EXTRAORDINARY MEETING OF THE ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF BLOOD AND TISSUES FOR TRANSPLANTATION

MINUTES OF 31st MEETING: THURSDAY 22nd JANUARY 2004 AT AVONMOUTH HOUSE, 6 AVONMOUTH STREET, LONDON SE1

Chair: Professor Lindsey Davies

Members:
Dr Cant
Dr Dash
Dr Gorst
Dr McClelland
Dr Mortimer
Dr Perry
Dr Robinson
Dr Warren
Dr Wyatt
Professor Zuckerman

Observers:

Dr Peter Bennett	-	DH
Mr Stephen Dobra	-	DH
Dr Philippa Edwards	-	DH
Mr Richard Gutowski	-	DH
Mr Andre Hare	-	DH
Mr Gerard Hetherington	-	DH
Mr Armin Kirthi-Singha	-	DH
Dr Denise O'Shaughnessy	-	DH
Dr John Stephenson	-	DH
Miss Kate Balmer	-	MHRA
Dr Joyce Lawrence	-	MHRA
Dr Martin Bruce	-	Scottish National Blood Transfusion Service
Dr Aileen Keel	-	Scottish Executive
Dr Miriam McCarthy	-	Northern Ireland
Dr Richard Jones	-	Welsh Blood Service
Dr Gladys Tinker	-	Welsh Assembly

In attendance:

Professor Ted Gordon-Smith	-	National Blood Transfusion Committee
Professor Don Jeffries	-	CJD Incidents Panel
Dr Mike Murphy	-	National Blood Service
Ms Liz Reynolds	-	National Blood Service
Professor Peter Smith	-	Spongiform Encephalopathy Advisory Committee (SEAC)
Professor Bob Will	-	National CJD Surveillance Unit

Secretariat: Dr Linda Lazarus and Miss Zubeda Seedat

Agenda Item 1: Introduction

1. The Chair welcomed everyone to the meeting and informed members that the extraordinary meeting of MSBT had been convened to discuss the implications for the UK Blood Services of a case of possible transmission of variant Creutzfeldt-Jakob Disease (vCJD) by blood transfusion. Representatives of other departmental committees and organizations with a direct interest in CJD and the security of the blood supply had been invited to provide expert input to the discussions.

2. Members were reminded that, on 17 December 2003, Dr John Reid, the Secretary of State for Health, had made a statement to the House of Commons about the blood transfusion incident. In his statement (attached at MSBT 31/7) the Secretary of State had asked MSBT "to look comprehensively at whether further precautionary measures could be taken which would not adversely impact on the safety or availability of blood".

3. Prior to issuing the statement, an ad hoc group, with representatives from the Department of Health, UK Blood Services, SEAC and MSBT had met on 15 December 2003 to discuss the full details of the case and advise Ministers on the policy implications. The ad hoc group had preliminary discussions on further options for safeguarding the security and safety of the blood supply (draft minutes MSBT 31/1). This extraordinary meeting of MSBT was tasked with examining the recommendations of the ad hoc group in more detail and providing advice to Ministers on what practical steps to implement, taking into account overall risk and safety considerations.

Agenda Item 2: Minutes of the previous meeting (22 October 2003)

4. The Chair indicated that the Committee should focus only on that section of the minutes relevant to today's discussion (paragraphs 17-22), with formal agreement of the minutes deferred until the next scheduled meeting of MSBT on11 March 2004.

Agenda Item 3: Matters arising – Item 4 only (Exclusion of transfused donors)

5. (Paragraph 22) Members were reminded that, at the last meeting, they had discussed whether previously transfused donors should be excluded from donating blood. At that time, the risk of vCJD transmission by blood transfusion had been a theoretical one and the risk to the blood supply and public health of deferring transfused donors was considered unacceptable. In light of the reported case, this position needed to be revisited.

Agenda Item 4: Note of vCJD ad hoc meeting held on 15 December – MSBT 31/1

6. The ad hoc group had been convened following notification from the National CJD Surveillance Unit of the recent death of a patient who had received a blood transfusion in 1996 from a donor who went on to develop vCJD. The group had been presented with a detailed medical history of the patient who had received the suspect blood donation. Further investigation, including post-mortem examination, confirmed that the blood recipient had vCJD. The ad hoc group concluded that there was a high probability that vCJD had been transmitted by blood transfusion and therefore there was a need to consider further precautionary measures.

