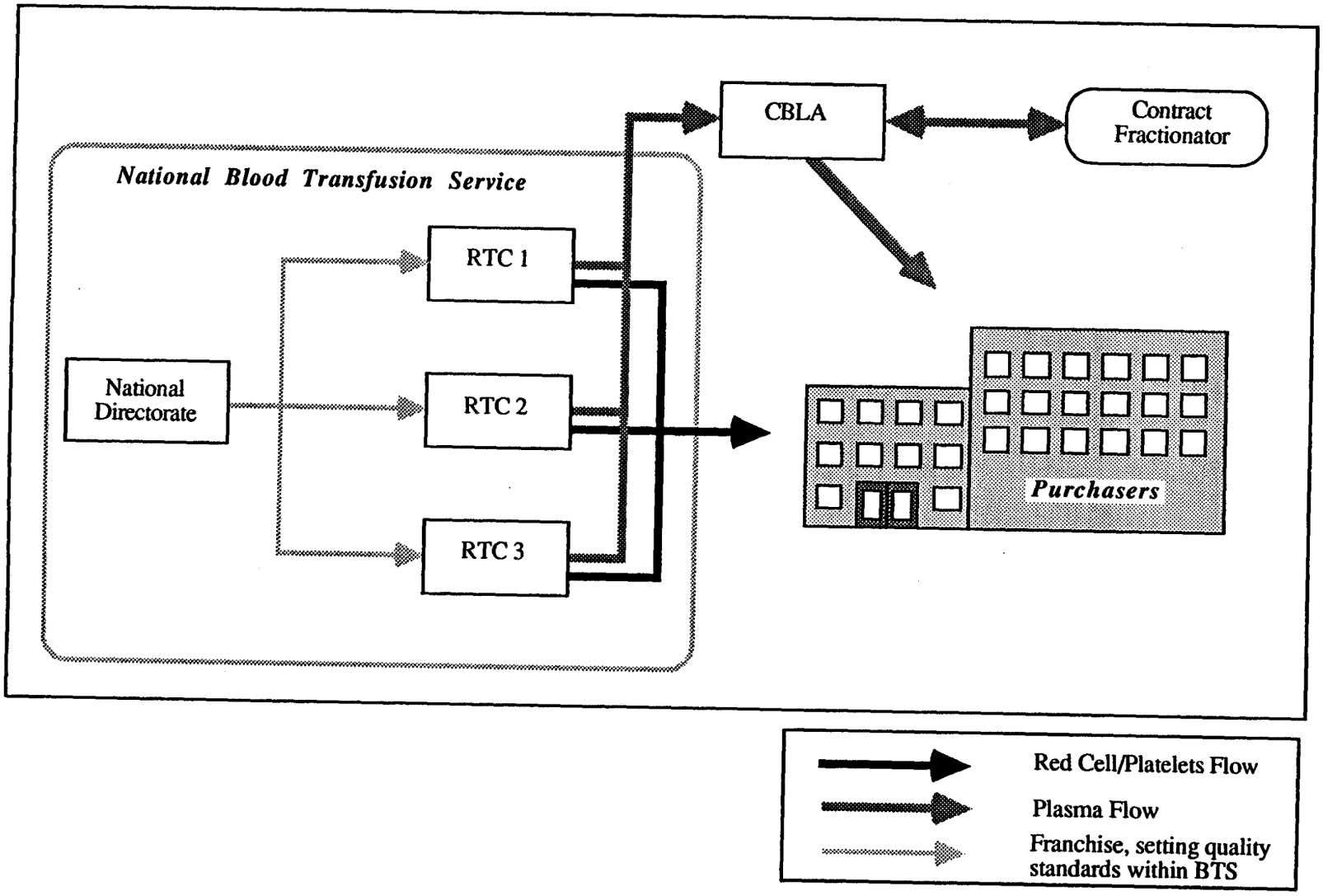
- **Coherence:** The coherence of the transfusion service may reduce if there is no change to the current system; as new initiatives and cost and quality issues emerge, the responses of the various RTCs could become more disparate, with different RTCs reacting in different ways and with different timescales. Additionally, the "no change" option perpetuates the artificial division between blood and plasma supply.

