NOT FOR PUBLICATION

WORKING GROUP ON TRENDS IN THE DEMAND FOR BLOOD PRODUCTS

Minutes of the second meeting held on 13 July 1977 at the Department of Health and Social Security.

Present: Mr P Benner (Chairman)
Dr A E Bell
Dr J D Cash
Dr J Darnborough
Dr Helen Dodsworth
Dr I Gillies
Dr W d'A Maycock
Dr Sheila L Waiter
Mr T E Dutton (Secretary)

In attendance: Mr R P Cleasby.

1. APOLOGIES FOR ABSENCE

There were no apologies for absence. The Chairman welcomed Dr A E Bell who had assumed Dr McIntyre's blood transfusion responsibilities within the Scottish Home and Health Department.

2. MINUTES OF THE PREVIOUS MEETING

The minutes of the first meeting held on 3 February were accepted. There were no matters arising.

3. PAPERS

A list of papers considered by the Group is annexed to these minutes.

4. GENERAL CONSIDERATIONS

The Group noted that the Department was seeking an informed estimate of the likely future demand for blood products. It was accepted that any such estimate would involve assumptions about a number of variables, not all of which could be predicted accurately. In particular it was necessary to take account of the tendency for certain products to become temporarily fashionable with demand falling away again after a time. Bearing in mind the WHO policy, to which the UK subscribed, that each country should be self-sufficient in its needs for blood and blood products, the Group considered it would be necessary to set realistic production targets which would leave the commercial manufacturing sector with, at most, a topping-up role. It was accepted, however, that the existing resources of the blood transfusion services were limited and expansion of production might have to be gradual. In this connection, the desirability of flexibility being incorporated into the design of new fractionation plant to cope with any changing demand for blood products was noted. It was also considered that it might in certain circumstances be expedient to use the industry's fractionation capacity.

5. ALBUMIN

5.1 The Group considered the Council of Europe working papers as a basis for their discussion of the likely future requirement for albumin. The base line annual yield of albumin, calculated in BPWG(77)8 based on the needs of haemophiliacs for Factor VIII, of 137gm/1000 population was thought to be too low for long-term needs. Although there was a tendency for albumin usage to increase it could be partly offset by educating clinicians to use blood products more economically and still further offset if new protein substitutes were developed. It was considered that a production target of 200gm/1000 population annually provided a reasonable margin for unforeseeable circumstances. The Group recommended that planning should be directed towards this level of production even though it would only be attainable in stages. The present annual albumin production level in NBTS (E & W) was 43g/1000 population, expected to reach 51gm/1000 population by the Autumn, though current usage was probably greater since no information was available on the quantities being purchased through hospital pharmacies.

5.2 It was thought that Regional Transfusion Centres (RTCs) would welcome guidance on targets for plasma collection. Increased plasma supplies depended on an effective concentrated red cells programme, but some RTCs were likely to find this difficult and would therefore opt for increasing the number of donors bled.

6. FACTOR VIII

6.1 The Group noted that the commonly accepted target figure for Factor VIII was 1000 iu per annum per 1000 population, a level which would probably be exceeded if there was an albumin programme providing 200gm/1000 population. Although this (Factor VIII) figure had originated in Scotland, there was now a feeling there that it was a minimum which should be increased by about 25%, to meet sudden demands for the emergency treatment of haemophilic patients involved, for example, in serious accidents. It was apparent that clinicians were coming to recognise the supply problems; eg, they were moderating their demands for Factor VIII for prophylactic treatment.

6.2 For the longer term prospect, the Group noted that there existed predictions that the haemophilic population could increase significantly since effective treatment had become available. It was agreed that this was a factor to be watched but not one which suggested that blood products production should be based on the demand for Factor VIII rather than on that for albumin. The views of a population geneticist on the forecast rise in the haemophiliac population would be helpful.

6.3 The Group decided against making a specific recommendation on the desirability of abandoning cryoprecipitate completely in favour of Factor VIII concentrate, but it was agreed that the report should draw attention to the need to take account of current trends in determining production policy and the advantages and disadvantages of intermediate concentrate.