7. The ad hoc group agreed that urgent action should be taken to notify the other recipients of suspect donations. Members were informed that the Health Protection Agency had contacted all 15 recipients in England and Wales while SNBTS had notified two Scottish patients; one further patient could not be traced.

8. The Chair drew attention to the five measures (A-E) to safeguard the blood supply discussed by the ad hoc group and listed in the draft minutes (MSBT 31/1). MSBT was tasked with examining the recommendations of the ad hoc group in more detail and providing advice to Ministers on what further vCJD risk reduction strategies should be implemented by the UK Blood Services, taking into account overall risk and safety considerations.

   Action 1: Blood policy team to circulate the draft minutes of the ad hoc group meeting for comment to those who attended before sign-off by the Chair.

Agenda Item 5: EU blood regulatory meeting – MSBT 31/9

9. MSBT 31/9 was tabled. The paper provided an update on the European Commission Technical Meeting of Blood Experts, convened on 20 January 2004 in response to the Secretary of State's statement to parliament. The meeting had been called to assess whether any additional action needed to be taken at the European Union or Member State level. The consensus was that existing European blood directives contained adequate measures. Member States should continue to follow their own practices, based on local risk assessment.

10. Only Ireland reported introducing additional precautionary measures as a result of the UK statement. These included suspending corneal collection (to be outsourced) and replacing cryoprecipitate with US-sourced fibrinogen.

Agenda Item 6.1: Deferral of previously transfused whole blood donors – MSBT 31/2

11. An additional paper entitled 'The implications of vCJD for blood safety and supply in England' was tabled as it provided a useful summary of the relative risk reduction that might be achieved by different initiatives. The National Blood Service (NBS) then presented MSBT 31/2. The paper was written from the premise that previously transfused donors would be excluded from donating blood, and did not reiterate the arguments or the evidence presented at the ad hoc meeting of 15 December 2003. In summary, the paper provided an assessment on how a new policy of donor deferral could be implemented while minimising the risk to the blood supply. MSBT endorsed the need for the UK Blood Services to introduce a policy of exclusion of previously transfused blood donors as a vCJD risk reduction strategy.

12. There was recognition that the operational implications of the MSBT's advice would differ for each of the UK Blood Services, but importance of a consistent approach throughout the UK to avoid confusing existing and potential donors was stressed. Concern centred on the variation in blood stocks across the blood services; for example, SNBTS is operating with around 3-4 days supply compared with 7 days supply in England.

13. NBS outlined the actions that would be required to compensate for the reduction in the donor base resulting from the new exclusion policy. These included recruiting new donors and increasing donation frequency, together with renewed efforts to encourage implementation of the Health Service Circular on *Better Blood Transfusion: Appropriate Use of Blood.* It was noted that the National Blood Transfusion Committee's Contingency Planning Sub-Group was developing a generic hospital Emergency Blood Management Plan for chronic shortages. This would provide the framework for individual hospital plans.

14. MSBT discussed and made recommendations on the key criteria determining the scope of the donor exclusion policy, as listed in section 2 of MSBT 31/2.

i) What should be the date of transfusion after which a donor is to be excluded?

15. MSBT accepted the recommendation from NBS that the critical date of transfusion after which a donor is excluded should be 1 January 1980, on the grounds that there would have been no dietary exposure to BSE in the UK before this date. The Dutch were considering post-1985 as an exclusion date, but this was from a logistical perspective (i.e. would lose fewer donors) and might be more hazardous.

16. An end date of October 1999 was suggested after which transfused donors could be accepted (i.e. to coincide with implementation of leucodepletion). This was rejected because, under the DNV risk scenario, there was still a very high probability of transmission from leucodepleted blood. Furthermore, a transfusion post-October 1999 may have come from someone incubating vCJD. Members agreed to keep the date under review.

ii) Should the exclusion cover transfusions received in the UK only?

17. Members discussed at length whether the policy should cover blood transfusions received in European countries or even worldwide. Some of the advantages and disadvantages identified (detailed in the table below). MSBT agreed that the exclusion should relate to UK transfusions only and that more work was needed on the implications of extending this further, including other biological considerations.

	Advantage	**Disadvantage**
Global ban	Reduction in other transfusion-transmitted infections from excluding those transfused in countries where blood precautionary measures less stringent.	Danger of distracting attention from the primary purpose of this initiative, i.e. vCJD risk reduction.
	Overcomes uncertainties about global distribution of vCJD.	Additional impact on donor base in terms of numbers excluded, but likely to be small.
	More palatable from a donor's perspective and avoids giving recipients the impression that UK transfusions are somehow unsafe.	Mixed messages regarding import of FFP from US as vCJD risk reduction measure.