- **Competitiveness:** This will not be facilitated without change to the way the service operates because of lack of incentive to improve costs and inadequate information flows between RTCs and purchasers on prices and quality standards, particularly information calculated on a common basis.

- **Clout:** The National Directorate currently has only limited influence over Transfusion Centres - the recent case of one RTC "breaking ranks" over the introduction of Hepatits-C testing exemplifies the Directorate's inability to ensure that its recommendations are implemented. Its position is likely to become weaker as RTCs react independently to budget and standards changes. The National Directorate would no doubt continue its current work on quality audit, but as now, there is little to sanction the implementation of its recommendations.

- **Confidence:** If the Hepatitis-C example given above represents a new trend within the Service for safety measures to be taken independently

Figure 4: Franchising/CBLA Ownership of Plasma Options



by RTCs, there will be a danger of a loss of donor and user confidence in the Service as a whole.

Option 3: Franchising

4.5 This option envisages the National Directorate "franchising" Regional Transfusion Centres to collect and process blood within the National Blood Transfusion Service. The franchise would only be granted where Transfusion Centres meet nationally established criteria for safety and quality. This Option and the next are illustrated by the diagram at Figure 4.

- **Coherence:** If applied across all RTCs, the franchising option would lead to greater consistency in donor selection and quality standards than at present. The artificial division between Blood and Plasma would however remain.

- **Competitiveness:** This option will have no direct impact on the competitive environment.

- **Clout:** The effectiveness of the franchising option depends on the extent to which a "National Directorate franchise" will be seen by donors, regions and users as being a significant element in judging a Regional Transfusion Centre. If an RTC is meeting regional needs, maintains good relations with its donors and has obtained a licence from the MCA, it is difficult to see why the gaining or loss of a National Directorate franchise will affect it in any way. In these circumstances therefore the ability of the National Directorate to influence the BTS and so to carry out many of the central functions decribed in Section 3, will be not be increased through this option.

- **Confidence:** It is unlikely that adoption of this option will have any impact on donor confidence

Option 4: CBLA owns plasma / National Directorate operates a Franchise system.

4.6 This option would build on the basic franchising scheme through ownership of the plasma by the CBLA with use of the BPL as a contract fractionator.

- **Coherence:** This option would perpetuate the division between blood and plasma.

- **Competitiveness:** Increased competition within the service may be improved in the supply of plasma but it would not affect the market in red cells.

- **Clout:** The CBLA would have considerable "clout" under this option as the owner of the plasma. If the CBLA worked closely with the National Directorate it might be possible to associate the possession of an ND "Franchise" with the acceptability of plasma to the CBLA. In practice, however, it is difficult to see how the CBLA could refuse to accept plasma from a Centre licenced by the MCA simply because it had not obtained a non-statutory franchise from a non-statutory body. In these circumstances, the weakness of the basic franchising option would not be overcome.

- **Confidence:** It is unlikely that adoption of this option will have any impact on donor confidence

Option 5: Licencing Authority

4.7 The National Directorate could take on the role of licencing the RTCs from the MCA This would require creating the National Directorate as some form of statutory licencing body.

- **Coherence:** The licencing authority of the proposed central body would be very difficult to define. It would be difficult for it simply to licence RTC's without that licence also covering the raw materials aspects of the MCA licence for BPL (otherwise RTCs would be obliged to meet the requirements of two licencing bodies for essentially the same activities). Unless the MCA licence and that of the National Directorate were, in all essentials, the same, BPL might reasonably complain that their competitors were operating under one set of rules (those imposed by MCA on the raw materials suppliers of their licencees) and the BPL on another (those imposed by the National Directorate on RTCs). Overall, unless the National Directorate were to take over all MCA responsibilities in relation to blood and products, this option seems likely to introduce considerable confusion and incoherence into the BTS.

