

# A toolkit for better blood transfusion

In line with Department of Health recommendations, all hospital trusts must now pursue and continually promote better blood transfusion practice. Here, transfusion scientist Barry Hill examines the background to this initiative.

As a resource, blood has never been more in demand than it is today. Escalating elective surgery, an ageing population and spiralling costs due to various safety introductions have all conspired to ensure that blood remains very much a vital but limited asset to the NHS. Now, with the donor restrictions that came into force in April 2004 as a result of the threat of variant Creutzfeldt-Jakob disease (vCJD) transmission now removing some 52,000 of the UK's 1.7 million regular donors from the pool, the need to use blood more appropriately is paramount. To date, the Chief Medical Officer (CMO) in England has held two national seminars aimed at examining future blood shortages and to suggest how all those in the blood transfusion community can ensure that not only is blood conserved but also it is used as sensibly as possible.

## TOOLKIT

The first CMO's seminar 'Evidence-Based Blood Transfusion', held in 1998, brought together transfusion experts, clinicians and NHS managers to discuss ways of promoting the safer and better use of blood. Many issues

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were discussed such as the wide variations in blood usage in different hospitals, the need to monitor and improve blood transfusion safety, and the areas of autologous transfusions and cell salvage.

The symposium concluded that there was much scope for improvement in transfusion practice and it set out a series of actions and recommendations to be implemented in all NHS trusts where blood is transfused.

These were contained in the Health Service Circular HSC 1998/224 entitled *Better blood transfusion, appropriate use of blood* and comprised:

- the introduction of hospital transfusion committees (HTCs)
- the increased use of transfusion guidelines and protocols
- better monitoring of blood transfusion hazards by participation in the Serious Hazards of Transfusion (SHOT) scheme
- encouragement to transfuse the patient's own blood using predeposit autologous donation (PAD), acute normovolaemic haemodilution (ANH) or perioperative cell salvage (PCS).

The CMO's second national 'Better Blood Transfusion Conference', held in 2003, took



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## ARTICLE

these issues a stage further by examining:

- better blood services for patients and informed consent
- ways of conserving blood
- safer blood transfusion and the prevention of errors
- the role of the National Patient Safety Agency
- microbiological testing of blood and in particular vCJD transmission
- electronic patient identification systems
- the effectiveness of blood transfusion
- the regulation of transfusions.

One of the eventual recommendations of this second seminar was that a continually updated web-based resource should be made available to all those involved in transfusion practice. This resource has become known widely as the Better Blood Transfusion Toolkit (BBT Toolkit) and essentially can be broken down into four key categories: safe practice; appropriate use; audit, monitoring and traceability; and education and training.

### SAFE PRACTICE

The area of safe practice ensures that policies on patient identification are in place, implemented and monitored throughout the blood transfusion process, from prescription, sampling, laboratory testing and issue of blood to the final collection and administration of the blood transfusion itself.

To enable positive patient identification, information on a number of methods are available, including handwritten or printed wristbands, barcoded wristbands and the use of photographic evidence for those patients whose clinical conditions preclude the

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wearing of wristbands. A number of other systems are also available and in use that are capable of producing barcoded wristbands and lockable, barcode-release blood bank refrigerator access.

Additionally, all trusts should ensure that policies are in place covering phlebotomy, minimum labelling requirements, blood labelling and issue, blood collection and bedside checking and administration.

### APPROPRIATE USE

Appropriate use reinforces the greater awareness of the need to improve transfusion practice. Blood is no longer recognised as a safe and unlimited resource, and the risks of transfusion are worth avoiding, even if this requires extra work and forward planning.

One of the main aims of good transfusion medicine has always been to reduce unwarranted exposure to blood products. This is especially true for surgical patients who may only have one exposure in a lifetime, and in this case should only be transfused if absolutely necessary. Therefore, appropriate use covers a wide range of issues such as preoperative planning (eg to treat anaemia), the use or cessation of pharmacological agents (eg antiplatelet drugs to prevent bleeding during surgery), surgical techniques, and the adoption of transfusion triggers.

This category also promotes the use of effective alternatives to transfusion of donated blood such as cell salvage, autologous transfusions and the use of blood substitutes.

### AUDIT, MONITORING AND TRACEABILITY

Audit, monitoring and traceability covers important factors that affect the transfusion process and impact on it, such as the use of clinical audit to highlight best practice in, for example, the use of wristbands to improve safety, the collection of blood samples, or the appropriate use of O RhD-negative red cells.

The work of the Blood Stocks Management Scheme, which monitors blood component usage and wastage across participating hospitals, can be accessed here, as can issues concerned with traceability, which is now vital as a result of recent EU blood directive legislation.

### EDUCATION AND TRAINING

Education and training encompass a broad range of categories such as diaries of forthcoming educational events, the use of staff induction and training programmes,

CPD activities, information on societies and forums, as well as the various patient information leaflets now available on blood transfusion and its alternatives. Also included here is a section that provides guidance for new and developing hospital transfusion practitioners (HTPs), an area that Joan Jones, HTP manager for the Welsh Blood Service and a former IBMS specialist advisor in transfusion science, believes to be a key component of the BBT Toolkit.

"HTPs now play a vital role in improving the clinical practice of transfusion by supporting their hospital-based colleagues to deliver a wide range of the BBT initiatives. Raising transfusion safety and awareness to all areas of the transfusion chain is our ultimate target and HTPs can achieve this by using a variety of clinical governance tools such as audit, risk management, incident investigation and reporting, as well as staff counselling."

Joan continues: "Teaching and education are equally important to achieve these ends, and HTPs play an active role in advising, networking, mentoring and disseminating transfusion knowledge and resources in their trusts, but essentially the role is all about communication."

**'Raising overall awareness should ensure a safe, efficient and effective service for all patients who need blood'**

### TOOLS OF THE TRADE

When the CMO's initial blood transfusion seminar was held, its intention was to provide the first step towards promoting better blood transfusion practice throughout the NHS. The 'Better Blood Transfusion 2' meeting took this groundwork a stage further by drawing up more recommendations for the optimal use of blood, and the resultant BBT Toolkit now provides a powerful online resource to help achieve these aims.

By regularly accessing the toolkit, important information and advice can be highlighted and passed on to all those involved in the transfusion chain, and particularly to clinicians who have a key role to play in this area as they are responsible for prescribing much of the blood transfused in hospitals today. By raising overall awareness in the practise of better blood transfusion, this should ensure that there will continue to be a safe, efficient and effective service for all patients who need blood. ■

Further information on the BBT Toolkit is available at [www.transfusionguidelines.org](http://www.transfusionguidelines.org)