European ban	Neutralises implications for NHS policy of reducing waiting times by sending patients to Europe for operations (i.e. transfusion safety levels on a par with UK).	Creates added complexity for implementation at donor sessions; requires selection of a definition of Europe (of which there are many).
	Addresses the not negligible risk of vCJD in Europe (but order of magnitude lower than in UK).	Scotland imports a significant proportion of its blood for fractionation from Europe.

iii) Which donors should be excluded?

18. NBS proposed to exclude only those donors who were certain that they had received a transfusion and not those who were unsure in the first instance. Those in the latter category would have their records flagged and would be asked to inform the NBS if they subsequently realised they had had a transfusion. This is partly a pragmatic approach to avoid overloading the NHS with enquiries from donors about their transfusion histories. It also differs from the normal approach to deferral taken by the blood services of erring on the side of caution in the face of uncertainty.

19. Analysis of a survey of donor transfusion history undertaken in 2001 estimated that this policy of exclusion would lead to a loss of 3.2% of donors and 3.3% of donations. This loss is well within the typical shrinkage of the donor base experienced by the NBS since 2000, but the impact would be far greater as typically donor shrinkage does not lead to significant donation loss. [SNBTS warned that this might underestimate the scale of impact of the exclusion policy on the donor base, given experience from the introduction of HIV-related deferral, when large numbers of donors self-deferred.] Exclusion of those uncertain about their transfusion history would increase the loss of donors to 6.3% and of donation to 6.5% bringing forward the date at which blood supplies reach stock alert levels from mid-July to end of May 2004 (based on an April 5 implementation date).

20. It was questioned whether the 3.2% loss figure could be refined by asking donors what surgical procedures they had undergone. However, this was not felt to be a robust method of identifying transfusion recipients because of differences in practice according to when, where and who performed the operation. In reality, the majority of transfusion recipients would not be eligible to donate because of medical conditions or advanced age.

21. Exclusions for other types of donor were also discussed. Recipients of autologous blood need not be deferred. However, because topping up with allogeneic blood is often necessary, those who are uncertain whether they received autologous blood only or both should be excluded. New bone marrow registry donors who are referred from the blood services would be excluded if previously transfused.

22. NBS proposed to exclude new apheresis donor recruits who had been previously transfused in the first instance. MSBT has previously advised increasing the proportion of platelet packs obtained by apheresis as a vCJD risk reduction measure (avoiding the need for pooling platelets from four whole blood donors). EOR tabled a paper entitled 'vCJD and the exclusion of previously transfused blood donors: some supplementary analysis' to inform this discussion. Deferring existing apheresis donors who are previously transfused conflicts with this strategy (and is expected to result in a loss of a larger proportion than the 3.2% for whole blood donors); the resulting shortfall in

apheresis platelets would need to be made up from whole blood, increasing the risk associated with pooling. As a starting point, it was agreed to exclude previously transfused blood donors. Previously transfused existing apheresis donors would be excluded as soon as implications for reduced supplies (particularly HLA/HPA matched platelets) can be managed.

23. Advice was also needed with respect to tissue donors. While few tissues are life-saving, deferral of previously transfused tissue donors was likely to have a disproportionate effect on the availability of tissues; most organ donors, for example, were likely to have been transfused (an estimated 30-50% of tissues would be lost). As transplantation of tissues and organs poses a higher risk of transmission than blood transfusion, deferring organ and tissue recipients also needs to be considered. Members were advised that EOR were currently undertaking a risk assessment of tissue donation and this would be examined in greater depth at the next meeting.

    Action 2: EOR to provide a progress report on the risk assessment in respect of tissue donors.

    Action 3: NBS to provide an assessment of the operational implications to the NBS Tissue Services of deferring previously transfused tissue donors.

24. In summary, the exclusion criteria **would** apply to the following groups:
    - whole blood donors
    - new apheresis donors
    - apheresis donors returning to whole blood panels
    - new applicants to the British Bone Marrow Registry.

    In order to maintain adequate blood stocks, the exclusion **would not** apply to:
    - existing apheresis (platelet, plasma and granulocyte) donors

    Categories not yet reviewed, but where further work would be done are:
    - existing and new tissue donors
    - existing and new cord blood donors
    - existing stem cell and bone marrow donors
    - autologous donors/recipients who are certain they only received autologous blood.