- **Competitiveness:** The Option will have no impact on competitivenes

- **Clout** As a licencing body, the National Directorate would have considerable power and influence.

- **Confidence:** Central donor selection, quality and safety standards may be expected to enhance donor confidence.

Option 6: A National Body Setting Prices for both Blood and Plasma within the Transfusion Service

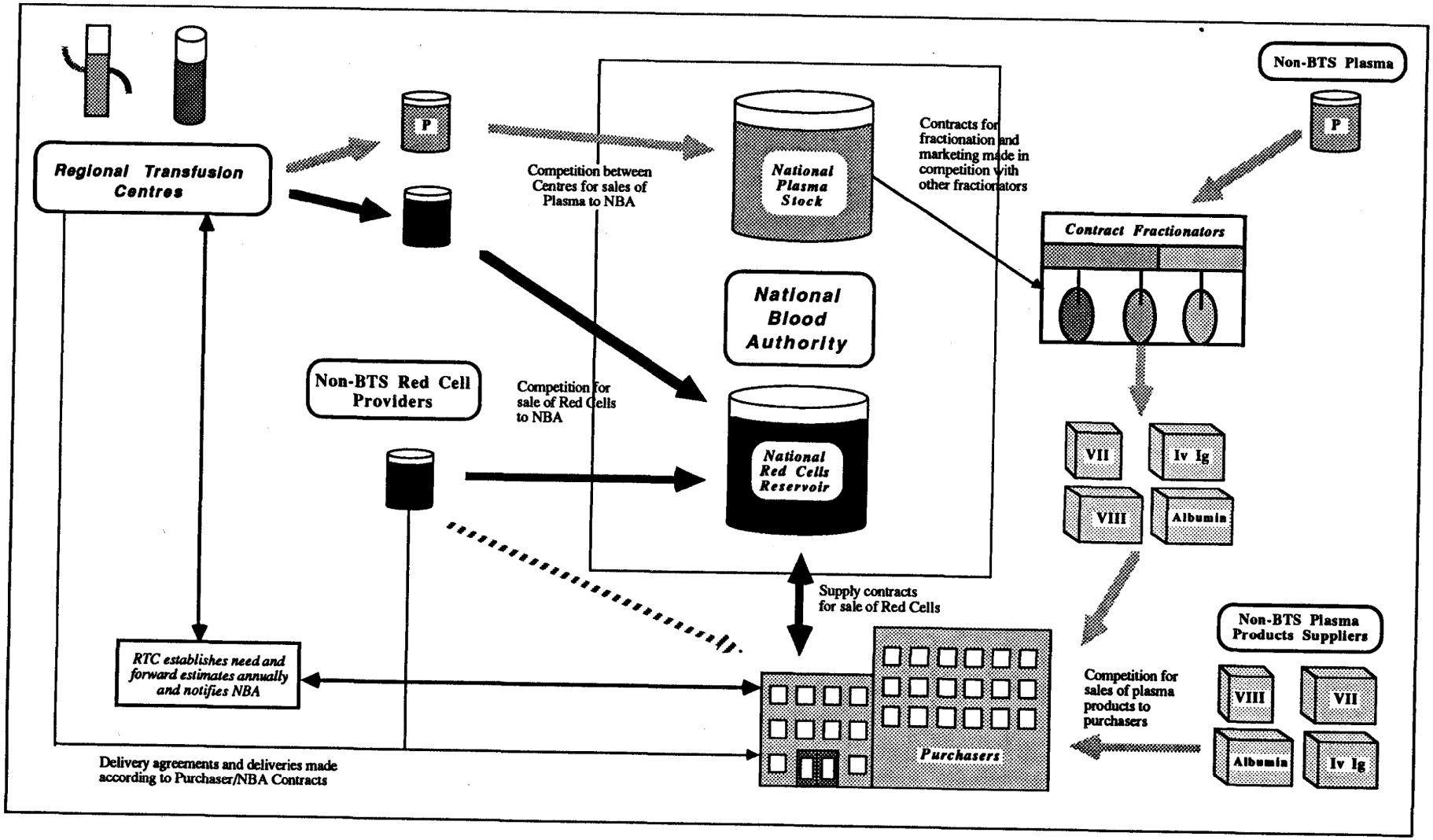
4.8 A national body would take on the responsibility of setting prices of red cells, plasma and associated products within the service. It would do so following establishment of a standard costing method for blood products and processing and consideration of the appropriate price weighting between blood and plasma products.

