

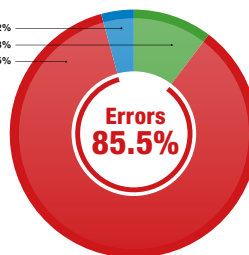
ANNUAL SHOT REPORT 2017 SUMMARY

3230 TOTAL REPORTS

85.5% ERRORS

21 deaths, 14 preventable

Possibly preventable 137 4.2%
Not preventable 333 10.3%
Errors 2760 85.5%



Key SHOT messages

Do not assume, verify: At each step in the transfusion process, do not assume that no errors have been made in previous steps; verify each step, particularly patient identification

Human factors: Failure of communication, distractions, interruptions, wrong assumptions, poor handovers and overriding alerts in the laboratory information systems are all important contributory factors

What went wrong? Thorough root cause analyses are essential and must identify attributable system-related and human factors so that appropriate actions can be instituted

Is your staffing adequate? Inadequate staffing, lack of training and poor supervision are all likely to be associated with an increased risk of error

Do not delay: Emergency transfusion saves lives. Do not let the patient bleed to death or die from anaemia

Guidelines or rules? Guidelines must not be translated into inflexible rules which may put patients at risk. Proportionate application of knowledge and experience may lead to a different course of action in individual circumstances. However, the final bedside check is a rule and must be completed in full

TACO alert: Patients who develop respiratory distress during or up to 24 hours after transfusion where transfusion is suspected to be the cause must be reported to SHOT. The national comparative audit of TACO in 2017 demonstrated that risk factors are being missed

It is the clinician's responsibility to know the patient's specific transfusion requirements

Key recommendation 1

Training in ABO and D blood group principles is essential for all laboratory and clinical staff with any responsibility for the transfusion process. This should form part of the competency assessments

Key recommendation 2

All available information technology (IT) systems to support transfusion practice should be considered and these systems implemented to their full functionality.

Electronic blood management systems should be considered in all clinical settings where transfusion takes place. This is no longer an innovative approach to safe transfusion practice, it is the standard that all should aim for

Key recommendation 3

A formal pre-transfusion risk assessment for transfusion-associated circulatory overload (TACO) should be undertaken whenever possible, as TACO is the most commonly reported cause of transfusion-related mortality and major morbidity (repeat from last year)

ABO-incompatible red cell transfusions 2016 and 2017



ABO-incompatible transfusions:

In 2017 there was 1 ABO-incompatible red cell transfusion (administration error), 4 of FFP and 2 of platelets

Have you instituted the full bedside checklist?

Many more near miss events could have resulted in ABO-incompatible red cell transfusions.

Wrong blood in tube errors will not be detected by the bedside check so get it right from the start

See full SHOT Report (www.shotuk.org) for additional recommendations in the following chapters: Information Technology Incidents, Adverse Events Related to Anti-D immunoglobulin, Immune Anti-D in Pregnancy, Transfusion-Associated Circulatory Overload, Cell Salvage and Paediatric Summary.

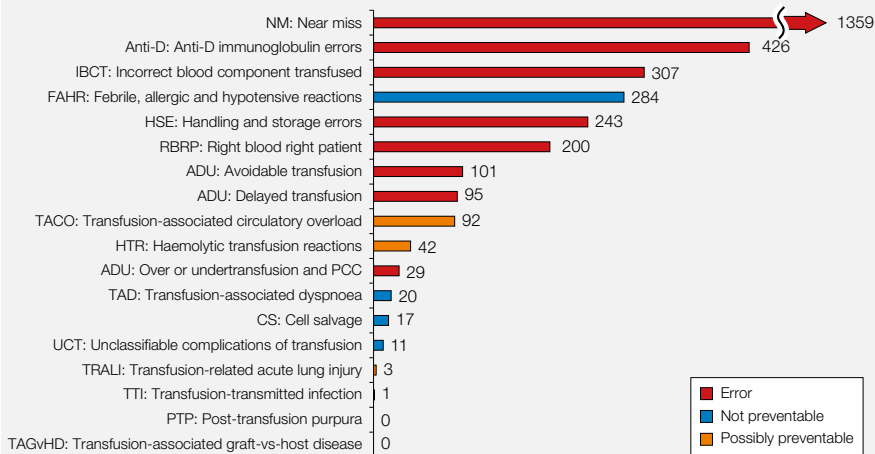
CONTACT DETAILS

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SERIOUS HAZARDS OF TRANSFUSION