25. MSBT endorsed the exclusion scheme proposed by the NBS, but agreed that the position should be reviewed in 6 months time.

    iv) What blood component categories define a transfusion?

26. MSBT agreed that having received any of the following blood components in the qualifying period (i.e. post 1980) would constitute a 'blood transfusion':

    - Whole blood
    - Red cells
    - Plasma (FFP) – excluding pooled FFP made from non-UK plasma
    - Platelets
    - Cryoprecipitate

- Cryo-depleted plasma

27. MSBT agreed that recipients of plasma derivatives should not be excluded from donation. The CJD Incidents Panel is calculating the risks to recipients of plasma products (e.g. anti-D, immunoglobulins, albumin, clotting factors) prepared from plasma pools that included a donation from a person who later developed CJD. The risks, in all cases, were lower than for transfusion recipients. Some will be excluded from donating on non-CJD health grounds. Recipients of some products, e.g. albumin, would be unlikely to have been put at sufficient risk to justify exclusion from donating.

v) Proposed implementation and announcement date

28. NBS detailed their rationale for the selected implementation date of 5 April (see section 5 of MSBT 31/2 for full details). The key reasons for not implementing sooner were: to allow stock levels to build; to train donor facing staff; to update information in donor invitation letters and include relevant questions in the new Donor Health Check Questionnaire; and to give Trusts time to prepare contingency plans to manage blood shortages. Operational risks associated with earlier implementation (e.g. in February) were also described.

29. EOR had examined the implications of an earlier versus a 5 April implementation date for excluding transfused donors in terms of the number of infections that might be let through. As an upper estimate, 0.4 vCJD transmissions per week would be avoided by introduction of the exclusion policy. This calculation was based on the following scenario: a disease prevalence of 1 in 10,000 (consistent with the retrospective appendix survey) or about 6,000 individuals in the UK; 40,000 donations per week; a four-fold higher risk of infection in previously transfused donors than the general population (from a combination of dietary risk and an average of 3 units [from 3 donors] being transfused per recipient); certain infection with any transfusion and approx. 3.5% of donations being excluded. It takes no account of the high post-transfusion mortality rate (i.e. many recipients would die before vCJD could develop). This risk reduction of 0.4 transmissions per week needs to be seen in the context of the hypothesised 6000 existing infections and balanced against the risk of blood shortage (leading potentially to operations being cancelled) that might ensue from inadequate preparation time.

30. MSBT agreed with NBS's assessment of the relative risks of early versus later implementation and with the proposal for an announcement to be made 2-3 weeks prior to the implementation date to ensure that the NHS has time to prepare and donors are properly informed. The strategy for handling queries from the public (section 6) was endorsed. Careful consideration needs to be given to the message for patients who are currently being transfused, transfused donors and anyone else who's ever been transfused, bearing in mind exposure through other routes (e.g. dietary). On the evidence from contacting recipients of donations from individuals who subsequently developed CJD, specialist support is likely to be needed (e.g. one-to-one counselling, neurological consultations) and this has to be addressed in the overall handling strategy.

31. Advice to hospitals: In relation to helping hospitals prepare for potential blood shortages, Members were informed that the Emergency Blood Management Plans (see paragraph 13) could be disseminated before April but they were unlikely to be implemented rapidly and needed to be linked to the better blood transfusion (BBT) initiative. A number of

actions to support BBT were proposed including a toolkit for implementation, direction from DH and central resources for cell salvage and erythropoietin (EPO) procurement. Inclusion of blood conservation targets in performance indicators for trusts was proposed as a lever to ensure sufficient priority is given to implementing BBT (see also Agenda item 9).

vi) Proposed costs for implementation

32. Members recognised that there would be cost implications for implementing the new donor deferral policy. However, the Chair advised that budgetary considerations were not within MSBT's remit.

vii) Look-back exercise

33. NBS did not favour undertaking a look-back exercise for all those donors who identified themselves as having been previously transfused. They argued that the situation differs from other look-backs (e.g. for HTLV) conducted where donors have evidence of a transfusion-transmissible infection. In addition, a look-back exercise including all donations from previously transfused donors would be an enormously complex and resource-intensive undertaking. The Chairman of the CJD Incidents Panel agreed to seek the views of the members of the panel on the need for look-back. It was agreed that for donors who, at the time of donation, were unsure of their transfusion history but who subsequently reported having been transfused, robust systems would need to be in place to recall any unused products.

Action 4: CJD Incidents Panel to comment on whether a look-back exercise should be undertaken for previously transfused donors.

