

★ Key recommendations



Introduction of the transfusion safety standards in 2025

- A set of transfusion safety standards have been produced by SHOT to promote safe clinical and laboratory transfusion practices. These standards cover the key themes evident from serial Annual SHOT Reports and are aligned with the recommendations from these reports. The standards can be accessed on the SHOT website
- The standards provide a framework for self-assessment and compliance check by regulatory organisations with national oversight. A baseline assessment tool and FAQ document is provided with the new standards



Key recommendation

- The key recommendation in this and future Annual SHOT Reports will be to ensure compliance with the transfusion safety standards. Organisations can work on a roadmap to implement improvement actions to ensure compliance based on the baseline assessment
- Routine yearly recommendations will no longer be issued



Suggested actions

- Local analysis to identify gaps in existing processes and practices against these standards to optimise compliance
- Drafting tangible action plans and prioritise actions based on risks to address gaps
- Monitor progress and benchmark locally to drive improvements



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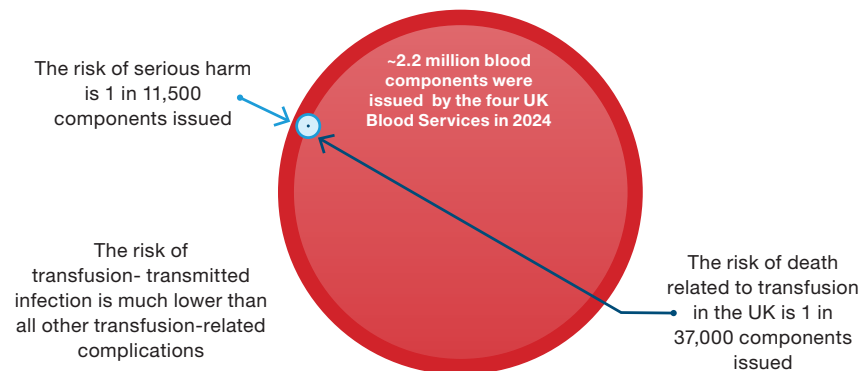


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Risk of death and serious harm related to transfusions in the UK in 2024

The risk estimation is based on all incidents reported to SHOT including the process-based error reports received. This covers deaths with possible, probable and definite imputability.



Note: This is a representative image and not accurate to scale
The estimated risks include risks of harm from errors in the transfusion pathway.

Paediatric SHOT summary for 2024



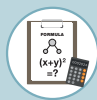
Paediatric reports account for 8.5% (340/3998) of all reports to SHOT. A large proportion of paediatric reports were in infants <1 year. There were 2 transfusion-related deaths reported in children or neonates in 2024, 1 related to delayed transfusion and another due to TACO.



Transfusion delays in children continue to be significant and occur at all stages. Most delays were due to lack of availability of appropriate blood component/s and knowledge gaps about the component specification or patient requirement.

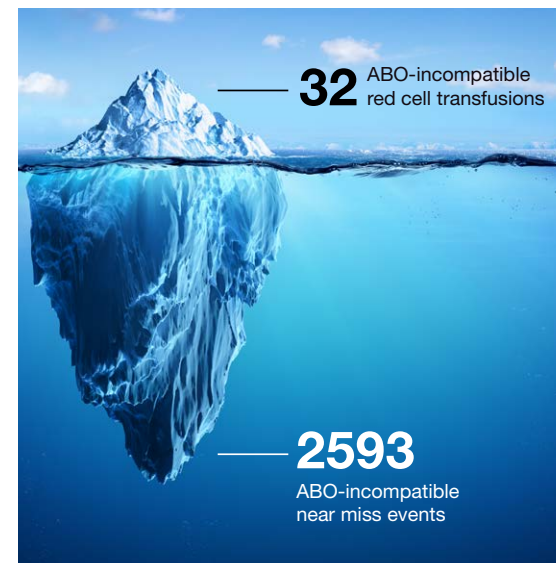


Paediatric reports were over-represented in febrile, allergic and hypotensive reactions, incorrect blood component transfused (in both specific requirements not met and wrong component transfused), delayed and under or overtransfusion, uncommon complications of transfusion and this year in haemolytic transfusion reactions.