SHOT

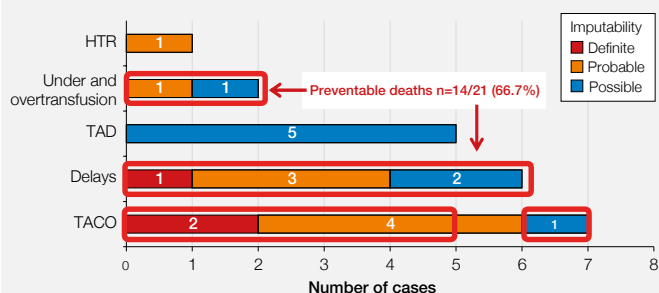
Summary data for 2017 all categories n=3230



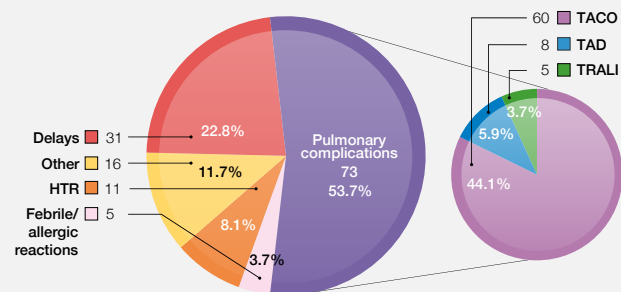
Febrile, allergic and hypotensive reactions (FAHR) are the most common serious and unpredictable reactions

- For febrile reactions alone, give paracetamol
- For allergic reactions give an antihistamine as first line; give adrenaline if anaphylaxis is suspected. The effect of steroids is delayed by several hours, will have no immediate effect, and should only be used to prevent a late recurrence. The use of steroids may further immunosuppress already immunocompromised patients and increase the risk of side effects such as infection

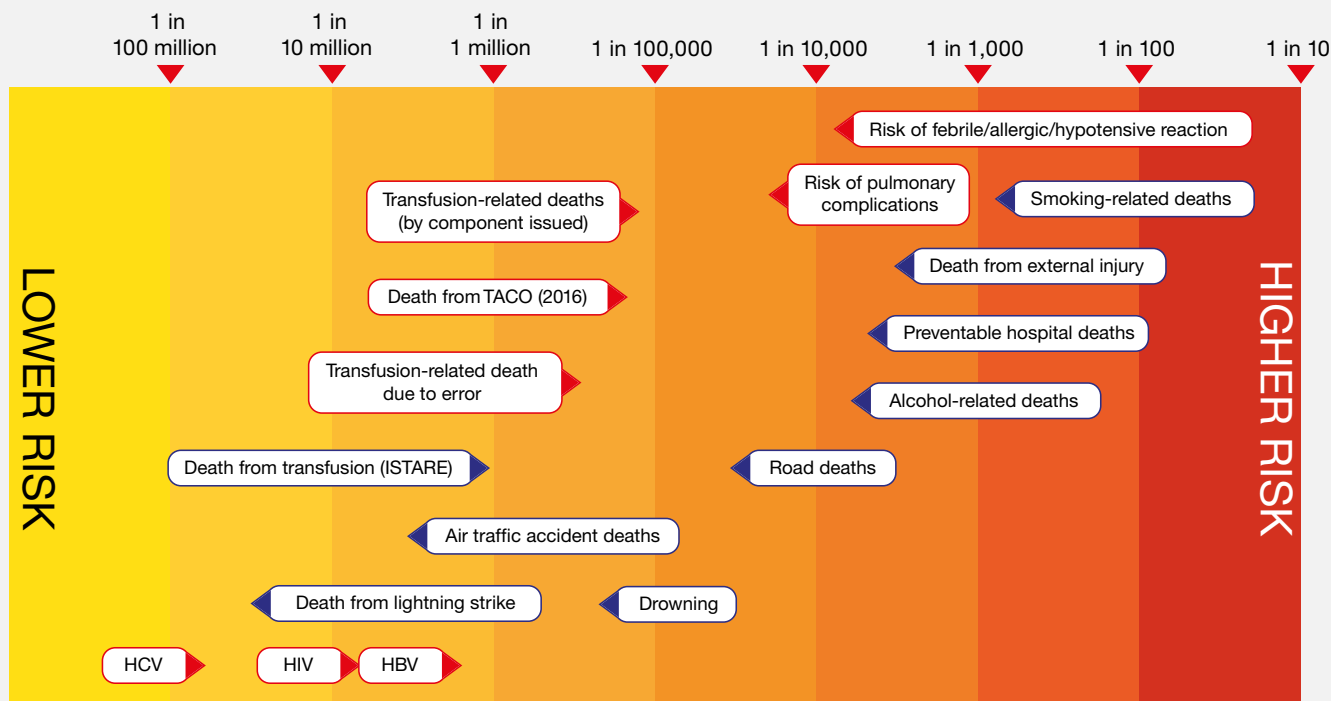
Death related to transfusion (with imputability) reported in 2017 n=21



