

Acknowledging Continuing Excellence (ACE) in Transfusion

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Abbreviations used in this chapter

ACE	Acknowledging continuing excellence	NHS	National Health Service
IV	Intravenous	TAGvHD	Transfusion-associated graft-versus-host disease
IVIg	IV immunoglobulin	UK	United Kingdom
MH	Massive haemorrhage		

Introduction

Starting this year, the ACE SHOT chapter will be included in the Annual SHOT Report to acknowledge excellent practices in transfusion. Identifying examples of excellence in the Annual SHOT Report will provide new opportunities for learning, improving resilience and staff morale, contributing to a holistic approach to patient safety.

Recommendation

- All National Health Service (NHS) organisations should embrace a Safety-II approach as a complement to Safety-I. It is necessary to analyse where and when things go wrong, whilst proactively seeking to promote good practice by celebrating when things go right and developing ways to support, augment and encourage this

Action: All NHS Trusts/Health Boards

Safety culture

Fostering a strong and effective safety culture is vital to reducing transfusion incidents and errors, thereby directly improving patient safety. The safety culture of an organisation is a combination of individual and group values, attitudes, perceptions, competencies and patterns of behaviours that determine the commitment to, and the style and proficiency of, an organisation's health and safety management. Strong, collective, empathetic and authentic leadership is critical in safety culture. Organisations with a positive safety culture are characterised by communications founded on mutual trust, shared perceptions of importance of safety and by confidence of the efficacy of preventive measures (Stavrianopoulos 2012).

Five critical elements have been identified for an engaged organisation with a good safety culture (Haddon-Cave 2009):

- **Reporting culture:** an organisational climate where people readily report problems, errors and near misses
- **Just culture:** an atmosphere of trust where people are encouraged and even rewarded for providing safety-related information; and it is clear to everyone what is acceptable and unacceptable behaviour
- **Flexible culture:** a culture that can adapt to changing circumstances and demands while maintaining its focus on safety
- **Learning culture:** the willingness and competence to draw the right conclusions from its safety information and the will to implement major safety reforms
- **Questioning culture:** It is vital to ask, 'What if?' and 'Why?' questions. Questions are the antidote to assumptions, which so often incubate mistakes

Annual SHOT Reports have continually shown a good, strong reporting culture in the United Kingdom (UK). The participation data is heartening and an increasing number of reports and near misses have been submitted to SHOT year on year. However, as noted in Chapter 2, Participation in United Kingdom (UK) Haemovigilance, areas of under-reporting have been recognised and are possibly due to staff shortage and inadequate resources which needs to be addressed and investigated further.

A just culture ensures balanced accountability for both individuals and the organisation responsible for designing and improving systems in the workplace. NHS Improvement's 'A just culture guide' provides a powerful tool to help promote cultural change in organisations or teams where a blame culture is still prevalent (NHSI 2018). Such a culture helps empower employees to proactively monitor practices in the workplace and ensure safety. Risk reduction will be achieved by focusing on human behaviours and redesigning systems. One of the 2018 key SHOT recommendations was that all NHS organisations must move away from a blame culture and towards a just and learning culture. While there are still instances of punitive blame culture, there is increasing awareness and adoption of just culture in healthcare organisations in the UK.

Some reported cases are withdrawn each year, as upon expert review, it was agreed that in all such situations the clinical/laboratory teams have consciously made transfusion decisions taking into account the overall clinical picture of the patient and assessing risks and benefits (as per the 2018 key SHOT recommendation). In such cases, there may have been an increased risk or anticipated side effect of the transfusion but the intended benefit from transfusion is deemed to justify the risk of harm and its possible severity. A couple of examples are recounted here:

Example 1: A patient was admitted with acute upper gastrointestinal bleed to the emergency department. The major haemorrhage protocol was appropriately activated, and the patient received two units of non-irradiated components. Medical staff were aware that the patient had specific requirements but could not wait for the irradiated components to come from the Blood Service. The patient was potentially at risk of transfusion-associated graft-versus-host disease (TAGvHD) due to previous fludarabine exposure. Risk of death from massive haemorrhage is often greater than the risk of TAGvHD. Clinicians also need to be aware that irradiated red cells have higher potassium levels, and a shorter shelf life. Transfusing all irradiated units in massive haemorrhage (MH) has been reported to be associated with risk of hyperkalaemia and death in some susceptible patients, including infants.

Example 2: A patient with obstetric bleeding and anti-Fy^a antibodies was given emergency O D-negative red cells. It is important to remember that in cases of massive haemorrhage, every minute counts and emergency transfusion saves lives. In a genuine emergency, if further delays risk patient harm, group O D-negative blood (consider O D-positive in males and females >50 years) should be given until alternative blood can be given safely. In MH, where the antibody screen is positive or the patient has known antibodies for which compatible blood is not readily available, ABO and RhD compatible, serologically least incompatible blood should be transfused with extra caution with intravenous (IV) methylprednisolone 1g +/- or IV immunoglobulin (IVIg) cover if required. This decision should be made

on the balance of risk of severe haemorrhage (anaemia, urgent requirement), versus a haemolytic transfusion reaction with potential complications including renal failure. If time/stocks allow, choose ABO compatible, full Rh and K compatible blood. In 80% of patients, antibodies are within the Rh & K systems. Discuss the need for methylprednisolone +/- IVIg with a clinical haematologist. Monitor patients (including urine output) for delayed haemolytic transfusion reactions, in light of alloantibodies and any incompatible blood transfused. For further information see SHOT Bite No 8. Massive Haemorrhage - Delays (available on the SHOT website <https://www.shotuk.org/resources/current-resources/shot-bites/>) and NHSBT guidelines for the management of urgent red cell transfusion and situations when serological compatibility cannot be assured (NHSBT 2019).