- **Coherence:** Coherence of the service would be significantly enhanced by uniting the two aspects of the service - blood and plasma - which are currently kept organisationally separate.

- **Competitivenss:** The impetus to control costs and increase competitiveness would be constrained by the level of prices set. A high price would protect higher cost producers and lay more efficient producers open to the charge of amassing profits; lower prices may cause RTCs to be in deficit and prevent development of the service through lack of funds.

- **Clout:** The single body would have a clear and powerful role in the business aspects of the Service; however its influence in quality and donor safety issues would not be increased.

Figure 5: "Contracting Authority" Option



- **Confidence:** There would be a risk of a degree of donor disillusion with Centres which, as a result of central national price setting, became either very profitable or very run down.

Option 7 : Single Contracting Authority

4.9 This option (described diagrammatically in Figure 5) builds on the proposal of a united CBLA and ND organised as a National Blood Authority (NBA) with the objective of acting as a contracting authority for both blood and plasma. Thus RTCs would continue to be responsible for the donor relationship and would collect blood and 'sell' it on a cost reimbursement basis to the National Body. The RTCs would also continue to establish need for Blood and products with Districts and Trusts in their own regions but the formal supply contracts would be with the National Authority. BPL would continue to fractionate the plasma, in competition with other contract fractionators. The NBA would be responsible for ensuring the appropriate allocation of capital and development resources and would manage the central publicity budget. RTCs could remain within Regional management structures but might more sensibly operate on a NHS Trusts basis. We understand that the issue of Colleges of Health becoming NHS Trusts is currently being explored, and that consideration is being given to setting these up with a reduced number of directors to comprise their Management Board. It may be that this would be a sensible model to emulate for the RTCs.

- **Coherence:** A single central body recognises the one product nature of the Blood Transfusion Service, removing the artificial separation between the two aspects of the product. Coherence would therefore be increased significantly. From its central position the NBA would be able to move progressively towards a consistent set of prices for blood and products.

- **Competitiveness:** Each RTC would be working to meet their supply contracts with the National Authority for both plasma and cellular products. There would however be an element of real inter-RTC competition annually as RTC's sought contracts to meet the National Authority's's requirements for blood and plasma at an acceptable cost to the Authority and its purchasers (perhaps in competition with other - non-BTS - suppliers of red cells and plasma).

- **Clout:** The influence of the national body as the purchaser of the product would be very considerable. Through its contracts with RTCs it would be able to stipulate key quality, standards and donor safety criteria which RTCs would need to meet.

- **Confidence:** The National Authority would remain within the NHS and would make its payments to RTCs on a consistent cost reimbursement basis. This would avoid any loss of donor confidence through an apparent commercialisation of the Service. The body's relationship with BPL would be as a contracted fractionater and marketer not with an organisation which "buys and sells" freely donated blood. Finally, the consistency which could be imposed through contractual relationships with RTCs should go far towards removing inter-RTC differences in blood collection. A single National Blood Authority would help project a uniform "image" of the BTS to all donors.

Option 8: Direct Management

4.10 This option involves operating a single national, centrally line managed Service. The Regional Transfusion Centres would come under central management, with policy, personnel and operational management all falling within the remit of the central body together with the appropriate allocation of capital and development resources. There would be a possibility of developing service agreements with the Regional Health Authorities covering staff, facilities and maintenance.in order to maintain operating links with the Regions.

- **Coherence:** Running the Blood Transfusion Service as one body would greatly improve the coherence of the service, enabling it to project a national image and to implement initiatives consistently throughout the service. However, unless carefully managed, the links between RTCs and their region might reduce.

