

# 4 Key Messages and Recommendations

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## ICE: identification, communication, education

### Key SHOT messages

- There is no substitute for **correct patient identification** at all stages in the transfusion process
- The severity of the outcome is not the determinant of the seriousness of the error. Near miss reporting demonstrated 889 errors which could have resulted in incorrect blood component transfusions, of which 288 were known to be potentially ABO-incompatible
- **Delay** in appropriate transfusion contributes to death in sick patients
- **Risk assessment** before transfusion. Transfusion-associated circulatory overload (TACO) is the most common cause of death and of major morbidity and may be preventable. Patients should be properly assessed prior to transfusion to identify those at particular risk and to ensure the transfusion is required
- **Information technology (IT) systems** depend on correct set up and validation to ensure they are fit for purpose and contribute to patient safety rather than impede it
- **Errors in the administration of anti-D immunoglobulin** remain disappointingly high; clear local guidelines and thorough training of all staff involved is essential
- **Checking means checking** with no short cuts
- **Laboratory error reports** to SHOT have increased and human error accounts for 96.7% of serious adverse events reported to the Medicines and Healthcare Products Regulatory Agency

In 2015 SHOT staff reviewed all recommendations made since the beginning of SHOT reporting. Many of these have been actioned and SHOT data have also contributed to 14 different British Committee for Standards in Haematology (BCSH) guidelines. In particular, changes to Blood Service practices were followed by a reduction in transfusion-related acute lung injury and bacterial infections from blood components. Some recommendations have been repeated many times; this is because they are still necessary, particularly the need for correct patient identification at the time of blood sampling and at transfusion. This was identified in the first Annual SHOT Report and triggered transfusion training and competency assessments, and the widespread appointment of transfusion practitioners. However, this is still a source of dangerous error and fatal outcome. Good patient blood management means full individual assessment for every transfusion to ensure it is really indicated. Transfusion may contribute adversely to immune and inflammatory activity (and be associated with transfusion-associated pulmonary complications) and tip the balance in patients of all ages, but particularly the elderly and frail, into circulatory overload.

We recommend the use of a checklist for the critical point in transfusion, the final bedside check. In addition to their successful use in the airline industry, a simulation-based trial of surgical checklists (17 teams, 106 scenarios) demonstrated a reduction of steps missed from 23% without checklists to 6% when available (Arriaga et al. 2013).

## Key recommendations

### Be WARM – work accurately and reduce mistakes

- A formal pre-transfusion risk assessment for transfusion-associated circulatory overload (TACO) should be performed whenever possible as TACO is the most commonly reported cause of death and major morbidity. An example is given in Chapter 13, Pulmonary Complications (Figure 13b.5)
- Use a 5-point practice improvement tool (checklist) at the patient's side immediately prior to connection of the transfusion. Never do this away from the patient. Two examples are illustrated below. Practice should be audited prior to introduction and regularly afterwards to demonstrate improved and safer practice

**Action: Trust/Health Board Chief Executive Officers and Medical Directors responsible for all clinical staff**

**Additional new topic-related recommendations** can be found in the following chapters: Chapter 11, Acute Transfusion Reactions (ATR) (n=1), Chapter 16, Paediatric Summary (n=2), and Chapter 26, Cell Salvage (CS) (n=5).

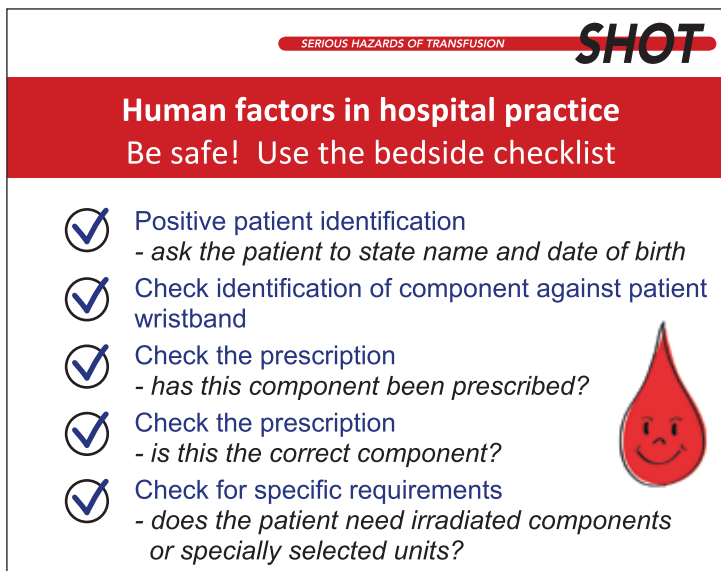


Figure 4.1:  
Modified 5-point  
checklist  
recommended by  
SHOT in the Annual  
Report for 2013

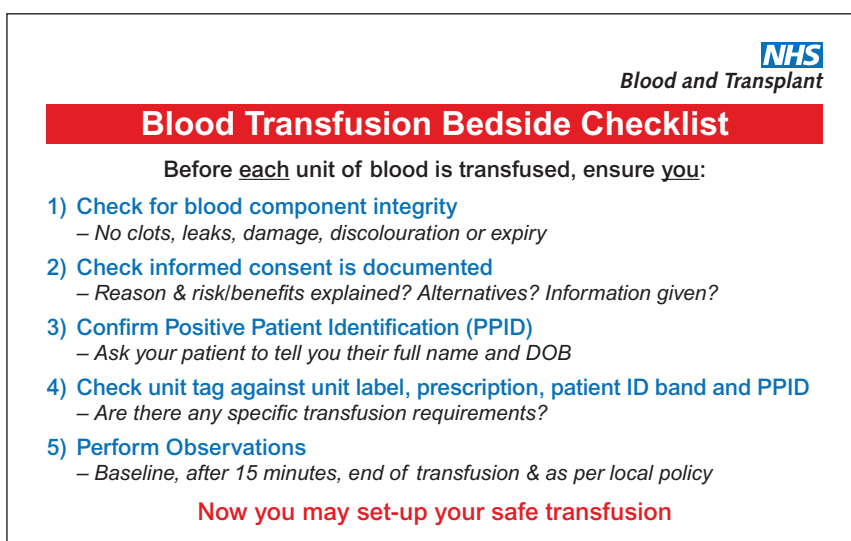


Figure 4.2:  
Bedside checklist  
piloted in London  
and available  
throughout England

## Reference

Arriaga A, Bader A et al. (2013) **Simulation-based trial of surgical-crisis checklists.** New Engl J Med 368, 246-253