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To: Chief Executives of HSS Boards
Directors of Public Health of HSS Boards
Finance Directors of HSS Boards
Chief Executives of HSS Trusts
Medical Directors of HSS Trusts
Nursing Directors of HSS Trusts

8 March 1999

Dear Colleague

Better Blood Transfusion

I am writing to provide you with information on changes which are required in the transfusion of blood and of action required by HSS Trusts and clinicians to improve transfusion practice.

While some Trusts may have introduced some or all of the recommendations contained in this circular my advice is that all Trusts should review their transfusion service to ensure they comply with the requirements of this circular.

Yours sincerely

GRO-C

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Chief Medical Officer

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Better Blood Transfusion

Summary

1. Quality improvement is now at the core of the health service. It is becoming the most important driver for change. This applies to the services provided by the Northern Ireland Blood Transfusion Service Agency as much as to other parts of the health service.

2. Recently, attention has focused on blood transfusion practice for the following reasons:-

   - a 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 following the introduction of leucodeplètion 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; and
   - the implications of clinical governance for blood transfusion practice.

3. This circular details the action required of HSS Trusts and clinicians to improve transfusion practice. The requirements are based on the 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 Health Service. Future work to be taken forward by the UK Health Departments in conjunction with the UK national blood services is also outlined.

4. The circular also describes the establishment of the Northern Ireland Advisory Committee on Blood Safety, the need to set up a N Ireland Blood Users Group and plans to investigate the feasibility of introducing autologous transfusion.

Action

5. From March 1999, all HSS 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.

6. By March 2000, all HSS 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.

7. Clinicians, HSS Trusts and health commissioners should collaborate in taking forward the above recommendations to develop a first class blood transfusion service.

Background and Other Information

8. 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, health service managers and professional leaders from all over the UK to discuss ways of encouraging the better and safer use of blood. The group addressed several specific issues including:

- the known wide variations in the use of blood in the Health Service;
- 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; and
- applying information and communications technology to blood transfusion.

9. 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 HSS Trusts where blood is transfused. While many 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.

10. **Hospital Transfusion Committees**

Every HSS Trust where blood is transfused should have an adequately resourced, multi-disciplinary Hospital Transfusion Committee (HTC). Some 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 the NI Blood Transfusion Service. Many Trusts already have an HTC and there is a wealth of knowledge about what works best.

11. 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 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;
- consult with local patient representative groups where appropriate; and
- contribute to the development of clinical governance.

12. **Monitoring the Safety of Blood Transfusion**

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 within Trusts. It also emphasises the need for procedural review and audit of the operational aspects of blood transfusion to reduce preventable hazards.

Transfusion Guidelines and Protocols

13. The use by clinicians 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.

14. Agreed hospital blood transfusion protocols should be included in 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.

15. **Transfusion of Patients' Own Blood**

There are 3 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.

16. 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.

17. 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.

18. The DHSS is currently exploring the feasibility of the more widespread introduction of autologous transfusion, in particular perioperative cell salvage.

Recommendations requiring further work

19. 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; and
- the organisation of regional and national blood user groups including patient representation.

20. **Northern Ireland Advisory Committee on Blood Safety**

Because of the concerns about blood safety, an Advisory Committee on Blood Safety has been established by the Chief Medical Officer. The Committee provides advice on:

- all matters relating to the quality and safety of blood and blood products and their use;
- any threat, or potential threat, to the health of the public in Northern Ireland arising from the collection, storage, processing, supply and/or use of blood and blood products;

- the Committee will also ensure that appropriate guidance is developed, distributed, put into practice and monitored.

21. The Department of Health and Social Services will facilitate the formation of a Blood Users Group for N Ireland to monitor the service provided by NIBTS and to bring to the Departments attention any difficulties which cannot be resolved at local level.