

Standards for *major haemorrhage* education sessions

CONTEXT

The ANZCA CPD standard requires participants to complete two of the four activities from the Emergency Responses category during each CPD triennium.

The purpose of this document is to assist hospital departments, private practice groups and continuing medical education providers to develop and/or conduct education sessions that may incorporate local staff, work environments and equipment, if they choose to do so.

This document defines the minimum standard required for education sessions to achieve recognition as a valid activity for satisfying the CPD requirement of the management of *Major Haemorrhage*.

This activity requires participants to complete a recognised education session, which could be workshops or an online learning resource.

BACKGROUND TO THE MAJOR HAEMORRHAGE ACTIVITY

The resuscitation of patients in the perioperative period has traditionally been the responsibility of the anaesthetist. Infrequently the anaesthetist is presented with impending or potential blood loss to a degree that profound cardiovascular instability and coagulopathy may ensue. The most frequent circumstances that this may occur are:

- Obstetric ante or post partum haemorrhage
- Trauma
- Perioperative elective surgical complications
- Pre-existing and developing intraoperative coagulopathies
- Paediatric haemorrhage.

As these circumstances can develop in any area of routine anaesthetic practice, a general proficiency in the management of major haemorrhage is expected in all specialist anaesthetists.

RECOGNISED ALGORITHMS AND GUIDELINES

ANZCA does not exclusively endorse any one algorithm or guideline for the management of major haemorrhage but recognises the need for clinicians to be familiar with at least one. The following guidelines are recognised as being suitable for use in this module:

- National Blood Authority of Australia
[Patient Blood Management Guidelines: Module 1 Critical Bleeding/Massive Transfusion](#)
- Association of Anaesthetists of Great Britain and Ireland. Thomas et al (2010)
[Blood transfusion and the anaesthetist: management of massive haemorrhage.](#)
- Rossaint et al (2010)
[Management of bleeding following trauma: An updated European Guideline](#)

LEARNING OBJECTIVES

To achieve recognition for the ANZCA CPD program, the education session must address, as a minimum, the objectives below.

By the end of the session, participants will be able to:

1. State the definition of critical bleeding, and massive transfusion.
2. Identify approaches to stop critical bleeding. This may include pneumatic, compressive, topical haemostatic, and systemic.
3. Recognise clinical risk factors that increase mortality with blood loss, that demand an emergency rather than routine resuscitation response. These include degrees of trauma injury, obstetric bleeding, acidosis, haemodynamic instability, and shock.
4. Identify haematology and coagulation investigations indicated to quantify major haemorrhage.

5. Describe minimum requirements including: transfusion and resuscitation equipment; IV access; and personal support to undertake major resuscitation.
6. Determine endpoints of resuscitation management of volume and selection of blood products to maximise patient outcome.
7. Describe advanced coagulation management including the use of blood and pharmacological products.
8. Recognise that the outcome is related to team management, initiation of emergency protocols of massive transfusion and when relevant, focus on surgical cessation of bleeding, rather than definitive surgical management (damage control surgery).

OPTIONAL

Departments developing an education session may elect to expand the focus of teaching to the type of major haemorrhage that is most likely to present and understand the team approach needed to deliver large volume blood products at the right time to the patient. Important educational points should include:

- Adoption of hospital massive transfusion protocols
- Compare the hospital's massive transfusion protocols with the Patient Blood Management Guidelines: Module 1.
- Discuss agreed initiation criteria, communication requirements, blood product content, and sources of clinical advice in more complex haemorrhagic cases.
- Agreement as to the responsibilities of each team member in massive haemorrhage
- Indications of shock related to major bleeding that should trigger mandatory referral, including: degree of haemorrhage; nature of haemorrhage; and lack of control of bleeding. Agreed stratification of shock is also useful.
- Cooperation between surgical, anaesthetic and ICU/ED teams to practice damage control resuscitation and surgery to allow stabilisation and minimise blood loss in uncontrollable haemorrhage.

Depending on the structure of the participant's clinical environment focus could be also be on:

- Massive Haemorrhage in obstetrics and trauma
- Coagulopathy management in cardiac bypass surgery
- Blood loss in major vascular and aortic surgery, particularly their acute presentation
- Bleeding in the presence of sepsis, liver failure or pre-existing medications that alter coagulation factor or platelet function.

STRUCTURE OF EDUCATION SESSION

Participants may complete the BloodSafe elearning Australia online resource – [Critical Bleeding](#), based on the National Blood Authority's *Patient Blood Management Guidelines: Module 1 Critical Bleeding/Massive Transfusion* to satisfy the requirements of this activity.

Education session delivered in a workshop or structured group discussion format must:

1. Provide pre-course reading that provides relevant foundation knowledge of the session content.
2. Have a minimum total duration of 60 minutes.
3. Provide case-based discussion or scenario-based simulation activities so participants have the opportunity to: apply knowledge learnt through the session or pre-reading; and practice implementation of the guidelines.
4. Be facilitated by a post-Fellowship specialist who is appropriately skilled and experienced to deliver the content of the session. Ideally the facilitator will have medical education experience and/or credentials.
5. Have a maximum facilitator: participant ratio of 1:25. Group discussion and/or activities must engage each participant to ensure all attendees are achieving the objectives of the session.

SESSION MATERIALS

Session materials for delivery via workshop or group discussion must include the following in hard copy or electronic form:

- Session objectives
- Session outline
- Facilitators' guide (including scenario outlines)
- Session evaluation forms for feedback from participants
- Participant list template to record date, venue, names and appointment type of participants