- **Competitiveness:** A centrally managed service would give less scope for improving the internal market within the transfusion service by changing the relationships between the players in the service and removing the incentive of RTCs to compete.

- **Clout:** The influence of the central body under such a sytem would be considerable.

- **Confidence:** An image of a single service would be projected allowing national donor recruitment and retention policies and consistency of donor standards in all areas.

Summary

4.11 Table 1 brings together our conclusions from the above analysis and asseses each of the Options against criteriia on a "0-5 Scale". In each case "0" indicates a complete inability to meet the needs of the criterion and "5" indicates the ability to meet the criterion in full.

4.12 The fifth column in the table indicates (similarly on a "0-5 Scale") the extent to which the option will be able to realise the range of required or desirable central functions discussed in detail in Section 3 of the report. The sixth column totals the scores of the previous five columns and identified which of the eight options were taken forward for more detailed cost/benefit analysis in Section 5.

Table 1: Summary Of Options Considered

Options Considered / Criteria Used	Coher-ence	Comp-etition	Clout	Conf-idence	Central Roles	TOTAL Scores
Abolition of National Directorate and CBLA	0	3	0	2	0	5
No Change	2	3	1	3	2	11 Option taken forward
Franchising	1	2	1	3	3	10
CBLA "Ownership" of Plasma PLUS Franchising	2	2	1	3	3	11
Licencing Authority	0	3	4	4	2	13
Price Setting Authority	3	0	2	2	2	9
Unified National Blood Authority as Contracting Authority	4	4	4	4	5	21 Option taken forward
Unified National Blood Authority as Direct Manager of Transfusion Centres	5	2	5	4	5	20 Option taken forward

Conclusions

4.13 We considered each of the above options carefully to identify their practicability and the benefits they would offer the BTS.

4.14 We rejected the "Abolition of Central Functions" option (Option 1) on the grounds that Section 3 of this report had established that there were a number of important tasks which needed to be carried out centrally and that the risks to continuity of supply and donor confidence of an unco-ordinated BTS were too great to require further consideration of the option.

4.15 We considered both Options (3 and 4) which involved a form of franchising but, whilst we recognised that additional central influence would be provided by the association of franchising with a CBLA which "owned" all plasma produced, (Option 4), we concluded ultimately that the perceived value of a "franchise" to any of the players involved in the BTS would be too low to provide the awarding body with the influence it would need to discharge effectively the functions set out in Section 3. In these circumstances, we concluded that neither of these options would advance the BTS any further than "No Change" but would carry the additional costs of establishing and promoting the "franchise" concept. We have therefore not taken these forward to detailed cost/benefit analysis.

4.16 We reviewed the "Licencing" Option (Option 5) and recognised its attractions in terms of providing a central body with real "clout" in the areas of donor selection, safety and product quality. However, we concluded that the overlap between a National

BTS Licencing Authority and the MCA was too great to be practicable. We did not believe that the establishment of a new authority to carry out functions already within the ambit of an existing authority would be acceptable. We therefore rejected this option.

4.17 Under the "Price Setting" Option (Option 6), the Authority would need to balance, within one set of centrally-imposed prices, the needs of the Service for incentives to improve efficiency, with donor expectations that Centres were not making profits from "their blood" and, lastly, the need to ensure that the less efficient Centres did not suddenly find themselves without the cash they need to continue to operate. Even with a very much better information base than currently exists within the BTS, we do not believe that this would, in practice, be possible.

4.18 Both the "Contracting Authority" and "Direct Management" options (Options 7 and 8) appeared to offer practicable approaches which allowed significantly greater opportunities for a central organisation to discharge effectively the functions set out in Section 3 than does the "No Change" option. On this, essentially qualitative, assessment therefore, these twop options emerged as requiring closer analysis. The BTS has however existed for more than 40 years without either organisational option in place, although it is now apparent that there are increasing difficulties being experienced in maintaining this status. We believe therefore that it is right to compare the detailed costs and benefits of these options with those associated with "No Change" (Option 2).