Transfusion-related deaths 2010 to 2017 n=136



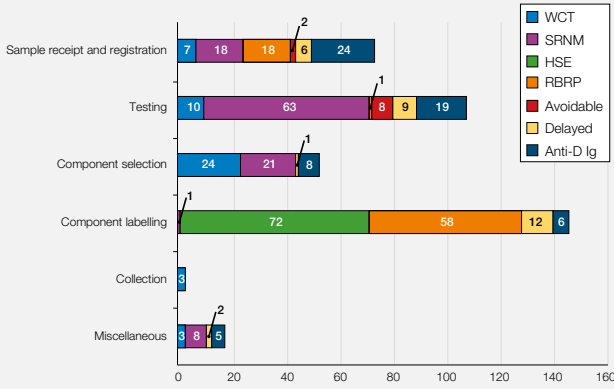
Approximate risks associated with transfusion compared with other life activities: UK data (log scale)



Sources of data: Many of these are found online in the UK office for national statistics. Red outline indicates SHOT data, blue outline indicates data from other sources. ISTARE is the International Haemovigilance Network database for the surveillance of adverse reactions and events in donor and recipients. Viral transmissions denote risk of infection, not deaths. HCV=hepatitis C virus; HIV=human immunodeficiency virus; HBV=hepatitis B virus. A full list of sources is available in supplementary information on the SHOT website www.shotuk.org.



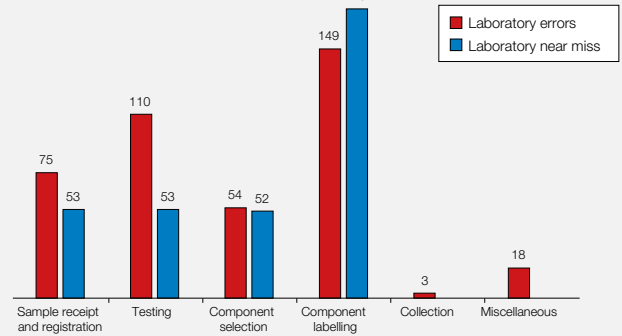
Laboratory errors (n=409) showing at which stage in the transfusion process the primary error occurred with outcome



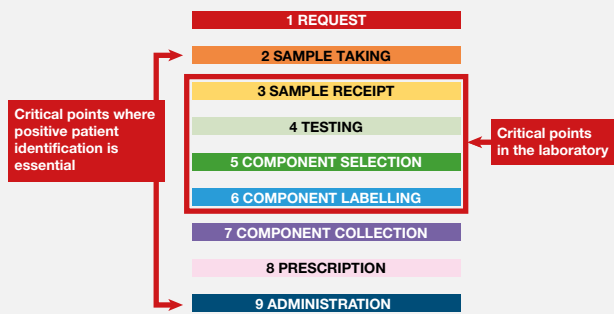
Messages for laboratory staff

- Know your components and their compatibility
- Always seek the patient's historical transfusion record
- Do not override warning alerts
- Follow the correct procedures

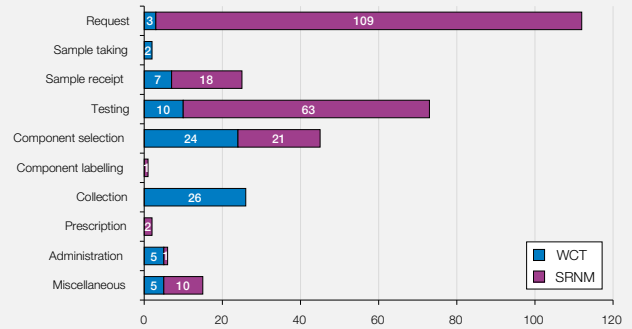
Laboratory errors and near miss incidents n=740 showing at which stage the primary error occurred



