

CLINICAL PRACTICE GUIDELINE: Synopsis Mass Transfusion Scoring Systems

Clinical Question:

Which mass transfusion scoring systems are most useful and effective in predicting the need for massive transfusion in adult non-combat emergency department trauma patients?

Problem:

In the management of the trauma patient, urgent surgical intervention and/or rapid volume resuscitation with blood products for the management of hypovolemic, hemorrhagic shock can be the most vital intervention (Kuhne et al., 2008; Ruchholtz, et al., 2006). Massive transfusion (MT) of blood products may be required; however, one challenge is the prompt identification of the patient in need of MT, which should occur during the initial trauma assessment. Although there are independent variables or triggers for the transfusion of blood products, there are no universal guidelines for MT (Davis, Johannigman, & Pritts, 2012). Several MT scoring systems that utilize differing sets of specific variables (i.e. physiological parameters and/or triggers) have been developed to predict the need for MT during the initial assessment of the trauma patient. Determining which scoring systems are most useful and effective for predicting the need for MT is important for providing high-quality, evidence-based care for non-combat emergency department trauma patients.

Description of Decision Options/Interventions and the Level of Recommendation:							
	The use of a massive transfusion scoring system during the initial assessment of adult non-combat emergency department trauma patients is recommended						B
	MT Scoring System						
	TASH	ABC	McLaughlin	PWH/Rainer	Vandromme	TBSS	ETS
Systolic BP	X	X	X	X	X	X	X
Heart Rate	X	X	X	X	X		
Gender	X						
Hemoglobin	X			X	X		
FAST		X		X		X	X
Fast or CT	X			X			
Pelvic Fractures	X			X		X	
Femur Fracture	X						X
pH			X				
Hematocrit			X				
Blood Lactate					X	X	
INR					X		
GCS				X			
Base Excess	X						
Penetrating Trauma		X					
Age (years)						X	X
Admission from Scene							X
Injury Mechanism-Fall							X
Injury Mechanism-Traffic Accident							X

Krumrei et al., 2012; Nunez et al. 2009, Ogura et al., 2014; 2009; Rainer et al., 2011; Ruchholtz et al., 2006; Vandromme, 2011; Yücel et al., 2006



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Decision/Level of Recommendation	
Trauma Associated Severe Hemorrhage Score (TASH) is useful and effective for predicting the need for massive transfusion.	B
Assessment of Blood Consumption (ABC) is useful and effective for predicting the need for massive transfusion.	B
McLaughlin Score may be useful and effective for predicting the need for massive transfusion.	C
Prince of Wales Hospital/Rainer (PWH/Rainer) may be useful and effective for predicting the need for massive transfusion.	C
Vandromme Score may be useful and effective for predicting the need for massive transfusion.	C
Traumatic Bleeding Severity Score (TBSS) may be useful and effective for predicting the need for massive transfusion.	C
Emergency Room Transfusion Score (ETS) is useful, but limited for predicting the need for massive transfusion.	NR

A	Level A (High): Based on consistent and good quality of evidence; has relevance and applicability to emergency nursing practice.
B	Level B (Moderate): There are some minor inconsistencies in quality evidence; has relevance and applicability to emergency nursing practice.
C	Level C (Weak): There is limited or low-quality patient-oriented evidence; has relevance and applicability to emergency nursing practice.
NR	Not Recommended: Based upon current evidence.

Access the full clinical practice guideline at: <http://bit.ly/2uQru2x>