The paediatric transfusion formula remains the best way to calculate the volume of red cells for transfusing an infant or child (i.e. >28 days of age). Hospitals should ensure the correct use of the paediatric red cell transfusion formula, with the Hb units in g/L. Small volume top-up red cell transfusions for neonates are typically 15ml/kg over 4 hours(10-20ml/kg).

ABO-incompatible red cell transfusions 2016-2024: few events (n=32) but many near misses (n=2593)



SHOT

Serious Hazards of Transfusion

ANNUAL SHOT REPORT 2024 SUMMARY

TACO pre-transfusion risk assessment

TACO Risk Assessment		YES	NO
	Does the patient have any of the following?: diagnosis of 'heart failure', congestive cardiac failure (CCF), left ventricular dysfunction, aortic stenosis, or any other heart valve disease		
	Is the patient on a regular diuretic?		
	Does the patient have severe anaemia?		
	Is the patient known to have pulmonary oedema?		
	Does the patient have respiratory symptoms of undiagnosed cause?		
	Is the fluid balance clinically significantly positive?		
	Is the patient receiving intravenous fluids (or received them in the previous 24 hours)?		
	Is there any peripheral oedema?		
	Does the patient have a low serum albumin level?		
	Does the patient have significant renal impairment?		
If risks identified		YES	NO
Review the need for transfusion (do the benefits outweigh the risks)?			
Can the transfusion be safely deferred until the issue is investigated, treated or resolved?			

If proceeding with red cell transfusion: ensure appropriate indication and volume is prescribed (adults)

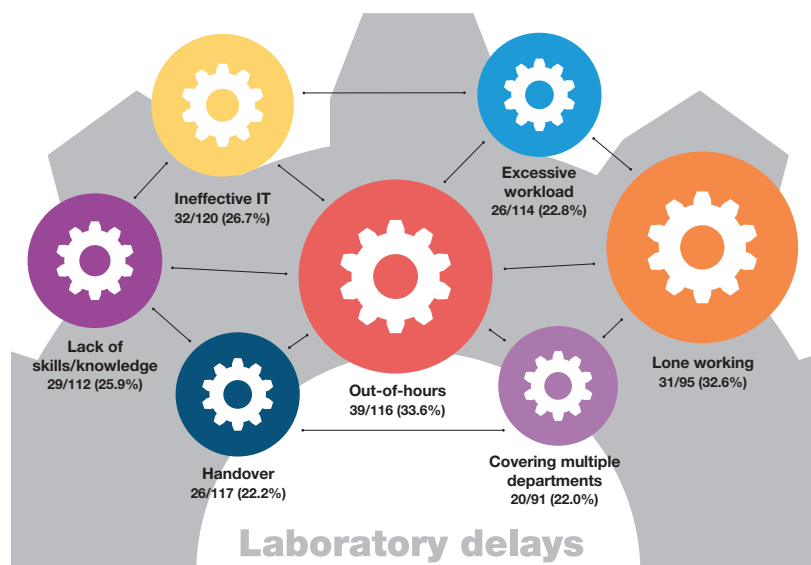
Indication code for transfusion	Target Hb	Dosing advice
Acute anaemia (R2)	Post-transfusion target Hb 70 - 90g/L	Body weight dosing (max 2 units)
Acute anaemia (R3: with acute MI/ACS)	Post-transfusion target Hb 80 - 100g/L	Body weight dosing (max 2 units)
Severe symptomatic chronic anaemia (R7)	No target Hb - minimum transfusion	Usually single unit only
Regular transfusion programme (R4)	Individualised target Hb	Body weight dosing (max 2 units)

Other measures to mitigate TACO: ASSIGN ACTION AS APPROPRIATE		TICK
Review patient after each unit (red cells) and review symptoms of anaemia. Is further transfusion necessary?		
Measure the fluid balance		
Consider a prophylactic diuretic (where appropriate/not contraindicated)		
Monitor the vital signs closely, including oxygen saturation		

