ANNUAL SHOT REPORT 2018 SUMMARY

3326 TOTAL REPORTS

87.3% ERRORS

20 deaths, 14 preventable

Possibly preventable 4.4%
Not preventable 8.3%
Errors 87.3%
Errors account for the majority of reports: 2905/3326 (87.3%)

Key SHOT messages

Learning from near misses is vital to prevent future incidents

Investigating incidents should be thorough, systematic and identify systemic issues

Staffing challenges, including staff shortages and gaps in skill mix, need to be addressed to improve safety

Rethinking transfusion education, including more technology-enhanced learning, learning in teams, non-technical skills training, patient safety training and human factors awareness

Standard operating procedures need to be simple, clear, easy to follow and explain the rationale for each step—this will help engage staff and improve compliance

Key recommendations

All NHS organisations must move away from a blame culture towards a just and learning culture

All clinical and laboratory staff should be encouraged to become familiar with human factors and ergonomics concepts

All transfusion decisions must be made after carefully assessing the risks and benefits of transfusion therapy. Collaboration and co-ordination among staff is vital

The A-E Decision Tree to facilitate decision making in transfusion

A
Assess patient
Any avoidable blood loss
(frequent, unnecessary tests/interventions)

B
Blood results (all) reviewed including trends – valid and reliable?
Best treatment option—is transfusion the best treatment option? If yes, what components needed, how many, what order and any specific requirements needed?

C
Consent for transfusion
Correctable factors—address all correctable factors like bleeding, haematinic deficiency

D
Do not forget other measures
(vitamin K, tranexamic acid, cell salvage)
Do not hesitate to challenge
Do not forget to document

E
Ensure communications with laboratory
Evidence-based decisions

CONTACT DETAILS
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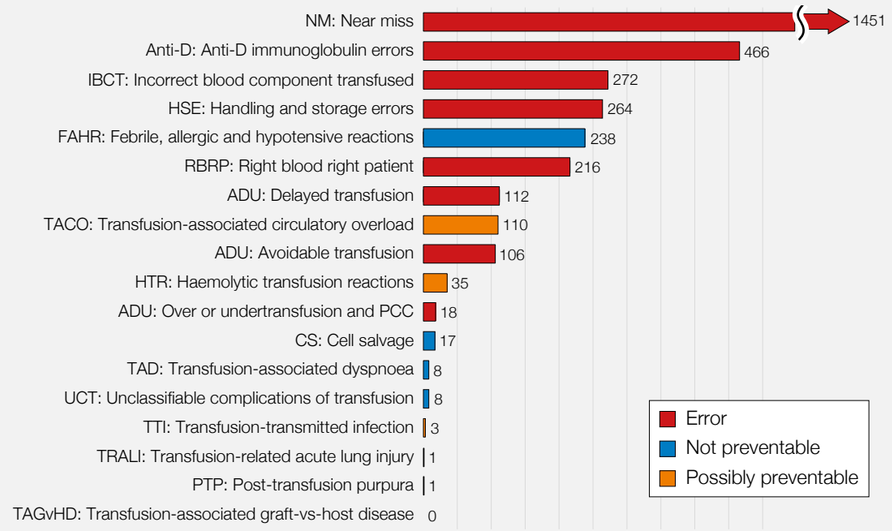
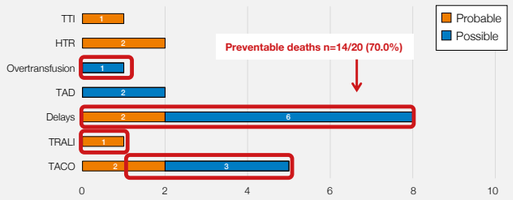
SHOT Serious Hazards of Transfusion

Summary data for 2018 all categories n=3326

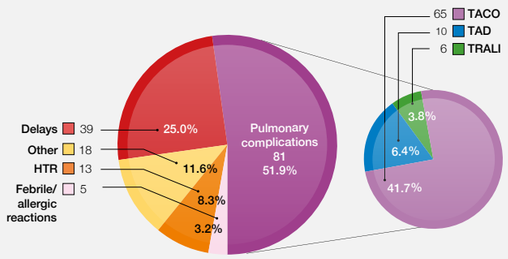
Near miss reporting continues to teach valuable lessons and contributed to 1451 (43.6%) of the total 3326 reports.