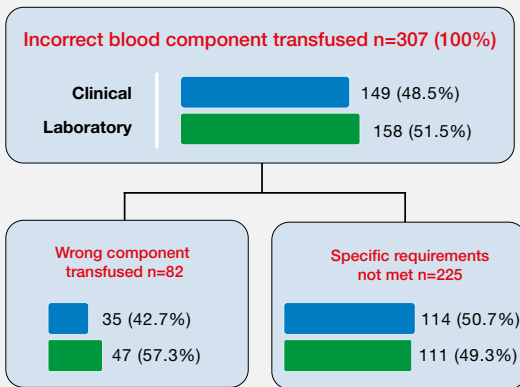
The 9 steps in the transfusion process



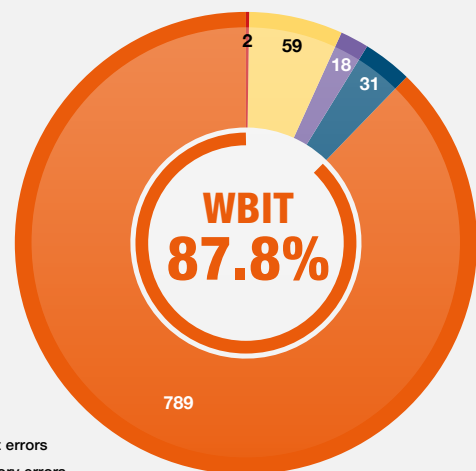
Points in the process where the first mistake occurred (clinical and laboratory) leading to wrong component transfused (WCT) or specific requirements not being met (SRNM) n=307



Overview of reports where an incorrect blood component was transfused in 2017 n=307

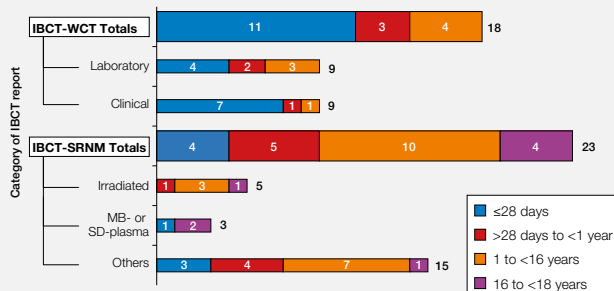


Near miss wrong component transfusions are mostly due to wrong blood in tube (WBIT) incidents



- Request errors
- Laboratory errors
- Collection
- Administration
- Wrong blood in tube (WBIT)

Paediatric reports where incorrect blood components were transfused n=41 (by age)



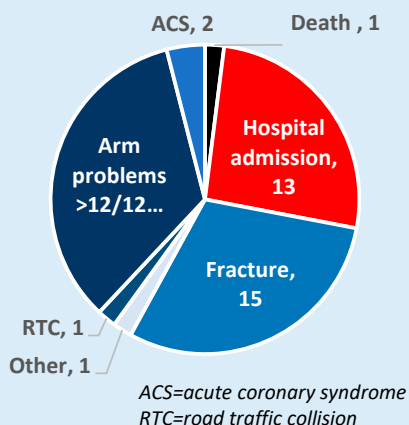
Serious Adverse Events following Blood Donation reported to the UK Blood Services in 2017



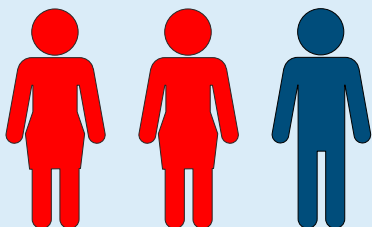
In 2017 the UK Blood Services collected approximately 1.9 million donations. Fifty serious adverse events of donation (SAED) have been reported last year (1 in 38,273 donations). Serious adverse events are very rare but do occur and can have a significant impact on donor health and donor retention

Breakdown of Serious Adverse Events in 2017

SAED Categories



Female donors accounted for nearly 2/3 of SAED reported



No reports of anaphylaxis, haemolysis or air embolism due to component donation reported in 2017



All 15 fractures were related to vasovagal reactions, 2 immediate and 13 delayed reactions



There was one report of a donor death <7 days of donation and two reports of acute coronary syndrome <24 hours of donation

36%

18/50 SAED were as a direct result of a delayed vasovagal reaction

34%

17/50 SAED were related to persistent arm problems more than one year post donation

In general 9/10 donors who suffer an SAED are withdrawn from future donations



Key Messages

Donors need a clear understanding of what, when and how to report adverse events

Vasovagal events resulting in donor hospitalisation or injury and nerve injuries post venepuncture continue to be the commonly reported SAED

Whole blood and component donation is safe but complications do sometimes occur



www.shotuk.org
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