

**Definitions of
Current SHOT Categories
And
What to Report**

Adverse Events

Term	Definition	What to report
Wrong Blood Transfused (Incorrect or Inappropriate Blood Component Transfused)	<p>All reported episodes where a patient was transfused with a blood component or plasma component which was intended for another patient</p>	<p>This category currently includes:</p> <ul style="list-style-type: none"> • Patient's receiving a blood component intended for a different patient. • Patients receiving blood of an incorrect group, including components of an incorrect group given to BMT/SCT or solid organ transplant patients.
Special Requirements Not Met (Incorrect or Inappropriate Blood Component Transfused)	<p>All reported episodes where a patient was transfused with a blood component or plasma product that did not meet the appropriate requirements.</p>	<p>Transfusion of blood of inappropriate specification or that did not meet the patient's special requirements. e.g. failure to provide CMV neg components, irradiated components or blood of incorrect phenotype. Also failure to provide the correct component to patients born after 1991.</p>
Unnecessary or Inappropriate transfusions	<p>These are cases in which the intended transfusion is carried out, and the component itself is suitable for transfusion and for the patient, but where the decision making is faulty. There are also cases where a transfusion of blood or a blood component was clinically indicated but was not undertaken.</p>	<p>This category includes:</p> <ul style="list-style-type: none"> • Prescription of components that are not required, or where another component or therapy would have been more clinically appropriate. • Prescription at an incorrect dose or rate, or for an inappropriate indication. • Failure to transfuse and under transfusion
Handling and Storage Errors	<p>Transfusion of a correct component to an intended patient, when handling or storage errors may have rendered the component less safe for transfusion</p>	<p>'Unsafe' transfusion where there were handling or storage errors such as a component out of temperature control, or delay in completion of transfusion</p>
RBRP (Right Blood Right Patient)	<p>Incidents where a patient was transfused correctly despite one or more serious errors which in other circumstances might have led to an IBCT</p>	<p>Labelling errors. Administration with incorrect or missing details</p>
Near Miss	<p>A near miss is an error or deviation from standard procedures or policies that is discovered before the start of the transfusion and that could have led to a wrongful transfusion or to a reaction in a recipient.</p>	<p>For all incidents where there was no transfusion. Do NOT report incidents which involve the use of a component which should not have been transfused but which, nevertheless, was transfused but did no harm.</p>

Physiological Reactions

Term	Definition	What to report
ATR (Acute Transfusion Reaction)	<p>Reactions occurring at any time up to 24 hours following a transfusion of blood or components, excluding cases of acute reactions due to incorrect component being transfused, haemolytic reactions, transfusion-related acute lung injury (TRALI), transfusion-related circulatory overload (TACO), Transfusion Associated Dyspnoea (TAD) or those due to bacterial contamination of the component.</p>	<p>These include:</p> <p>Isolated febrile – a rise in temperature of > 1°C +/- minor rigors and chills.</p> <p>Minor allergic – skin +/- rash</p> <p>Anaphylaxis– hypotension with one or more of: urticaria, rash, dyspnoea, angioedema, stridor, wheeze, pruritis, within 24 hours of transfusion.</p> <p>Severe allergic reaction – Severe allergic reaction with risk to life occurring within 24 hours of transfusion, characterised by bronchospasm causing hypoxia, or angioedema causing respiratory distress.</p> <p>Hypotension – a drop in systolic and/or diastolic pressure of >30mm Hg occurring within one hour of completing transfusion, provided all other adverse reactions have been excluded together with underlying conditions that could explain hypotension.</p> <p>Febrile with other symptoms/signs – rise in temperature of >1°C, with no features of an allergic reaction, but with one or more of myalgia, nausea, change in blood pressure or hypoxia</p> <p>Please note that the severity of the reactions must be assessed and recorded as per the Severity Grades for Acute Transfusion Reactions. See below.</p>
HTR Acute (Haemolytic Transfusion Reaction)	<p>Acute HTRs are defined as fever and other symptoms / signs of haemolysis within 24 hours of transfusion; confirmed by one or more of the following in: a fall of Hb, rise in LDH, positive DAT and positive crossmatch.</p>	<p>Cases with relevant features (see definition) should be reported together with results of all laboratory investigations and antibody identification results if available.</p>
HTR Delayed (Haemolytic Transfusion Reaction)	<p>Delayed HTRs are defined as fever and other symptoms / signs of haemolysis more than 24 hours after transfusion; confirmed by one or more of: a fall in Hb or failure of increment, rise in bilirubin, positive DAT and positive crossmatch not detectable pre-transfusion.</p> <p>Simple serological reactions (development of antibody without positive DAT or development of haemolysis) are excluded. Please report these in the Alloimmunisation category.</p>	<p>Cases with relevant features (see definition) should be reported together with results of all laboratory investigations and antibody identification results if available.</p> <p>Cases will be included with no clinical or laboratory features as long as DAT is positive.</p> <p>Please note that the severity of the reactions must be assessed and recorded as per the Severity Grades for Haemolytic Transfusion Reactions. See below.</p>
PTP (Post Transfusion Purpura)	<p>Thrombocytopenia arising 5 – 12 days following transfusion of red cells, associated with the presence in the patient of alloantibodies directed against the HPA (Human Platelet Antigen) systems.</p>	<p>Cases where the platelet count drops more than 50% following transfusion should be investigated and reported if complete or partial serological evidence is available.</p>
PUCT (Previously Uncategorised Complication of Transfusion)	<p>Physiological reaction or adverse effect in temporal association with transfusion which can not be attributed to already defined side effects and with no other risk factor other than transfusion</p>	<p>Any reaction or adverse effect that cannot otherwise be classified into existing categories. To include reactions or adverse effect that may be due to the introduction by blood services of new component processing techniques e.g. prion filtration</p>
TA-GvHD (Transfusion Associated Graft-versus-Host Disease)	<p>Characterised by fever, rash, liver dysfunction, diarrhoea, pancytopenia and bone marrow hypoplasia occurring less than 30 days after transfusion. The condition is due to engraftment and clonal expansion of viable donor lymphocytes in a susceptible host.</p>	<p>All cases where diagnosis is supported by skin / bone marrow biopsy appearance or confirmed by the identification of donor-derived cells, chromosomes or DNA in the blood and/or affected tissues.</p> <p>Cases with a very high index of clinical suspicion.</p>