Conclusions

34. The Chair recommended that a detailed implementation plan should be agreed between the UK Blood Services and Health Departments. In addition, there would need to be a comprehensive communication strategy for donors. This should emphasise the key role of implementing BBT for reducing the risk of transfusion. MSBT agreed that the exclusion strategy should be reviewed within six months of the implementation date, at which point the need for greater stringency in applying the exclusion policy can be guided by its impact on supply.

Action 5: DH and NBS to prepare an implementation strategy and communication strategy in consultation with the other blood services and Health Departments.

Action 6: NBS to assess the impact of implementation after 6 months, including the effect of the date of exclusion (1 January 1980), and give further consideration to extending the ban beyond UK-transfused donors. **MSBT** to review the exclusion strategy in October 2004. The assessment should include additional exclusions in those areas not currently covered (see para 24).

Agenda Item 7: Reducing plasma in red cell components - MSBT 31/4

35. Members were informed that NBS produce two types of red cell packs with different residual plasma content: the more common whole blood packs (processing entails filtration and centrifugation) and the more expensive BAT ('bottom and top') packs (from which the whole buffy coat is removed together with a fraction of the red cell layer). As well as a 75% reduction in plasma, BAT processing leads to a reduced haemoglobin content, which may impact on transfusion requirements. Extending the use of BAT pack systems as a vCJD risk-reduction measure would cost an extra £1.4 million per annum because of additional plasma filters for secondary leucodepletion.

36. With reference to plasma-reduced red cells, the evidence of continued need for this product is lacking. High haematocrit packs are not favoured by some paediatricians and this will be exacerbated by BAT processing.

37. The benefits for vCJD risk reduction of reducing plasma content of red cell components will depend on the infectivity of plasma. Nonetheless, MSBT endorsed the general approach and asked NBS to undertake further work on the costs and benefits of reducing plasma in red cell components and report progress at the next meeting.

38. Extending the shelf-life of red cells (from the current 35 days to 42 days as in the US) was an option NBS wished to explore with the Medicines and Health Care Products Regulatory Agency (MHRA) (there are licensing implications). The benefits of this extension in reducing the impact of excluding previously transfused donors need to be assessed.

    Action 7: NBS to undertake further work on red cell processing, including discussions with the MHRA on the option of extending the shelf-life of red cells, and report back to MSBT at a future meeting.

Agenda Item 8: US FFP for plasma transfusion dependent patients - MSBT 31/5

39. NBS reported that it would shortly begin issuing MB-treated FFP for neonates and children born after 1 January 1996, once stock-building was complete. A previous examination of the feasibility of extending the supply of non-UK FFP to other groups, such as chronic (adult) users and older children, had favoured solvent detergent FFP. The drawbacks, in addition to higher costs relative to MB-FFP, included reliance on a sole supplier and the fact that, although the NBS could specify a non-European source for the FFP (i.e. from a country with a low risk for BSE/vCJD), it would still be processed through the same production lines as other plasma.

40. It was argued that, in parallel with this work, blood users needed to be encouraged to reduce their usage of FFP. The recently published **Guidelines for the use of fresh frozen plasma, cryoprecipitate and cryosupernatant** (www.bcshguidelines.co.uk) provide a framework for this. A virally inactivated fibrinogen product would be an adequate substitute for FFP for most indications but this needs to be demonstrated in clinical trials before a license will be granted (currently available on a named-patient basis only). Discussions are ongoing with the MHRA.

Action 8: NBS to prepare a paper on the cost and clinical implications of extending non-UK sourced FFP to high-risk groups initially, with a view to providing all patients with virally inactivated non-UK FFP.

Action 9: Blood policy team and NBS to consider ways of encouraging a reduction in use of FFP.

Agenda Item 9: Appropriate use of blood - MSBT 31/6

41. MSBT discussed some of the reasons underlying slower than expected progress in implementing the action plan set out in the Health Service Circular 2002/9 *Better Blood Transfusion – Appropriate Use of Blood.* These included insufficient awareness/education within hospitals of the potential impact on blood transfusion safety, lack of effective means of enforcement by the CMO's National Blood Transfusion Committee or the Hospital Transfusion Groups and lack of will at local management level, including lack of resources to ensure implementation. At a more fundamental level, undergraduate clinical curricula need to give greater prominence to *Better Blood Transfusion* as an important area of clinical care.