Name (PRINT):	Due to the differences in adult and neonatal physiology, babies may have a different risk for TACO. Calculate the dose by weight and observe the notes above.	
Role:		
Date:		
Signature:		

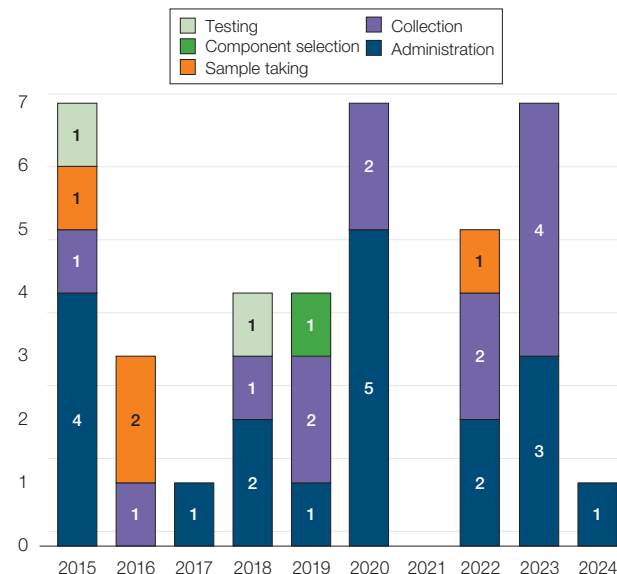
TACO=transfusion-associated circulatory overload; MI=myocardial infarction; ACS=acute coronary syndrome; Hb=haemoglobin

Contributory factors to transfusion laboratory delays in 2024

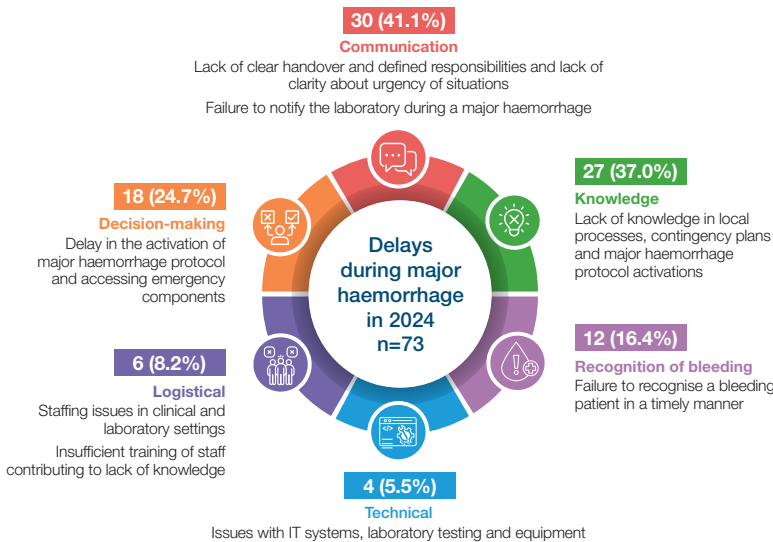


Denominators shown vary according to the number of responses received to each question

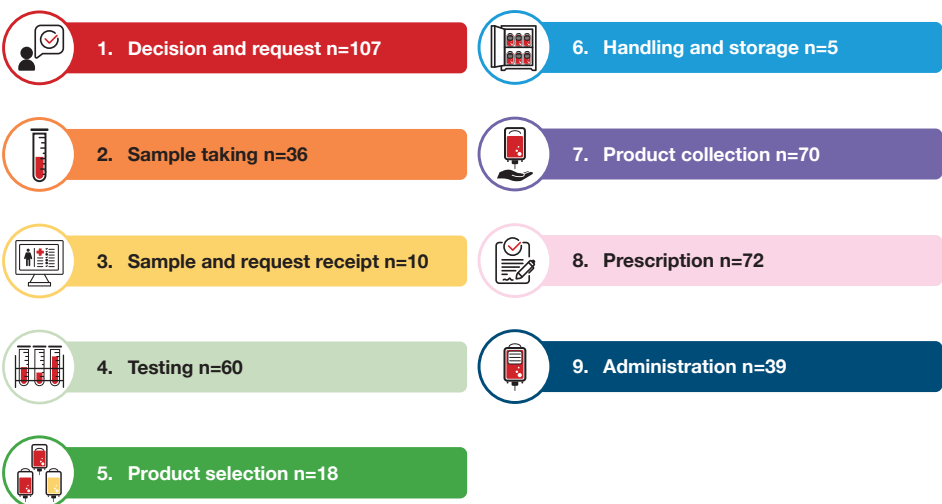
ABO-incompatible red cell transfusions (2015-2024) - errors by step



