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# SNBTS: PUBLIC EXPENDITURE SURVEY (1986)

## PROGRAMME NARRATIVE

JDC/CSA/5/86/1

11/5/86

A. DESCRIPTION OF PROGRAMME

The SNBTS is responsible for:

1. Ensuring that the SHS is self-sufficient in safe and efficacious blood and blood related products in the period under review.
2. Ensuring that, where possible, appropriate laboratory support services are operational for (1) above and for monitoring and influencing the clinical use of the products supplied.
3. Ensuring that the public (voluntary donor) programme, which gifts the raw material from which these products are derived, is appropriately supported and maintained.
4. Provision of contract plasma fractionation for the Northern Ireland Health Services.
5. Ensuring that the SHS laboratories are supplied with those laboratory reagents derived from blood donors.
6. Ensuring that effective research and development is undertaken to support, long-term, the work in (1-5) above.

B. BASE-LINE FINANCIAL FIGURES

(See attached Appendices I and II).

C. PURPOSE OF EXPENDITURE

The purpose of the expenditure is to enable the SNBTS to fulfil its functions as described above (A).

D. OBJECTIVES FOR EXPENDITURE

As (C) above in the most cost-effective way.

E. MEASUREMENT OF SUCCESS

There are likely to be a number of ways the achievement (or

otherwise) of the objectives can be measured. Attempts to generate databases and analytic resources to examine some of the options are underway. No results are currently available. Our international retion would suggest that in many areas our success is significant.

F. BASELINE "BUYING"

The current baseline will not be sufficient to meet all objectives.

G. JUSTIFICATION OF BIDS FOR DEVELOPMENT

See separate Appendix III.

In the context of making future financial provision for revenue developments in the period 1987-90 it should be emphasised that detailed and adequate information is not available for 1988-89 and 1989-90. Moreover, we envisage that a significant and currently unknown number of important development proposals planned for implementation in 1986-87 will not be funded and thus will be carried forward for consideration in succeeding years. Compounding all these problems is the continued escalation in demand, the increasing impact of AIDS which now goes far beyond simple donation screening and the likelihood that new mass donation screening programmes will commence in the foreseeable future: all combine to threaten seriously our position of being self-sufficient (a position we share with 5 other countries).

All these factors lead me to conclude the following:

(1) In the light of current and expected demands on the Service, it would be unrealistic and irresponsible not to propose a minimum annual real growth requirement of 2% compound on our rising (inflation based) baselines for the period under review.

(2) This 2% annual growth will not meet the Division's legitimate needs and it is again suggested that consideration is given by SHHD to the following proposals:

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(a) That the financial implications of Items 5 (a) to (g) in Table I below, which are not part of our planned developments but have been thrust upon us, be covered by funds which are not part of the 2% development programme.

(b) It is also proposed that similar considerations pertain with regard to our contract for Northern Ireland. We, for our part, will continue to seek to cover the shortfall between the proposed 2% allocation each year by making efforts at savings through improved efficiency.

Should these proposals be acceptable in principle then the following summary position of Revenue Monies can be tabulated.

TABLE I
(estimated costs including inflation factor)

| | Item | 1986/87[2] £ 000 | 1987/88 £ 000 | 1988/89 £ 000 | 1989/90 £ 000 |
|---|---|---|---|---|---|
| 1. | Revenue baseline | 13,270 | 14,524 | 16,330 | 18,016 |
| 2. | Inflation provision[1] | 597 | 509 | 490 | 450 |
| 3. | Sub-total | 13,867 | 15,033 | 16,820 | 18,466 |
| 4. | Developments (2% of 1) | 207[3] | 290 | 327 | 360 |
| 5. | Specially funded items | | | | |
| | (a) AIDS Donation testing | 400 | – | – | – |
| | (b) Liver transplantation support | – | 100[4] | – | – |
| | (c) AIDS Reference Lab. testing | – | 43[4] | – | – |
| | (d) Northern Ireland fractionation | – | 43[4] | 22 | 23 |
| | (e) Supply of products to private sector | – | 11[5] | 11[5] | 11[5] |
| | (f) Commercial interface | 50 | – | – | – |
| | (g) Non-A/Non-B Hepatitis testing | – | 810 | 836 | – |
| 6. | Sub-total of 5 | 450 | 1,007 | 869 | 34 |
| 7. | GRAND TOTAL (3+4+6) | 14,524 | 16,330 | 18,016 | 18,860 |

Notes:

1. Inflation factors - 1986/87 - 4.5%
   1987/88 - 3.5%
   1988/89 - 3%
   1989/90 - 2.5%

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2. 1986/87 allocations are actual figures
3. Balancing figure - Developments as per PESC 1985 - £133,000
   Unallocated balance - £ 74,000
   £207,000
4. Assumes special bid in 1986/87 will be funded in 1987/88 and thereafter.
5. Assumes allocation made in 1986/87 will continue.