42. A range of measures were proposed in MSBT 31/6, including the appointment of a 'Blood transfusion Czar', resources for consultant sessions, appointment of transfusion practitioners, audit and blood cost incentives, to take the policy forward. The French model of having a haemovigilence officer in each hospital was proposed as an effective, albeit costly, intervention. Other alternatives include Preparing Patients for Surgery (PPS) clinics and use of substitutes (e.g. EPO) and intravenous iron.

43. MSBT agreed that renewed efforts should be made to reinforce *Better Blood Transfusion*, both to minimise unnecessary patient exposure to the risks of blood transfusion and to mitigate the impact of potential blood shortages, including support and involvement of DH.

Action 10: Blood policy team with the **National Blood Transfusion Committee** to consider how to encourage progress in implementing *Better Blood Transfusion.*

Agenda Item 10: Increase in platelet procurement by apheresis

44. Members were informed that collection rates for platelet procurement by apheresis were currently under (the 40%) target. A phased increase was endorsed by MSBT but NBS would need to examine the cost implications and assess the timescale for implementation. Increasing apheresis platelets was likely to be more difficult against a background of deferring previously transfused donors (see paragraph 22).

Action 11: NBS to prepare a proposal for increasing platelet procurement by apheresis for consideration by MSBT.

Agenda Item 11: BSE case in US: implications for plasma supplies

45. A single case of BSE had been widely reported in the US at the end of 2003 and this had led to questioning of the rationale for importing US FFP. Members were reminded that the cost/benefit analysis performed by EOR to inform the decision on importing US

plasma as a vCJD risk reduction measure did not assume zero prevalence of vCJD (or BSE) in the US, only that it would be significantly lower than in the UK. If the risk were 1/100th of the UK level, this would still eliminate 99% of the risk.

46. Decisions on the importation of plasma (e.g. by NBS from the US and by SNBTS from Germany) are critically dependent on veterinary surveillance for BSE in other countries. The Chair suggested it would be helpful if MSBT were presented with a report on the surveillance of BSE at a future meeting.

    Action 12: Secretariat to arrange for a presentation to be made at a future meeting of MSBT of comparative surveillance systems for BSE in the UK, Europe and North America.

Agenda Item 12: Any other business

Clinical features associated with case of probable transfusion-transmitted vCJD

47. Further detail was requested about the clinical features of presentation of the probable secondary case. Members were informed that the patient was homozygous for methionine at codon 129 and that the infectious agent was type 2B protein. Studies on the anatomical distribution of abnormal prion were ongoing to establish whether there were any differences from primary infection.

Agenda Item 13: Date of the next meeting

48. The next meeting will be held on Thursday 11 March 2003 at 10:30am at Avonmouth House.

Tabled Papers

The implications of vCJD for blood safety and supply in England (prepared by NBS based on EOR paper for presentation to the ad hoc group on 15 Dec 2003)

vCJD and the exclusion of previously transfused blood donors: some supplementary analysis (EOR 19 Jan 2004)

ACTION POINTS

Action 1: Blood policy team to circulate the draft minutes of the ad hoc group meeting for comment to those who attended before sign-off by the Chair.

Action 2: EOR to provide a progress report on the risk assessment in respect of tissue donors.

Action 3: NBS to provide an assessment of the operational implications to the NBS Tissue Services of deferring previously transfused tissue donors.

Action 4: CJD Incidents Panel to comment on whether a look-back exercise should be undertaken for previously transfused donors.

Action 5: DH and NBS to prepare an implementation strategy and communication strategy in consultation with the other blood services and Health Departments.

Action 6: NBS to assess the impact of implementation after 6 months, including the effect of the date of exclusion (1 January 1980), and give further consideration to extending the ban beyond UK-transfused donors. MSBT to review the exclusion strategy in October 2004. The assessment should include additional exclusions in those areas not currently covered.

Action 7: NBS to undertake further work on red cell processing, including discussions with the MHRA on the option of extending the shelf-life of red cells, and report back to MSBT at a future meeting.

Action 8: NBS to prepare a paper on the cost and clinical implications of extending non-UK sourced FFP to high-risk groups initially, with a view to providing all patients with virally inactivated non-UK FFP.

Action 9: Blood policy team and NBS to consider ways of encouraging a reduction in use of FFP.

Action 10: Blood policy team with the **National Blood Transfusion Committee** to consider how to encourage progress in implementing *Better Blood Transfusion.*

Action 11: NBS to prepare a proposal for increasing platelet procurement by apheresis for consideration by MSBT.

Action 12: Secretariat to arrange for a presentation to be made at a future meeting of MSBT of comparative surveillance systems for BSE in the UK, Europe and North America.