SECTION 5: COST/BENEFIT ASSESSMENT

Introduction

5.1 In this Section we review the quantifiable costs and benefits of the three Options taken forward from Section 4 and draw conclusions as to the most appropriate of the options for the future organisation of the NBTS. We have based our assessments on the information currently available within the BTS. The following areas are covered :

- Quantifiable Costs - Staffing and Running Costs
  - Systems Costs
  - Set Up Costs
- Quantifiable Benefits - Scope for Efficiency Improvements

Quantifiable Costs

Staffing & Running Costs

5.2 We have assessed the costs of running the new structures suggested by each option, have made estimates based on current costs of the National Directorate and the CBLA and our best judgement of the staff costs of filling such new posts as would be created. We have also sought to identify, as a block, the overhead, property and associated costs of each option, again based on current experience.

5.3 We have not attempted to take into account compensatory savings in, for example, Regional financial management support services of (under the "Direct Management" option) the movement of this function to a central body. Neither have we taken account of the fact that, in many cases, a central body would wish to contract with individual regions under an SLA for the provision of certain services.

5.4 Thus, the costs shown in this section should be regarded as indicative of the order of magnitude differences between options rather than precisely determined expenses of taking forward a particular option. We would regard this latter area as being one requiring a detailed feasibility study, the extent of which is beyond both our timescales and the scope of this review.

5.5 The "No Change" option assumes the continued separate existence of the National Directorate and the CBLA. "Direct Management" and "Contracting Authority" assume a single unified central organisation.

5.6 Table 2, overleaf sets out our conclusions regarding the size and costs of the three selected options. Based on this table, the annual running costs of the three Options are estimated to be:

"No Change"	£585,000 pa
"Direct Management"	£1,700,000 pa
"Contracting Authority"	£860,000 pa

NB Central publicity budget (£950,000 pa) not included in the above since it is an essential component of all options.

Table 2 : Estimated Staffing Mix & Costs of Selected Options

OPTIONS / *POSTS*	No Change	Direct Management	Contracting Authority
Chairman	1	1	1
Chief Executive	2	1	1
Deputy CE	1	1	1
Finance Director	1	1	1
Medical Director		1	1
Personnel Director		1	
Accountants		2	
Systems Managers	1	2	1
Contracts Managers		5	1
Business Managers		3	1
PR Managers		1	1
Quality Managers		3	1
Office Managers	2	1	1
Medical Consultant		1	1
Medical Staff		2	
Personnel Staff		5	
Clerical Support	1	5	4
Personal Assistants	3	4	3
TOTALS	12	40	19
Salaries & Overheads	£490,000	£1,400,000	£710,000
Property & Ass Costs	£95,000	£300,000	£150,000
TOTAL ANNUAL COSTS	**£585,000**	**£1,700,000**	**£860,000**

Systems Costs

5.7 We have made a preliminary assessment of the additional information systems needs under each option. The costs given represent indicators of magnitude. The variety of systems options available makes precise costings very difficult at this stage. These will need to be determined through information systems needs assessments and evaluation of the packages available.

"No Change"

Systems are required in each RTC to monitor/manage their purchaser contracts. On average, the required scope would be for 14 systems to cover 30-50 contracts per RTC

Estimated Systems Cost: £150,000

"Direct Management"

Significant systems costs are implied to cover Financial Management, possibly Personnel Management and Contact Management

Estimated Systems Cost: £750,000

"Contracting Authority"

This option would result in the need for a single, relatively large Contract Management system

Estimated Systems Cost: £250,000

Set-Up Costs

5.8 These costs are very much more difficult to estimate in advance; however there will cerrtainly be a direct relationship between the costs of establishing an option and the degree of organisational change involved. Thus this element of the Cost/Benefit Analysis is based upon the level of dislocation which would occur in the process of change from the current arrangements to those involved under each Option.

"No Change"

Clearly, there would be no dislocation under this option and therefore no set-up costs.

