

Health Service Circular



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Better Blood Transfusion

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Better Blood Transfusion

Summary

1. The Government set out its plans for modernising the National Health Service in the White Paper *The New NHS – Modern and Dependable* and the consultation document *A First Class Service*. Both documents emphasised that in the NHS quality would be at the heart of patient care. This applies to NHS blood transfusion services as much as to other parts of the health service.
2. Attention has focused on blood transfusion practice recently for several reasons:
 - greatly increased demand for blood compared with the increase in donations
 - the likely additional demand for blood associated with the waiting list initiative
 - the rise in the cost of blood with leucodepletion and nucleic acid testing
 - the recommendations from the Serious Hazards of Transfusion (SHOT) enquiry on how the safety of patients receiving blood could be improved
 - the theoretical risk of new variant Creutzfeldt-Jakob Disease
 - the implications of clinical governance for blood transfusion practice
3. This circular details the action required of NHS Trusts and clinicians to improve transfusion practice. The requirements are based on recommendations of a symposium held by the UK Chief Medical Officers on *Evidence-Based Blood Transfusion* in London 6 July 1998, followed by wide consultation. This is a first step towards better blood transfusion in the NHS and outlines future work the Health Departments will take forward with the UK national blood services.

Action

4. From March 1999, all NHS Trusts where blood is transfused should:
 - ensure that hospital transfusion committees are in place to oversee all aspects of blood transfusion
 - participate in the annual SHOT enquiry
5. By March 2000, all NHS Trusts where blood is transfused should:
 - have agreed and disseminated local protocols for blood transfusion, based on guidelines and best national practice, and supported by in house training
 - have explored the feasibility of autologous blood transfusion and ensured that where appropriate, patients are aware of this option. In particular they should have considered the introduction of perioperative cell salvage (PCS)
6. Clinicians, NHS Trusts and health commissioners should collaborate in taking forward these recommendations to develop a first class blood transfusion service.

Background and Other Information

7. The action required by this circular derives from a symposium on Evidence-based Blood Transfusion held by the UK Chief Medical Officers on 6 July 1998 in London. The seminar brought together transfusion experts, a wide range of clinicians, NHS managers and professional leaders from all over the UK to discuss ways of

encouraging the better and safer use of blood. The large group addressed several specific issues including:

- the known wide variations in the use of blood in the NHS
- evidence supporting the use of blood and its components in clinical practice
- concerns about known and unknown infectious agents in the donor population
- the need to monitor and improve the safety of the blood services from donation to transfusion, with reduction of avoidable hazards
- autologous blood transfusion, particularly advances in perioperative cell salvage
- applying information and communications technology to blood transfusion

8. The symposium concluded that there was considerable scope for improving blood transfusion practice. As a minimum, the action set out in this circular should be implemented in all NHS Trusts where blood is transfused. While many NHS Trusts have already introduced some or all of these recommendations, the advice of the Chief Medical Officers is that *all* should review their transfusion practice to ensure a safe, efficient and effective service for patients who need blood.

Hospital Transfusion Committees

9. Every NHS Trust where blood is transfused should have an adequately resourced, multi-disciplinary hospital transfusion committee (HTC). Some NHS Trusts may share a committee, whilst others may need more than one. Given its key role in resource and risk management, the HTC should be an integral part of local arrangements for clinical governance, with corresponding lines of accountability to the Chief executive. The structure and organisation of an HTC should be informed by the best practice of existing HTCs, and it should be in close contact with local and national blood user groups. About 65% of NHS Trusts already have an HTC and there is a wealth of knowledge about what works best. The National Blood Users' Group is an excellent information resource.