6.4 The importance of research into the stability of Factor VIII was agreed.

7. FACTOR IX

7.1 The Group accepted the calculations in BPWG(77)10 as being generally applicable for the UK as a whole. An estimated requirement of 100 iu/1000 population for the treatment of Christmas Disease was agreed, plus a tentative

estimate of 50 iu/1000 population for the treatment of other conditions in which the administration of Factor IX to promote coagulation might be valuable (the latter figure was based on data from the Edinburgh and SE Scotland BTS and was higher than the norm for the population due to the existence of a MRC trial there; if the trial indicated that the use of Factor IX was effective in treating these conditions, the Edinburgh figure would probably hold good in all areas).

7.2 Possible developments in the use of highly purified Factor IX concentrate would result in the need for increased fractionation capacity for Factor IX. Sufficient raw material (plasma) would be available.

8. PLATELETS

Figures for Cambridge and Edinburgh RTCs showed that the preparation of platelets was being carried out on an increasing scale. There were however difficulties in predicting accurately the demand for platelets (wastage rates were high). The Group agreed that the foreseeable need for platelets would be catered for in meeting the predicted demand for albumin.

9. LEUCOCYTES/INTERFERON

9.1 Clinical trials using Interferon were now being reported and if it were proved that the clinical properties being attributed to Interferon were present only in Interferon derived from normal human leucocytes (as opposed to that from lymphoblastoid/fibroblastoid cellular lines), the implications for the blood transfusion services in relation to the demand for leucocytes would be considerable. Developments in Finland and elsewhere were being watched closely.

9.2 In the shorter term there was an increased demand for leucocytes associated with the increased use of blood cell separators, but this demand was not quantified. It was agreed that the report should refer to the desirability of closer integration of cell separator units into the blood transfusion services.

10. FIBRINOGEN

The Group noted that Scotland was phasing out the use of fibrinogen in favour of cryoprecipitate. Opinion in England was less committed.

11. DRIED PLASMA

Although use of dried plasma had declined as production and use of plasma protein fraction (PPF) had increased, some burns units and paediatricians still preferred the latter. This suggested a continuing demand for dried plasma, particularly while PPF remained in short supply.

12. SPECIFIC IMMUNOGLOBULIN

The specific immunoglobulins currently in demand were: anti-herpes zoster, anti-varicella, anti-vaccinia, anti-tetanus, anti-herpes simplex and anti-(Rh)D. The demand for anti-D would more than double if it were decided to offer prophylactic treatment late in pregnancy to all Rh(D) negative women in addition to immediately post-natal as at present. A programme to collect anti-rabies immunoglobulin from actively immunised groups (eg veterinary workers) would begin shortly.

13. BLOOD GROUPING REAGENTS

High-quality blood grouping reagents were being produced in the NBTS and also considerable quantities were being purchased from commercial sources. It was recommended that the NBTS should increase its production, if necessary by their generation in human volunteers.

14. CONCLUSIONS

14.1 The Group agreed that, on the best evidence currently available, an annual yield of albumin of 200 gm/1000 population would provide sufficient material to meet UK needs for blood products over the next 5-10 years.

14.2 It was agreed that, in parallel with this albumin production, sufficient Factor VIII would be produced, over the same time-scale, for clinical needs, but whether as concentrate alone or concentrate and cryoprecipitate was yet to be decided.

14.3 The value of education of clinicians in the use of blood and blood products was important.

14.4 Developments in the use and production of Interferon should be monitored and UK production considered.

14.5 Consideration should be given to increasing (to self-sufficiency) the production of blood-grouping reagents.

14.6 The Chairman thanked members for their help and for their understanding of the problems which confronted the Departments in their broad planning functions and guiding health authorities meeting the need for blood and blood components. A report would be prepared and circulated to members for comment. The Group's advice would enable the Health Departments to consider how the NBTS should be organised in order to ensure that it would be able to meet the demands of clinicians in years to come.

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