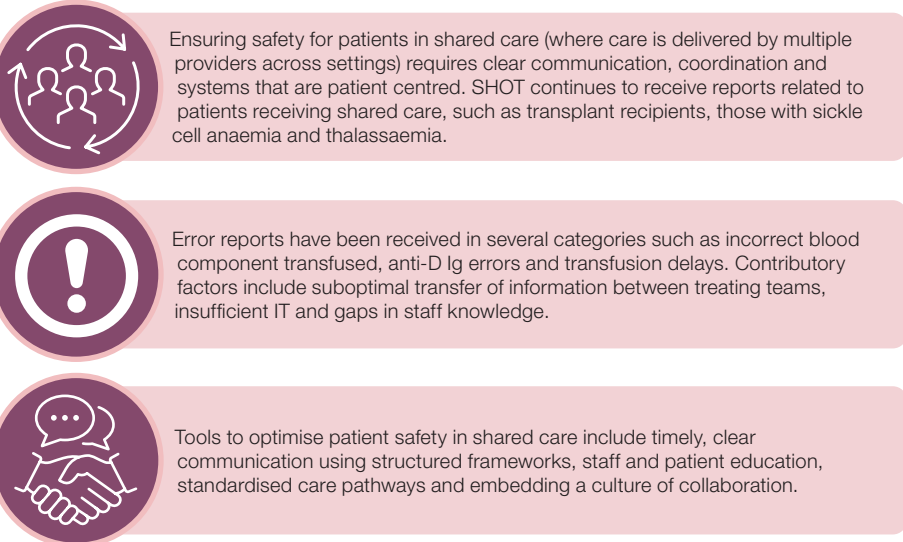
Factors contributing to delays during major haemorrhage in 2024



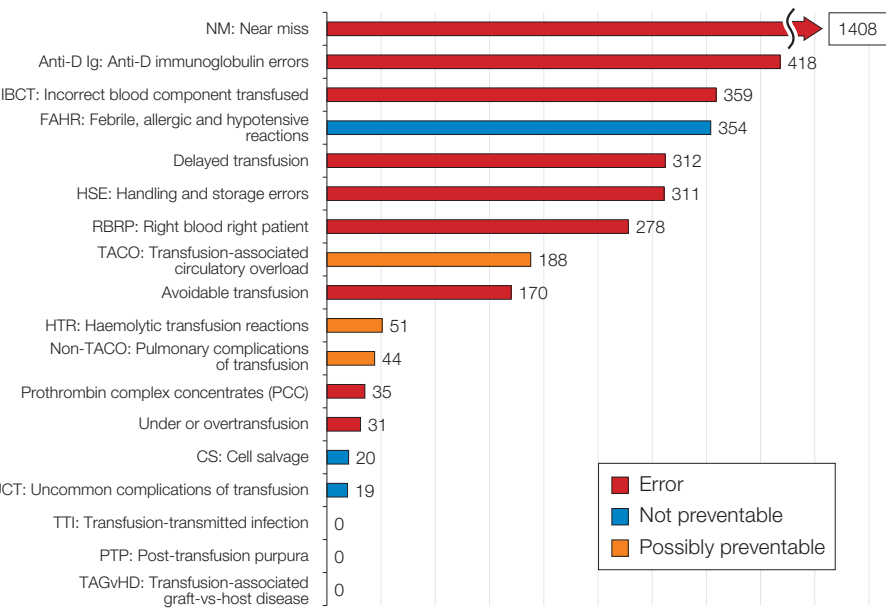
Steps in the transfusion pathway when the anti-D Ig errors occurred in 2024