Incident investigations continue to be an area of concern and can often lack scope, depth and detail. Actions generally identified continue to target individuals and are therefore less impactful. Opportunities to address systemic/organisational factors are regularly missed with suboptimal attempts to identify trends and corrective and preventative actions. Investigations must be systematic, comprehensive, and efficient with appropriate allocation of resources. It is equally important to share lessons learnt with other healthcare professionals. Ensuring that the right questions are asked, making each experience count and making the messages/lessons stick will help address the implementation gap and truly improve patient safety in transfusion.

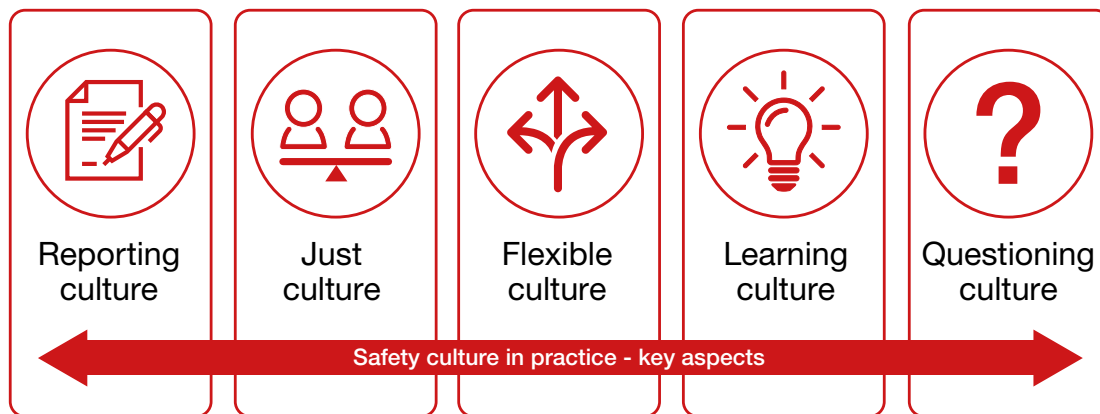


Figure 5.1:
Critical elements
of a safety culture

Safety-I and Safety-II approaches

Patient safety incident reporting and learning systems, the traditional Safety-I approach, where systemic improvements are instituted by primarily focussing on when things go wrong, play a crucial role in making healthcare safer. Healthcare leaders, and their organisations, must be responsible for developing robust mechanisms to ensure patient safety incident reporting systems capture essential information that can inform improvement efforts, be systematically interrogated and used to redesign care processes.

Safety-II is a proactive approach looking at safe episodes of care to inform improvement in healthcare systems (Hollnagel 2015). While understanding errors is critical, it is also important to understand and appreciate how frontline staff handle dynamic situations throughout the day, constantly adapting, and getting so much right so that we can begin to identify the factors and conditions that underpin the success. This helps to optimise organisational learning and significantly improve patient safety further and has formed the basis for Safety-II thinking. In Safety-II, organisational learning in healthcare is based on a deeper understanding of the adaptations healthcare workers make in their everyday clinical work, and that learning and improvement should be more democratic by promoting participation and ownership among a broader range of stakeholders as well as patients.

It is important, to recognise that Safety-II isn't about looking only at success or the positive. Safety-II is about all possible outcomes: involving normal, everyday, routine performance; exceptionally good performance, near-misses, accidents and disasters. Our traditional approach, Safety-I, has largely limited itself to the latter – the accidents (actual or potential). Safety-II is about the whole distribution, and its profile. We normally ignore 'normal performance'. To improve system performance, we need to focus more on normal performance and frequent events, which are easier to change and manage.

Table 5.1:
Overview of
Safety-I and
Safety-II
(Hollnagel 2015)

	Safety-I	Safety-II
Definition of safety	That as few things as possible go wrong	That as many things as possible go right
Safety management principle	Reactive, respond when something happens or is categorised as an unacceptable risk	Proactive, continuously trying to anticipate developments and events
View of the human factor in safety management	Humans are predominantly seen as a liability or hazard. They are a problem to be fixed	Humans are seen as a resource necessary for system flexibility and resilience. They provide flexible solutions to many potential problems
Accident investigation	Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify the causes	Things basically happen in the same way, regardless of the outcome. The purpose of an investigation is to understand how things usually go right as a basis for explaining how things occasionally go wrong
Risk assessment	Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify causes and contributory factors	To understand the conditions where performance variability can become difficult or impossible to monitor and control

Please see Figure 7.4 in Chapter 7, *Human Factors in SHOT Error Incidents*

Combining Safety-I and Safety-II approaches will help provide a more holistic understanding of the underlying reasons for errors and procedural violations and will help identify aspects of practice that could benefit from targeted interventions to help support staff in providing safe patient care (Braithwaite et al. 2015). Leaders should proactively and simultaneously seek signals for improvement from unsafe, suboptimal and excellent care (Learning from Excellence n.d.). It is important to turn healthcare into a constantly learning system, with everyone involved attuned to systems features and with strong feedback mechanisms to try to build momentum for change (Braithwaite 2018). Such an approach will help build resilience in the system.



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