In regard to the perceived magnitude of the operational problems ahead, bearing in mind our current paucity of management information, it is nevertheless possible to summarise a very approximate overall position in the table below although it must be stressed the Centre forecasts from 1988-89 and 89-90 are weak.

TABLE 2

New Revenue Development Bids
(estimated costs including inflation factor)

| Item | 1986-87 £ 000 | 1987-88 £ 000 | 1988-89 £ 000 | 1989-90 £ 000 |
|---|---|---|---|---|
| 1. Specially funded items as per item 5 in Table 1 | 450 | 1,007 | 869 | 34 |
| 2. Current Centre forecasts | 538[1]+ | 213[2]+ | 125[3]+ | N/K[4]+ |
| 3. Current SNBTS National Schemes: | | | | |
| (a) AIDS Testing of PFC Products | 19 | - | - | - |
| (b) Plasmapheresis | 52 | - | - | - |
| (c) National Computing Development | 31 | 39 | 10 | N/K |
| (d) Clinical Trial Studies | 50 | - | - | - |
| (e) Increased supply of fresh frozen plasma to PFC | - | 108 | 111 | 114 |
| Sub-total of 3 | 152 | 147+ | 121+ | 114+ |
| **TOTAL (1+2+3)** | 1,140+ | 1,367+ | 1,115+ | 148+ |

Notes:

1. No cost estimate yet included for PFC staffing structure.
2. Significant number of uncosted schemes.
3. No forecast from 5 of 7 Centres.

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4. No forecast from 6 of 7 Centres.

\+ Relates to additional unknown element of schemes as yet uncosted.

It is now theoretically possible (given an adequate management database) to make some further calculations. Unfortunately our database is less than adequate but the principles of the exercise are worth summarising for they provide a view of what may be possible, in management terms, in the not too distant future:

TABLE 3

Operational (Financial) Outline of SNBTS Revenue Development Forecasts

| Item | 1986-87 £ 000 | 1987-88 £ 000 | 1988-89 £ 000 | 1989-90 £ 000 |
|---|---|---|---|---|
| 1. Funds available[3] (see Table 1) | 299[1] | 290 | 327 | 360 |
| 2. (a) Shortfall b/f | - | 391+ | 475+ | 408+ |
| (b) Inflation factor on (a) | - | 14+ | 14+ | 10+ |
| (c) Centre forecasts | 538+ | 213+ | 125+ | N/K |
| (d) National forecast | 152 | 147 | 121 | 114 |
| Sub-total | 690+ | 765+ | 735+ | 532+ |
| 3. Shortfall c/f (1-2)[2] | 391+ | 475+ | 408+ | 172+ |

Notes:

1. Estimate as per Table 1 £207,000
   Add balance not allocated 85/86 92,000
   £299,000
2. Projection assumes real inflation will be as forecast by Government and current guidelines are accurate.
3. No additional funds from economies/savings etc. included.

\+ Relates to additional unknown element of schemes as yet uncosted.

SERIAL NO: 5C APPENDIX I

PUBLIC EXPENDITURE SURVEY 1985

VOTE: PRISONS, HOSPITALS AND COMMUNITY HEALTH SERVICES ETC SCOTLAND PESC HEAD: 15.10.1

SUBHEAD: K2 Common Services Agency (3) Blood Transfusion Services (a) Salaries & Wages (b) other expenses (c) Direct credits

£'000

| National Accounts Classification (NAC) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1984-85 | 1985-86 | 1986-87 | | | 1987-88 | | | 1988-89 | | | 1989-90 | | | |
| | Outturn | Provis Outturn | CPNB 9702 Base Estimate | Rev F'cast | Variation + - * | CPNB 9702 Base | Rev F'cast | Variation + - * | CPNB 9702 Base | Rev F'cast | Variation + - * | Base | Rev F'cast | Variation + - * | |
| Pay - 11001/2 | | | | | | | | | | | | | | | |
| Pay - 12001/2 | 6,971 | | 8,057 | 7,999 | -58 | 8339 | 8,649 | +310 | 8589 | 9,281 | +692 | 8804 | 9,693 | +889 | |
| Fees - 18002 | | | | | | | | | | | | | | | |
| Pay - 18003 | | | | | | | | | | | | | | | |
| Goods & Services - 18003 | 5,503 | | 6,475 | 6,533 | +58 | 6702 | 7,689 | +987 | 6903 | 8,743 | +1,840 | 7076 | 9,175 | +2,099 | |
| Charges - 19001 | -8 | | -8 | -8 | - | -8 | -8 | - | -8 | -8 | - | -8 | -8 | - | |
| Grants - 31001/2 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| TAL | 12,466 | | 14,524 | 14,524 | - | 15,033 | 16,330 | 1,297 | 15,484 | 18,016 | +2,532 | 15872 | 18,860 | +2,988 | |