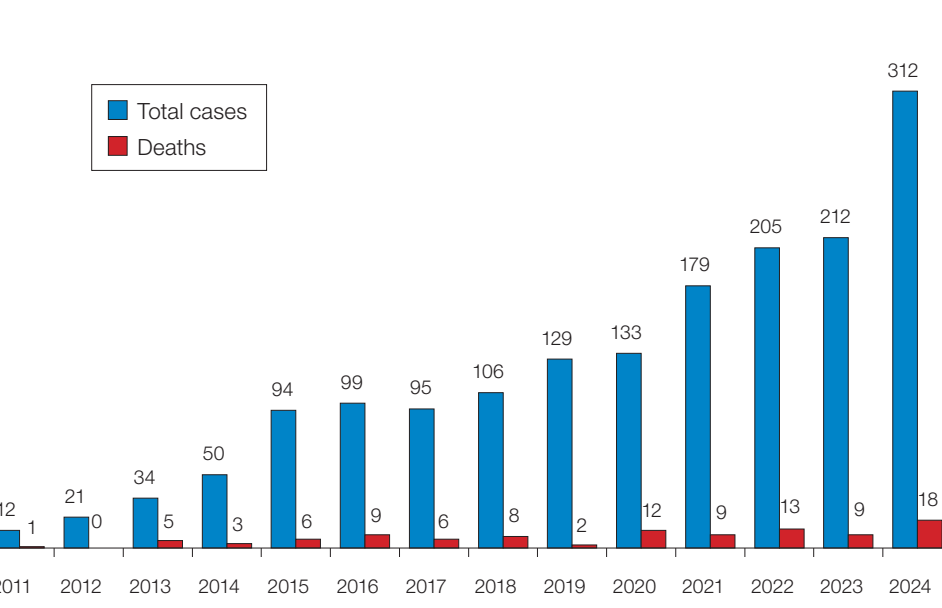
Optimising safety for patients in shared care



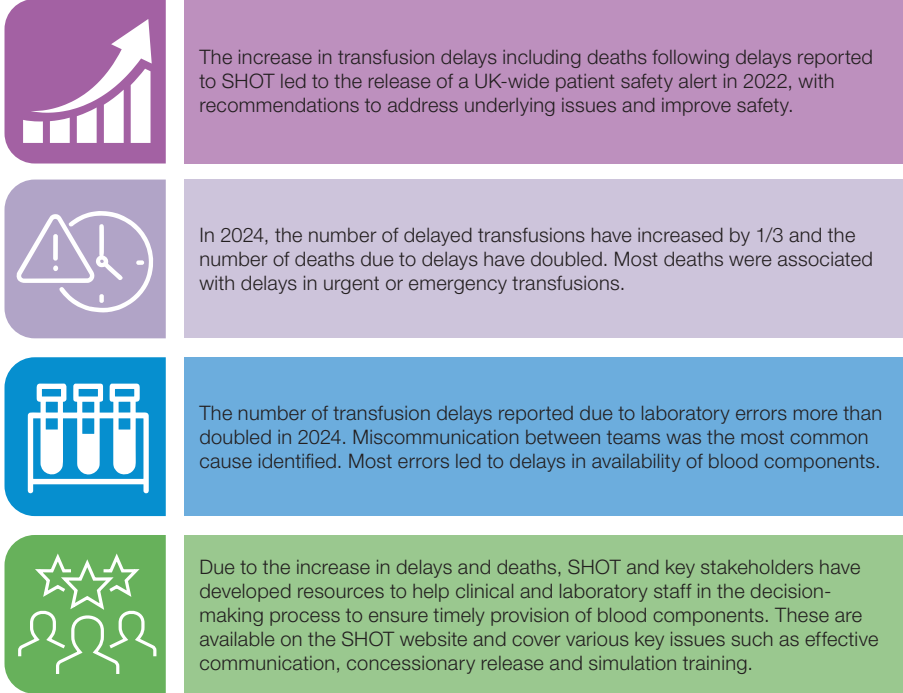
Summary data for 2024, all categories (includes RBRP and NM) (n=3998)



