



Department of

**Health, Social Services
and Public Safety**

An Roinn

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agus Sábháilteachta Poiblí**

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**Development of an integrated plan for the
management of blood (red cell component)
shortages**

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Emergency Planning - Development of an integrated plan for the management of blood (red cell component) shortages.

Introduction

This paper sets out an integrated plan for blood shortages and in particular red cell components. The objective of the NIBTS, working with hospitals, is to ensure that those patients who need blood can receive a transfusion regardless of their geographical location. Once implemented, arrangements will ensure that: -

- blood continues to be available for all essential transfusions to patients equally across N Ireland.
- overall usage is reduced to ensure the most urgent cases receive the supply which is available.

This plan has been developed to be integrated with HPSS and wider NHS emergency planning arrangements.

This document summarises the new contingency plan for the management of blood during situations which have caused a shortage, leading to the activation of the NIBTS emergency plan. In due course more detailed procedures will be finalised and where appropriate shared with Transfusion Laboratory Managers and Consultant Haematologists with responsibility for transfusion in Trusts.

Background

As part of the wider NHS emergency planning process the development of contingency plans to ensure the effective use of available blood when blood stocks have fallen to very low levels will be critical to ensuring transfusion support remains available for patients who most need it. These plans must be developed by the NIBTS and Hospital Trusts

At a meeting of the N Ireland Regional Transfusion Committee in September 2004 the new position regarding increasing donor selection criteria and the possible impact on the blood supply were presented. There was wide agreement that a framework was required which enabled management of shortages in a variety of situations including: –

- Short term shortages, caused by, for example, bad weather or an influenza outbreak
- Very acute shortages caused by, for example, security issues which stop donors coming forward to donate blood.
- Prolonged blood shortage which could result from a number of circumstances e.g. the introduction of further measures to reduce the risk of disease transmission by transfusion.

Rationale

The framework described below is designed to ensure that the NIBTS and hospitals in Northern Ireland work in a consistent, integrated manner to manage blood shortages.

The appropriate use of donor blood and the use of effective alternatives to blood are becoming increasingly important public health and clinical governance issues. The plan is designed to build on actions taken by hospitals to improve transfusion safety and effectiveness in line with the Better Blood Transfusion initiatives. These actions are defined within the HPSS Circular HSS (MD) 6/03 Better Blood Transfusion.

Within this framework, hospitals have been required to have taken action to:

- reduce the usage of blood will, at times of shortage
- prepare plans to ensure that procedures are in place to ensure appropriate action and prioritisation of blood usage in the event of shortage.

Plan Structure

The plan is structured to provide a framework of actions for the NIBTS and hospitals at three phases –

- Green: Normal circumstances where supply meets demand
- Amber: Reduced availability of blood for a short or prolonged period
- Red: Severe, prolonged shortages

If NIBTS stocks fall to a pre-determined level then the NIBTS will communicate a move to Amber phase. This may apply to either a single blood group or all blood groups. However, should the NIBTS identify a severe, imminent threat to the blood supply then, under the direction of their Chief Executive/Medical Director, or Quality Manager in his role as Emergency Planning Manager, the NIBTS may communicate a move directly to the Red phase.

At Amber and Red phases hospitals will be advised on a daily basis, group by group, of the rationing/issue criteria (%allocation) which will apply.

In such circumstances hospitals will implement their contingency plans to conserve and restrict usage of blood to ensure that usage does not exceed supply available.

Clinical Usage Prioritisation

In developing their contingency plans, Trusts must identify their clinical priorities within their specific case mix. The clinical prioritisation must be developed to cover levels of shortage including severe shortage for prolonged periods.

As part of their planning process, hospital should review their stockholding capacity and adjust as appropriate. Plans should also consider the use of cell salvage techniques, where appropriate.

The table below suggests 3 broad patient categories that can be applied to prioritise the management of patients in times of blood shortage. This table is based on similar plans developed by the NHS in England and Wales

Category 1	Category 2	Category 3
Resuscitation Resuscitation of life-threatening /on-going blood loss including trauma.		
Surgical support Emergency surgery* including cardiac and vascular surgery**, and organ transplantation. Cancer surgery (probably curative).	Surgery/Obstetrics Cancer surgery (palliative). Symptomatic but not life-threatening post-operative or post-partum anaemia. Urgent*** (but not emergency) surgery.	Surgery Elective surgery which is likely to require donor blood support (patients with > 20% chance of needing 2 or more units of blood).
Non-surgical anaemias Life-threatening anaemia and high dependency care/SCBU. Stem cell transplantation or chemotherapy**** Severe bone marrow failure.	Non-surgical anaemias Symptomatic but not life-threatening anaemia.	

* Emergency – patient likely to die within 24 hours without surgery

** With the exception of poor risk aortic aneurysm patients who rarely survive but who may require large volumes of blood

*** Urgent – patient likely to have major morbidity if surgery not carried out

**** Planned stem cell transplant or chemotherapy should be deferred if possible.

Where the required reduction in usage is quite small it is anticipated that hospitals will be able to achieve this through the implementation of appropriate use measures. However some hospitals may have to consider cessation of some procedures in category 3. In a prolonged shortage this will inevitably have an impact on elective surgery and waiting lists.

In a severe shortage where, for example, 50% or more of the blood supply becomes unavailable, it is likely that only patients in category 1 would be treated.

Hospital Actions

Each hospital should establish as soon as possible, as part of their overall emergency planning, an Emergency Blood Management Group (EBMG) with the following suggested membership:-

Emergency Blood Management Group
Essential
Chief Executive or Representative
Medical Director (possibly also CE's representative)
Chair of the HTC
The Haematologist responsible for Transfusion
Blood Transfusion Laboratory Manager
As Appropriate
Clinical Director of Acute Medicine
Clinical Director of Surgery
Director of Nursing
Director of Operations
Clinical Director, Critical Care/ Lead Clinical Anaesthetist
Haemovigilance Officer
Clinical Risk Manager

This group should identify a Co-ordinator with appropriate authority to implement the agreed hospital contingency plans as appropriate.

The group will be required to formulate arrangements, including clinical priorities detailed above, to manage the appropriate use of blood in each Alert phase, as part of their contingency plans.

Should a blood shortage occur, or be imminent the NIBTS will activate their Emergency plan for managing blood stocks and will notify the Transfusion Laboratory Managers. Hospitals should ensure that communication lines are identified for the activation of appropriate procedures as agreed by the EBMG. As with any other major incident, contingency or emergency arrangements, procedures to ensure key roles are covered at all times should be clear. In shortage, actions within the arrangements may need to be reviewed daily by either the EBMG or a nominated group of key staff.

It is essential that the arrangements agreed by the EBMG have senior hospital management support i.e. from the Chief Executive and Medical Director to ensure their effectiveness when they are called into action. Staff should be aware of their existence and be willing to accept that a decision making process, however difficult, is necessary when the supply of blood is limited.

More detailed information on actions to be taken at each phase is contained in the full plan to be issued to all Transfusion Laboratory Managers and Consultant Haematologists with responsibility for transfusion by the NIBTS.

Long-term

In the longer term it may be appropriate that those hospitals that have made most progress to implementing appropriate use measures as required under the Better Use Of Blood will, in times of shortage, be expected to contribute less to a general

reduction in blood usage to support the broad management of the shortage. It would then follow that those hospitals where actions have not been implemented would be required to contribute more to a general reduction in usage. This process will however only be applied when appropriate information can be collated and reviewed.

Reference.

1. HPSS Circular HSS (MD) 6/03 Better Blood Transfusion

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