Treasury Cash Factors

1987-88 Cash = 1986-87 Cash +3½% overall
1988-89 Cash = 1987-88 Cash +3½% overall
1989-90 Cash = 1988-89 Cash +2½% overall

* Detail on the reverse of this form the variations from the CPNB 9702 base levels, and explain the variations.

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APPENDIX 11

C Ref: _____ MAC: _____

Vote: Prisons, Hospital & CHS etc. Scotland

Section: _____

Subhead: Common Services Agency –
Blood Transfusion Service

| | 198 -8 Outturn | 198 -8 Provisional Outturn | 1986-87 | | 1987-88 | | 1988-89 | | 1989-90 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cmnd Base | Revised Forecast | Cmnd Base | Revised Forecast | Cmnd Base | Revised Forecast | Base | Revised Forecast |
| REMUNERATION (£'000) | | | | | | | | | | |
| ic pay, allces, £C | | | | | | | | | | |
| rtime | | | | | | | | | | |
| s NI and Superannuation conts | | | | | | | | | | |
| er pay, £C | | | | | | | | | | |
| AL WAGES AND SALS, £C | | | | | | | | | | |
| fessional Fees | | | | | | | | | | |
| er Charges | | | | | | | | | | |
| AL REMUNERATION, £C | | | | | | | | | | |
| STAFF NUMBERS AS AT 30 SEPTEMBER | | | | | | | | | | |
| Total staff (counting part-time as ne half) | | | | 949 | | 986 | | 1,023 | | 1,041 |
| Industrials (included in a.) | | | | | | | | | | |
| Part-time included in a. (counting ach part-time as one) | | | | 173 | | 173 | | 173 | | 173 |

Signed _____

Division _____ Date _____

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APPENDIX III

PES 1986

# SNBTS: DEVELOPMENT PROPOSALS 1986-90

(Item G: Programme Narrative)

## INTRODUCTION

In the context of the SNBTS it seems appropriate to try and respond, as briefly as possible to two fundamental management questions: "In overall terms, where are we at and where are we going?"

## CURRENT POSITION

### 1. Self-sufficiency in Therapeutic Blood Products

In early 1984 Scotland joined a small band of countries (5) and became self-sufficient in blood and blood products. The arrival of AIDS and the continued escalation in demand for existing and new products are currently seriously threatening this position. The problem is one of the availability of finance. Unless significant steps are taken in the foreseeable future Scotland will no longer be able to maintain self-sufficiency in blood/blood products and we will return to reliance on the commercial sector: a high cost and less safe (for the patients) option.

### 2. Self-sufficiency in Donor Derived Laboratory Reagents

Our previously strong position has been progressively weakening - at significant costs to the SHS. Steps are now well in hand to eliminate/reduce this problem.

### 3. Clinical Transfusion Services

The SNBTS has developed, since 1974, a strong clinical base in terms of transfusion practice in 5 of its 6 Regional Transfusion Centres. This development has had a profound effect on controlling expensive resources and improving the quality of patient care. It is attracting considerable attention worldwide and in particular the Council of Europe and the NIH (USA).

4. Laboratory Services Associated with (3) above.

The Edinburgh Centre is best developed for this function. However, positive progress is now being made in Aberdeen and Dundee.

5. Successful Donor Panel

The staff of the SNBTS have created and maintained the loyal and enthusiastic support from our donors. This is in contrast to many other parts of the UK and contributes to our donor management costs being very competitive. Attention is drawn to the fact that increasing effort and cost is required to maintain existing ordinary blood donation inputs due to complex fears about AIDS in our donor population.

6. Protein Fractionation Centre

This Centre must currently rate as one of the most outstanding of its kind, worldwide. Evidence for this is the way we have so far succeeded in meeting the challenge of our commercial competitors and the frequency of overseas visitors. This facility brings many savings for the SHS and has a significant impact in terms of patient safety.

7. Research and Development

The SNBTS as a whole, from NHS sources, spends approximately 3% of its revenue allocations on research and development. This compares with 7-15% (with respect to turnover) for our commercial competitors. Nonetheless our investment has proved to be a key to our success in terms of achieving and maintaining self-sufficiency. In the world of science many of our staff are now national and international figures.