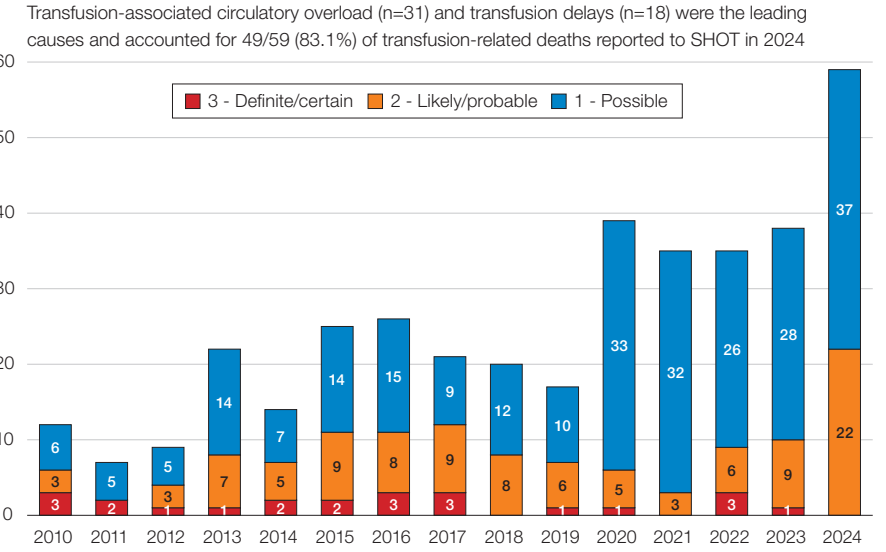
Delayed transfusions by year 2011-2024



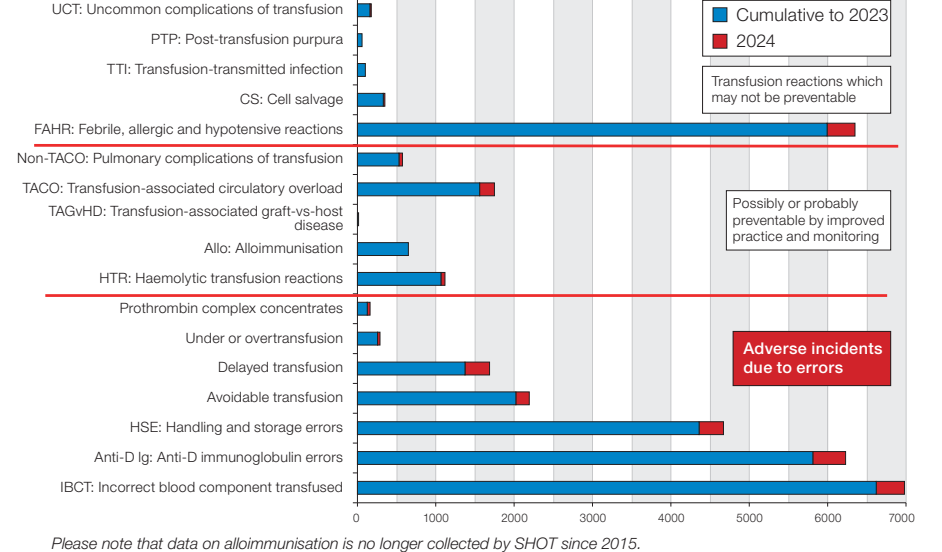
Addressing transfusion delays



Deaths related to transfusion with imputability reported 2010-2024 (n=379)



Cumulative data for SHOT categories 1996-2024 (n=33343)



Framework to transfer IDEAS of excellence into practice