Death related to transfusion (with imputability) reported in 2018 n=20

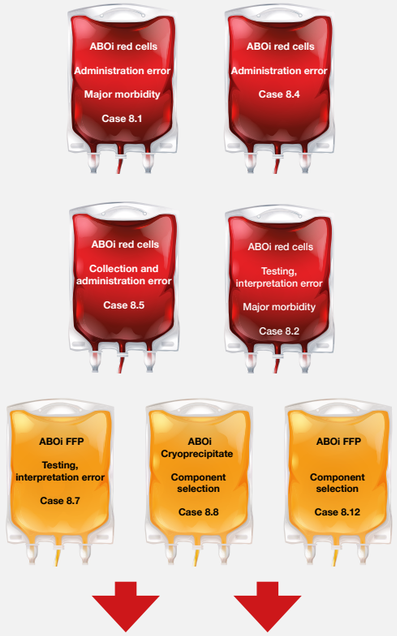


Transfusion-related deaths 2010 to 2018 n=156



'Other' includes 1 each for post-transfusion purpura (PTP), transfusion-associated graft-versus-host disease(TAGvHD) and anti-D Immunoglobulin related; there were 6 in the avoidable, over or undertransfusion (ADU) category, 2 transfusion-transmitted infections (TTI), and 7 deaths related to other unclassified reactions

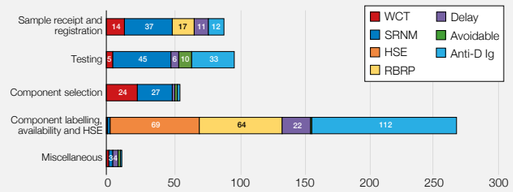
ABO-incompatible transfusions in 2018



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

Laboratory errors (n=530)

showing at which stage in the transfusion process the primary error occurred with outcome



Numbers <3 are too small to be annotated on the figure: Component selection: delay=2; avoidable=2, anti-D Ig=2; Component labelling, availability and HSE: WCT=1; SRNM=2; avoidable=1; Miscellaneous: WCT=2, avoidable=2, anti-D Ig=1

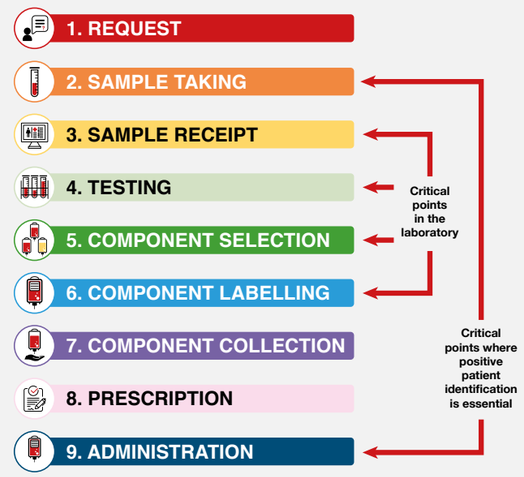
Key messages for laboratory staff

Many of the incidents reported appeared to result from failure to follow correct procedures, inadequate processes, omitting steps or wrong procedure being performed

Robust root cause analysis using ergonomics/human factors approach should be undertaken to identify quality management systems (QMS) improvements to mitigate these errors

All laboratory staff must complete annual good manufacturing practice (GMP) training (European Union: Guidelines for Good Manufacturing Practice 2015)

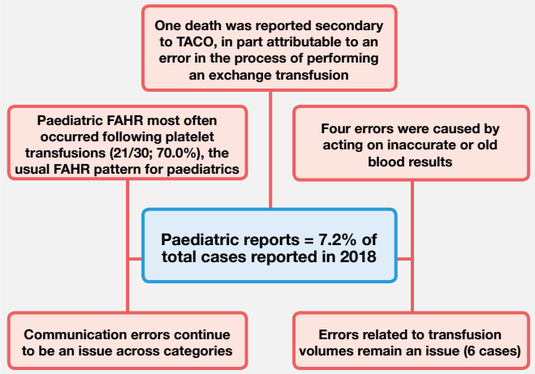
The 9 steps in the transfusion process



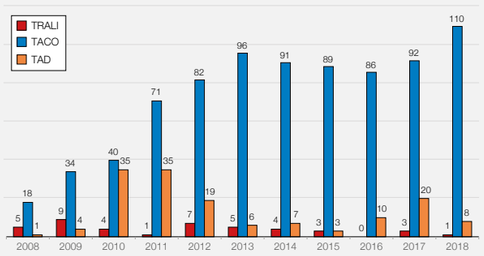
All clinical and laboratory Standard Operating Procedures (SOP) must be CLEAR

