

Adult Massive Transfusion Protocol (MTP) for Middlemore Hospital

Background

This protocol has been established to aid in the clinical management of massive ongoing haemorrhage.

Massive haemorrhage is defined as:

one blood volume per 24 hours or

half a blood volume in 3 hours or

150ml/min with anticipation of ongoing haemorrhage

Patients who lose more than 30% of their blood volume are at an increased risk of haemorrhagic shock and coagulopathy with life-threatening consequences.

Purpose

The purpose of this protocol is to clarify the order of products supplied during MTP activation

The aim of the protocol is to ensure a rapid supply of products in a predetermined ratio. This is often referred to as "1/1/1" and is designed to mimic fresh whole blood. The prime advantage is a system approach to the timely delivery of Blood and products in a coordinated fashion.

Scope

All medical, nursing and technical staff working within Middlemore Hospital
Overview

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Service :	Laboratory - Transfusion Service	Last Review Date :	12/12/2016
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Counties Manukau Health			

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Team Leader Responsibilities

Activate by ringing Blood Bank (Ext 9151) and say "I am activating the Massive Transfusion Protocol"

Notify Lab, send requests on the CMDHB laboratory request form marked **URGENT**

Make a decision to cease MTP and inform Blood Bank

Blood Bank Responsibilities

Ensure X-match sample processed ASAP after O negative release

Notify Haematologist after issuing MTP Box Four

Thaw next box in advance and await request

Ensure supply of platelets

Contacts MMH

Blood Bank - Ext 59151

Coagulation Lab - Ext 58538

Anaesthetist – *3008

Haematologist – via Switchboard

Additional treatment thresholds

If PR > 1.5 or APTT > 40 consider additional 4 units FFP

If fibrinogen <2g/L consider additional 3U cryoprecipitate

If platelets <75 x10⁹/L consider additional 1 pack platelets

If ionized Calcium <1mmol/L give 10mls calcium

Massive bleeding with either shock or abnormal coagulopathy

Ensure delivery of X-matched specimen to Blood Bank

Give 3 units of Group O Rhesus Negative or type specific RBC

Ring Blood Bank to activate Massive Transfusion Protocol

REQUEST, DELIVER & TRANSFUSE AS BELOW

BOX ONE

2U RBC
2U FFP

Check: Coags, Platelets, FBC, ABGs, Ca⁺⁺

BOX TWO

4U RBC
4U FFP
3U Cryoprecipitate

Tranexamic acid 1gm IV

BOX THREE

4U RBC
4U FFP
1U Platelets

Check: Coags, Platelets, FBC, ABGs, Ca⁺⁺

BOX FOUR

4U RBC
4U FFP
3U Cryoprecipitate

Repeat every 30 minutes

and alternate 3 & 4

Check: Coags, Platelets, FBC, ABGs, Ca⁺⁺

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Associated Documents

Other documents relevant to this protocol are listed below:

NZ Legislation	None
CMDHB Clinical Policies	Transfusion of Red Blood Cells, Platelets, Fresh Frozen Plasma and Cryoprecipitate.
NZ Standards	None
Organisational Policies	None
Other related documents	Transfusion Medicine Handbook (2008) BCSH Guidelines on the management of massive blood loss ANZSBT Guidelines for the Administration of Blood Products (2011)

Definitions

Terms and abbreviations used in this document are described below:

Term/Abbreviation	Description
1/1/1	4 RBC/4 FFP/1 Platelet pool
ABGs	Arterial Blood Gases
Coags	Coagulation panel
FBC	Full Blood Count
Box	Only red cell units will be supplied in a box. Platelets and defrosted units will be supplied in colour coded bags as and when available

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