Physiological Reactions

Term	Definition	What to report
TACO (Transfusion Associated Circulatory Overload)	Any four of the following occurring within six hours of transfusion: <ul style="list-style-type: none"> • Acute respiratory distress. • Tachycardia. • Increased blood pressure. • Acute or worsening pulmonary oedema. • Evidence of positive fluid balance. 	
TAD (Transfusion Associated Dyspnoea)	TAD is characterized by respiratory distress within 24 hours of transfusion that does not meet the criteria of TRALI, TACO, or allergic reaction. Respiratory distress should not be explained by the patient's underlying condition.	
TRALI (Transfusion Related Acute Lung Injury)	Acute dyspnoea with hypoxia and bilateral pulmonary infiltrates during or within six hours of transfusion, not due to circulatory overload or other likely cause.	Suspected cases should be discussed with a Blood Service Consultant, and reported if there is a high index of suspicion, even if serological investigation is inconclusive.
TTI (Transfusion-Transmitted Infections)	Include as a TTI if, following investigation, the recipient had evidence of infection post-transfusion, and there was no evidence of infection prior to transfusion and no evidence of an alternative source of infection. Plus; Either at least one component received by the infected recipient was donated by a donor who had evidence of the same transmissible infection. Or at least one component received by the infected recipient was shown to contain the agent of infection.	Cases of bacterial transmission from blood components, where cultures from the patient's blood match cultures from the component bag and/or from the donor. Transmissions of viruses, whether routinely tested for by the blood services or not. Transmissions of other agents such as prions, protozoa and filaria.

Other Reporting Categories

Term	Definition	What to report
Anti-D	Events relating to the administration of anti-D immunoglobulin. Please note that this category now includes events relating to the administration of anti-D following transfusion of RhD-mismatched platelets.	Reports in this section include: <ul style="list-style-type: none"> • Omission or late administration. • Anti-D given to a D Positive patient or a patient with immune anti-D. • Anti-D given to mother of a D Negative infant. • Anti-D given to wrong patient. • Incorrect dose of anti-D given. • Anti-D given that was expired or out of temperature control.
Cell Salvage	Events and reactions in relation to the use of intraoperative and postoperative cell salvage.	Incidents to be reported: <ul style="list-style-type: none"> • Adverse events due to operator error • Adverse events due to machine failure • Adverse clinical events • Reactions to reinfused blood

Optional Reporting Categories

Reporting incidents in these categories is not required by SHOT

Term	Definition	What to report
Alloimmunisation	<p>Alloimmunisation occurs when, after a transfusion, there is demonstration of clinically significant antibodies against red blood cells which were previously absent (as far as is known) and when there are no clinical or laboratory signs of hemolysis. This term is categorised as a Delayed Serological Transfusion Reaction by the ISBT</p> <p>Development of an antibody with positive DAT or development of haemolysis is excluded. Please report these in the Haemolytic Transfusion Reaction category.</p>	See definition
Haemosiderosis	<p>Iron overload as indicated by laboratory investigation or biopsy due to chronic transfusion and which can result in organ injury (Heart, Lung, Liver and or Endocrine glands)</p>	Any cases of chronically transfused patients that require iron chelation therapy.

Imputability

N/A	Not assessable	When there is insufficient data for imputability assessment
0	Excluded or Unlikely	When there is conclusive evidence beyond reasonable doubt for attributing the adverse reaction to causes other than the blood or blood components or where the evidence is clearly in favour of alternative causes.
1	Possible	When the evidence is indeterminate for attributing the adverse reaction either to the blood or blood component or to alternative causes
2	Likely / probable	When the evidence is clearly in favour of attributing the adverse reaction to the blood or blood component.
3	Certain	When there is conclusive evidence beyond reasonable