"Direct Management"

Under this Option, considerable dislocation might be expected as the BTS adjusts to new lines of responsibility and management.

As well as the managerial time which would be spent on this, it is likely that some - but probably not all - RTCs will wish to continue to receive services (personnel, financial management, etc) from the Regions in which they would be sited. This would involve BTS management in arranging (or confirming, if

the negotiations were carried out by local RTC management) Service Level Agreements with a substantial number of Regional service providers. Where RTCs did not wish - or were not able - to take advantage of Regional providers (the South London Centre is an example of where this might occur) national BTS management will need to assist in the establishment - or integration - of local systems within the new management framework.

Overall, the set-up costs of this option seem likely to be large in terms of managerial time and effort throughout the BTS.

"Contracting Authority"

Under this Option the level of dislocation seems likely to be very much lower than under "Direct Management".

All RTCs have agreed contracts with their Regional purchasers for the current year and have forged the links necessary to establish future needs. Under this Option the needs establishment process will continue to be carried out at local level so there will be little change to assimilate. However, the National Body will need to establish mechanisms with RTCs and purchasing bodies for the submission of needs statements and the agreement of contracts. In addition, work will be required in order to establish sensible arrangements for invoicing users of RTC products and recording performance against contract.

Overall it is expected that this Option will require a level of set-up expenditure which falls about half way between the costs associated with "Direct Management" and those associated with "No Change".

Quantifiable Benefits

The Scope for Efficiency Improvements

5.9 Substantial opportunities appear to exist within the BTS to achieve improved cost effectiveness through the promotion of particular mechanisms for collecting or processing blood and products and by improved focussing of blood collection in areas or Regions in which it is cheapest or most efficient to do so.

5.10 The extent of the opportunities for improvement can be assessed from the following three tables which are based on information avaiable from the BTS. Table 3 sets out the differences in prices and the ranges of costs involved in the sale and production of five key BTS products. It also records the current volumes of production.

5.11 In considering the implications of the following tables, it is very important to take the following into account:

- The information base within the BTS from which the data has been drawn is weak. The National Directorate can be confident about the volume and price information provided; however, the costing information is based on returns from those few Centres whose costs are known Thus, whilst the cost differences shown between Centres for particular products are an accurate reflection of the fact that very wide ranges of costs exist in practice, we cannot be confident that there are not other Centres whose costs are either higher or lower than those shown as maxima and minima.

• The apparent potential for savings cannot be regarded as necessarily entirely achievable in practice. Because, for example, of the current high level of demand for the BTS's products, it is likely that, for some time into the future at least, it will continue to be necessary to collect from the more expensive sources of supply (eg from donors located at a considerable distance from the nearest Transfusion Centre - requiring collection teams to make costly overnight stops in order to obtain their donations).

Table 3 : Costs & Prices of BTS Products

BTS Products	Total Production	Price	Highest Prod'tn Cost	Lowest Prod'tn Cost	Average Prod'tn Cost
Recovered Plasma	420,000kg	£36/kg	n/k	n/k	n/k
Apheresed Plasma	80,000kg	£60/kg	£89/kg	£65/kg	n/k
Special Plasmas	10,000kg	£80/kg	n/k	n/k	n/k
SAG(M) Red Cells	1.80m units	n/a	£33/ unit	£24/ unit	£27/ unit
Whole Blood	0.54m units	n/a	£42/ unit	£33/ unit	£36/ unit

5.12 From this it can be seen that the costs of Apheresed plasma range from £89/kg to £65/kg between RTCs; those of SAG(M) Red Cells from £24/unit to £33/unit; and those of whole blood from £42/unit to £33/unit. The implications of this in cost terms is shown in Table 4.