Clear and concise
Logical and meaningful
Easy to follow and effective
Always workable and simple
Realistic and relevant

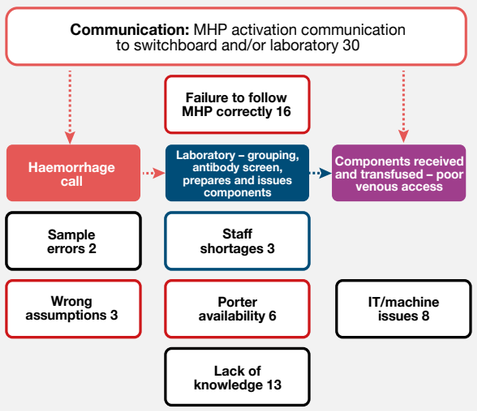
Summary of Paediatric reports for 2018 (n=123)



Reports of pulmonary complications by year 2008–2018 Reports of pulmonary complications continue to make the greatest contribution to death and major morbidity after transfusion.



Problems continue to be reported in the management of major haemorrhage

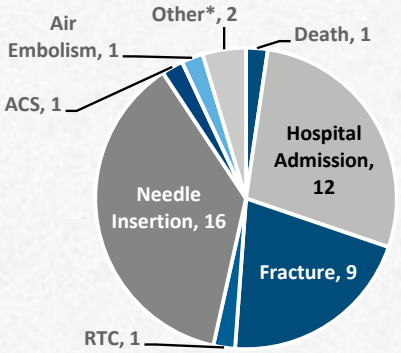


Serious Adverse Events following Blood Donation reported to the UK Blood Services in 2018

In 2018 the UK Blood Services collected approximately 1.9 million donations. Forty three serious adverse events of donation (SAED) were reported (1 in 43,794 donations). Serious adverse events are very rare following blood donation but do occur and can have a significant impact on donor health and donor retention.

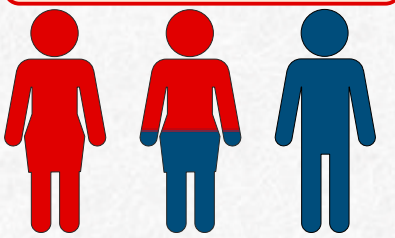
Breakdown of Serious Adverse Events in 2018

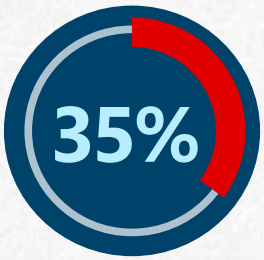
SAED Categories n=43



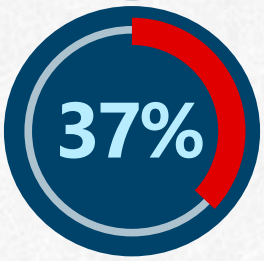
RTC=road traffic collision, ACS=acute coronary syndrome
**Other = Upper limb deep vein thrombosis*

Female donors accounted for 23/43 (53%) SAED



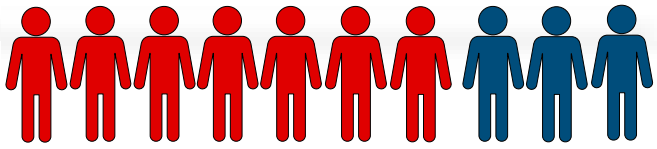


15/43 SAED were as a direct result of a vasovagal reaction



16/43 SAED were related to persistent arm problems 12/12 post donation

7/10 donors who suffered an SAED were withdrawn from future donations



2/43 SAED related to upper limb deep vein thrombosis following donation.

8/9 fractures were related to vasovagal reactions, 4 immediate and 4 delayed reactions.

1 report of a donor death <7 days of donation and 1 report of acute coronary syndrome <24 hours of donation.

Key Messages

Donor safety is of paramount importance and is assured, in as far as it can be, by donor selection guidelines, standard operating procedures, adequately trained staff and appropriate facilities.

Complications during or following donation can happen despite the safety measures in place

Arm problems relating to needle insertion persisting for more than a year and vasovagal events resulting in donor hospitalisation or injury continue to be the most frequently reported SAED