## FUTURE STRATEGIES

1. Increasing Efficiency and Making Economies to Support Developments

It is our intention to continue to explore all options in this area

because we believe the required rate of development of a Transfusion Service, which has its own Plasma Fractionation facility and is committed to maintaining national self-sufficiency for its Health Services, is not likely to be matched by the availability of new government monies. This is now a matter of grave concern (see 1 above). We believe that the structure and performance of the management of the Agency and indeed certain areas within our Division, are not well suited to this financial climate. We will continue to press for reform which must go far beyond the appointment of a General Manager.

2. Self-sufficiency in Therapeutic Products

The plasma product industry is expanding rapidly and investing heavily. We anticipate the arrival of a new range of expensive products. Those of current interest include the following:

1. High Purity and Heat Treated Factor VIII and IX Concentrates (see below)
2. Heat Treated Immunoglobulin preparations
3. A new range of Anti-Microbial Immunoglobulin Preparations.
4. Antithrombin III Concentrate
5. Haemoglobin Solutions
6. 1 Antitrypsin Concentrate
7. Protein C Concentrate
8. Protein S Concentrate
9. Heparin/Antithrombin III Complex Concentrate

The successful development of many of these products will have substantial implications for PFC and RTCs (increased plasma requirement) and create a very heavy additional work-load for medical staff (clinical trials). At the same time there will be an increase in demand for existing products (Albumin, Factor VIII, Factor IX and I.V. IgG)

3. AIDS

(a) Donor Screening/Counselling

This represents a significant additional undertaking. Every effort

will be made to ensure that costs are contained and hopefully restricted to the purchase of kits and disposables and use of reference facilities.

(b) Product Implications

The impact of virocidal treatments of plasma products and the production of higher purity products (to reduce antigenic load and minimise immuno-compromising recipients) has been and will be considerable. The financial implications of this development, which is well advanced in the commercial sector, are considerable not only at PFC but at RTCs because the fall in yields will require an increased plasma input. Unless efforts, which are successful, are made to keep up with the commercial sector, then we stand in danger of having products which are not required by clinicians. Without effective research and development the future viability of PFC is in danger.

4. Additional Donation Microbial Screening

(a) CMV negative blood products

There is now an increasing and justified demand (for neonates and bone marrow transplant recipients) for blood products which have been screened to ensure they do not transmit cytomegalovirus. Modest provisions have been made for this work in the RTC development proposals.

(b) NANB

Despite the absence of specific tests to detect donations which transmit non-A, non-B (NANB) hepatitis there is increasing evidence that both in Europe and North America formal moves will be made, within the next 12-18 months, to introduce surrogate testing of all donations (liver function and anti (HBsAg) core tests). Current studies in the States have costed this exercise at $7.00 per donation. For the SNBTS this would be approximately £1.5 m.p.a. (using current exchange rates). There would be additional capital monies required and the US costings do not include a significant revenue cost for subsequent counselling of donors. Provision has been made for this development to commence in 1987-88 (part year).

5. Computing

We believe it is now essential to rationalise and co-ordinate an SNBTS approach to much needed computer development in the interests of economy, improved patient care and the procurement of viable management databases. To this end there has been established an SNBTS Computer Project Management Group, one member of which will be a senior colleague from ISD.

6. PFC

(a) Staffing Structure

The urgent need to adjust the staffing structure and pay-scales of PFC in line with its sister organisation BPL has not changed. It is hoped that implementation of proposals will commence in 1986-87.

(b) Engineering Support Facilities

We will have to support the maintenance and servicing needs of the recent major investment capital (engineering) equipment in PFC.

(c) Biotechnology

There is a requirement for us to develop this technology as a new and complementary tool for plasma fractionation. Significant initial progress has now been made.

7. Centre (Capital) Developments

We have welcomed the indication from Departmental colleagues that we can now proceed to develop plans for a new Centre in Aberdeen. Over the next 3 year period we anticipate modest staffing additions will also be required as this Centre has suffered from under-investment for many years. It is hoped that the implelentation of the much needed building programmes in the Inverness and Dundee Centres will be progressed in the near future. An option appraisal for a new Centre in the West of Scotland is currently underway.

8. Liver Transplantation

A SHS clinical programme is currently under scrutiny. Its transfusion support will be substantial and require detailed planning and appropriate resources. At the present time it is not envisaged that this programme will be underway until the financial year 1987-88.

9. Cost/Financial Management

It is our intention to continue to develop the existing studies and implement much improved financial management systems at Centre level in particular. Significant progress on phase I of these studies has been made in SEBTS, North and East. New proposals for further work by Professor Lapsley are being considered.