Table 4 : Implications of Cost Differentials on BTS Costs

BTS Products	Cost of Production at Highest Cost	Cost of Production at Average Cost	Cost of Production at Lowest Cost
Apheresed Plasma	£7.21m	n/a	£5.16m
SAG(M) Red Cells	£59.40m	£48.60m	£43.20m
Whole Blood	£22.68m	£19.44m	£17.82m

5.13 As mentioned above, it would be dangerous to extrapolate directly from the above tables to identify immediately achievable savings; however, it has been made clear to us that several - of the cheaper - RTCs have the capacity to produce significantly more product but have not done so since the local demand does nor require it. Overall, it seems safe to conclude that the scope exists to make savings in this area alone which would more than cover the administrative costs of a National Blood Authority.

5.14 As can be seen from Table 3, the differential in the price paid by BPL for apheresed plasma as against recovered plasma is considerable (£24/kg); also from Table 3 it can be seen that some 540,000 units of Whole Blood are still being produced by the

BTS. Whole Blood represents blood from which plasma has not been recovered; this 540,000 units therefore represent a currently untapped source of recovered plasma. Table 5 sets out the implications to BPL of a proportion of that source being used to replace the apheresed plasma BPL currently purchases annually from the BTS.

Table 5 : Effect of Price Differentials

Effect on BPL Costs of :	BPL Annual Savings
All of Current Apheresed Prod'tn achieved instead through Recovered Plasma	£1,920,000
50% of Current Apheresed Prod'tn achieved instead through Recovered Plasma	£960,000
25% of Current Apheresed Prod'tn achieved instead through Recovered Plasma	£480,000
None of Current Apheresed Prod'tn achieved instead through Recovered Plasma	0

5.15 The extent to which these cost-efficiency savings are achievable will of course depend on demand and individual user requirements. However it is clear that they will not be achieved without some external stimulus. In order to judge between the three Options under consideration it is therefore necessary to consider the extent to which they will provide that stimulus.

"No Change"

With current levels of central influence over RTCs it is unlikely that any of the above savings will be achieved. The BTS information base - already weak - will be unlikely to improve and as each RTC focusses increasingly on its intra-Regional users, the scope to identify and act upon opportunities to improve the cost mix in the BTS's products will, if anything, reduce.

"Direct Management"

Under this option the ability of central management to obtain and act upon cost and product mix infromation will be greatly enhanced and considerable scope should exist to take advantage of some of the opportunities outlined above.

"Contracting Authority"

So long as the Contracting Authority made it part of its contract with the RTCs to provide comparable cost information prepared on consistent bases, it should be very well placed to identify, and through its award of contracts to RTCs , act upon the opportunities for improved cost-effectiveness outlined above.

Conclusions & Recommendations

5.16 We base our conclusions on the assessments made in this Section and the last under three headings;

- Qualitative Benefits of the Options
- Quantified Assessed Costs of the Options

• Assessed scope to realise Quantifiable Benefits

5.17 Each Option has been assessed under these headings as follows:

"No Change"

This Option offers the least in terms of qualitative benefits, delivering neither the necessary coherence nor the necessary clout for the Central Functions outlined in Section 3 to be carried out most effectively.

It is however the cheapest of the Options in terms of staffing, systems costs and dislocation costs during set up.

It offers least scope to realise the cost-effectiveness opportunities described above, having neither the necessary information nor the means to act upon it.

"Direct Management"

This Option offers a considerable amount in terms of qualitative benefits, failing only to introduce any strong element of competition into the BTS structure.

It is the most expensive of the Options in terms of staffing, systems and set up costs.

It provides very good opportunities to identify and act upon the opportunities for cost effectiveness savings outlined above.

"Contracting Authority"

This Option offers most in terms of the qualitative benefits, providing the BTS with a coherent structure, a Central Organisation with "clout" through its contractual power, and also introducing a strong element of competition into the BTS framework.

It is the second most expensive of the options under all three headings identified; although not significantly more expensive than "No Change" in either staffing and running costs or systems costs.

It provides very good opportunities to identify and act upon the cost-effectiveness opportunities identified.

5.18 Based on this assessment **we recommend that the "Contracting Authority" Option be selected** as the most appropriate organisational arrangement for the BTS and that early action be taken to investigate the precise means and timetable for its introduction, through a full feasibility study.

ERNST & YOUNG