



## Title CSOP Massive Transfusion Protocol

Version No: 2.3

Effective date: 30/09/2020

### APPROVALS

|                               |   |                   |           |
|-------------------------------|---|-------------------|-----------|
| Original Document Author:     | Dr Caroline Leech                       | Date<br>Sept 2010 | Signature |
| Revised Document Prepared by: | Sam Cooper, Paramedic                   |                   |           |
| Reviewed by:                  | Phil Bridle, Head of Operations         |                   |           |
| CGG Approval:                 | Dr Justin Squires, Deputy Clinical Lead |                   |           |
| Next Review Date:             | October 2022                            |                   |           |

### HISTORY

| Effective Date | Version No. | Summary of Amendment                |
|----------------|-------------|-------------------------------------|
| 01/09/2010     | 1.0         | Creation of document                |
| 19/10/2012     | 2.0         | Change to be used for all hospitals |
| 2015           | 2.1         | Review                              |
| Feb 2017       | 2.2         | Review                              |
| Sept 2020      | 2.3         | Review                              |

### REFERENCES

| Document Reference Number | Document Title  |
|---------------------------|---|
| 1                         | Doughty H, Woolley T, Thomas G<br>Massive Transfusion<br><i>BMJ Military Health</i> 2011;157:S277-S283  |
| 2                         | Jansen Jan O, Thomas Rhys, Loudon Malcolm<br>A, Brooks Adam. Damage control resuscitation for patients with major trauma <i>BMJ</i> 2009; 338 :b1778  |
| 3                         | Holcomb, J.B., Donathan, D.P., Cotton, B.A., del Junco, D.J., Brown, G., Wenckstern, T.V., Podbielski, J.M., Camp, E.A., Hobbs, R., Bai, Y. and Brito, M., 2015. Prehospital transfusion of plasma and red blood cells in trauma patients. <i>Prehospital Emergency Care</i> , 19(1), pp.1-9. |



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### 1. PURPOSE / SCOPE

Exsanguinating haemorrhage is the most common cause of death within the first hour of arrival to the Emergency Department following injury. There is increasing evidence to show that early administration of blood products in massive haemorrhage is associated with better outcomes than administration of colloids and crystalloids. As a result, trauma centres utilise Massive Transfusion Protocols to ensure timely access to blood products in an emergency [1, 2, 3].

This CSOP provides a framework for HEMS crew to request activation of the Massive Transfusion Protocol (MTP) prior to the patient arriving. Although not all hospitals have a policy in which this request automatically triggers activation of the MTP, communicating your assessment will give the receiving hospital an opportunity to act.

### 2. Definitions/Acronyms:

| Acronym | Description                           |
|---------|---------------------------------------|
| CSOP    | Clinical Standard Operating Procedure |
| ED      | Emergency Department                  |
| HEMS    | Helicopter Emergency Medical Service  |
| MTP     | Massive transfusion protocol          |
| TAAS    | The Air Ambulance Service             |

### 3. INDICATIONS

The MTP should be requested if the patient has:

**Suspected non-compressible haemorrhage**

AND

**Systolic BP < 90mmHg**

AND

**Transient or absent response to fluid resuscitation**



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If one or more of these features is not present, the MTP may still be requested if the HEMS crew's clinical assessment is that there is life-threatening haemorrhage that requires massive transfusion.

Activation of the MTP may be requested by either doctors or paramedics.

### 4. OTHER CLINICAL CONSIDERATIONS

When severe haemorrhage has been identified important clinical considerations include;

- External haemorrhage control
- Splinting and reducing long bone fractures
- Judicious intravenous fluid therapy
- Minimising on scene times
- Rapid transfer to definitive care
- Tranexamic acid administration
- Administration of blood products via pre hospital providers or 'pit stop' at a nearby Trauma Unit en route to a Major Trauma Centre

### 5. PRE-HOSPITAL ALERT

The prehospital alert should take the form of a structured clinical summary (for example, in the 'ATMIST' format) followed by a clearly stated recommendation, such as;

*"I am requesting that you activate your Major Transfusion Protocol for this patient"*

Check that the pre-alert information has been received and understood correctly before ending the call due to the possibility of differing local terminology (i.e. Major Haemorrhage Protocol, Code Red). Also, ensure that the structured summary includes the estimated age and sex of the patient as this may be of use to the blood bank at the receiving hospital. If prehospital blood products have been administered, the blood bank should be made aware via the pre-alert due to potential to conflict with initial cross-match testing.

If there are multiple casualties from a single incident, take particular care to clearly establish during handover at the hospital which patient, or patients, you have identified as requiring activation of the MTP.



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**6. AUDIT**

Over-triage of patients to the MTP risks wasting of blood products. Where centres have a policy of triggering activation of the MTP automatically based upon a prehospital recommendation this process will remain the subject of ongoing audit and evaluation and will need to be recorded onto the patient report form and clinical database.

If the MTP has been requested and activated, this should be specifically annotated in the free text section of TAASBase entry for ease of auditing if required at a later date.

**End of Document**

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