10. As a minimum, an HTC should:
- promote best practice through local protocols based on national guidelines
 - lead multi-professional audit of the use of blood components within the NHS Trust, focusing on specialities where demand is high, e.g. haemato-oncology and certain surgical specialities
 - maintain a database that allows feedback on performance to all hospital staff involved in blood transfusion
 - promote the education and training of all clinical and support staff involved in blood transfusion
 - have the authority to modify existing blood transfusion protocols and to introduce appropriate changes to practice
 - report regularly to local, and through them to national, blood user groups
 - consult with local patient representative groups where appropriate
 - contribute to the development of clinical governance

Transfusion guidelines and protocols

11. The use by clinicians in the NHS of red cells, platelets and fresh frozen plasma for the same procedures is highly variable. This suggests that some of these scarce resources are being used unnecessarily and could be better managed. This also has implications for patient safety. In general, and in the field of blood transfusion,

evidence-based clinical guidelines have been shown to improve clinical practice. Currently however, most guidelines on blood transfusion practice come from expert committee reports and opinion and, although soundly based, may lack the rigour of well controlled clinical trials. Therefore, whilst existing guidelines from the British Blood Transfusion Society (BBTS) and British Committee for Standards in Haematology (BCSH) and protocols based on them, need to be encouraged and implemented, the development of evidence-based practice must be supported.

12. Agreed hospital blood transfusion protocols should be on induction programmes for all clinical staff, be available in summary form in hospital handbooks, and on the wards. Their implementation will require the support of the senior clinical nurse. Where there are gaps in knowledge, further systematic review of current work and research into transfusion practice are required. The development of the evidence base by the professions will be encouraged by the NHS Executive and the National Blood Authority.

Monitoring the safety of blood transfusion

13. Blood transfusion in the UK is very safe, but there is no room for complacency. While there is wide recognition of the risks of blood borne infections, the operational safety of blood transfusion is a greater problem. The first SHOT report, published in March 1998 indicated that of the 169 reported serious hazards following blood transfusion, 81 involved a blood component being given to the wrong patient while only 8 involved viral and bacterial infections. This finding emphasises the need for the involvement of a senior clinician in decisions to transfuse patients, and for clear blood prescribing and handling procedures in NHS Trusts. It also emphasises the need for procedural review and audit of the operational aspects of blood transfusion to reduce preventable hazards.

Transfusion of patients' own blood

14. There are three approaches to using patients' own blood in blood transfusion practice: pre-deposit autologous donation (PAD), acute normovolaemic haemodilution (ANH), and perioperative cell salvage (PCS) using centrifugal cell separation.
15. Although PAD is an attractive concept, there is no evidence yet that it either reduces adverse events or significantly reduces demand for donated blood. However, despite costs, difficult organisational logistics and some wastage, the practice may have benefits in certain circumstances. Where appropriate and available, patients need to be aware that it is a possible alternative to receiving donor blood. The value of the practice of ANH as a means of saving blood remains unproven. This is a potentially useful technique that also needs continued careful research and evaluation.
16. On the other hand, PCS has promising potential to reduce the exposure of patients to allogeneic blood and to reduce the quantity of donor blood used in an increasing range of surgical operations. A number of approaches to funding PCS systems are available including leasing. The introduction of PCS will also require investment in education, training and operational support. It may currently be expensive compared with using donor blood but the cost differential will reduce significantly with the introduction of universal leucodepletion and nucleic acid testing of the blood supply. In the UK a number of NHS Trusts have introduced PCS. These include The Cardiothoracic Centre – Liverpool NHS Trust; Basildon & Thurrock General Hospitals

NHS Trust, and Morriston Hospital NHS Trust, and these centres may be consulted for advice on best practice.

Recommendations requiring further work

17. The symposium raised several other areas of blood transfusion practice that need more detailed discussion. The UK Health Departments will pursue these with the national blood services, the blood user groups and the professions as part of the ongoing work on blood transfusion. Particular matters were:

- extending the current accreditation of haematology laboratories to include the whole transfusion service, requiring hospitals to be accredited in blood transfusion
- integration of the range of national systems for providing advice on blood and tissue safety in the light of the responses to *A First Class Service*
- systematic review of, and research into, the clinical and cost effectiveness of blood component therapy and variations in transfusion practice
- the possible role of an academic department of blood transfusion medicine
- the potential application of new technologies to improve blood transfusion
- the development of a web site for the exchange of good practice
- the development of comparative audit in blood transfusion practice
- the organisation of regional and national blood user groups including patient representation

This circular has been issued by:

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