

**Southern Minnesota Regional Trauma  
Advisory Committee (SMRTAC)**

**Regional Practice Management Guideline**

**Adult Traumatic Blunt Agonal Arrest**

**Adult  
Practice Management Guideline**

**Effective: 10/2015**

**Contact: SMRTAC Coordinator**

**Last Reviewed: 12/2015**

**Purpose**

To outline the procedure for the treatment of the adult traumatic patient with a blunt mechanism of injury who has no signs of life. In patients without signs of life for >15 minutes, it is appropriate to terminate resuscitation efforts.

**Definitions**

1. Blunt trauma –physical impact to the body by some force
2. Adult trauma patient – any patient age fifteen (15) years or older who has sustained a blunt injury.
3. Blunt agonal arrest – a severely injured patient in extremis, with no signs of life (absent pulse, absent respirations, absent pupil response, GCS 3)

**Policy Statements**

1. Resuscitation of the adult trauma patient who is agonal or arrests as a result of a blunt mechanism consist of a rapid assessment and treatment of the various measures of PEA (profound hypovolemia, airway compromise, tension pneumothorax and pericardial tamponade).
2. Drowning, lightning strikes, medical causes of cardiac arrest, patients with profound hypothermia or if the patient's age is 14 years and less are excluded from this guideline.
3. The utilization of Advanced Cardiac Life Support (ACLS) and Basic Life Support (BLS) measures (Epinephrine, Atropine and CPR) in the setting of Advance Trauma Life Support (ATLS) resuscitation is of limited, if any, benefit in the setting of blunt traumatic patient arrest.
4. Consider previous establishment of the patient's DNR/DNI status, especially in patients who reside in a long term health care facility.
5. Procedures (including airway assessment, needle decompression, chest tubes, etc.) take priority over chest compressions in the **trauma** patient in agonal or arrest states.

**Procedure Statements**

*Note: Procedures (including airway assessment, needle decompression, chest tubes, etc.) take priority over chest compressions in the trauma patient in agonal or arrest states. This procedure statement is applicable in the pre-hospital and hospital setting.*

1. Identify time patient meets the Blunt Agonal Arrest definition (see above definition)

2. If patient has been without signs of life for greater than 15 minutes, it is appropriate to terminate resuscitative efforts.
3. If transport time is greater than the 15 minute total arrest time, transport should not be initiated unless a return of circulation or signs of life are found. *Resuscitation efforts may be terminated after fifteen (15) minutes if there has not been a return of spontaneous circulation.*
4. Resuscitation efforts may be terminated after fifteen (15) minutes of resuscitation if there has not been a return of spontaneous circulation.

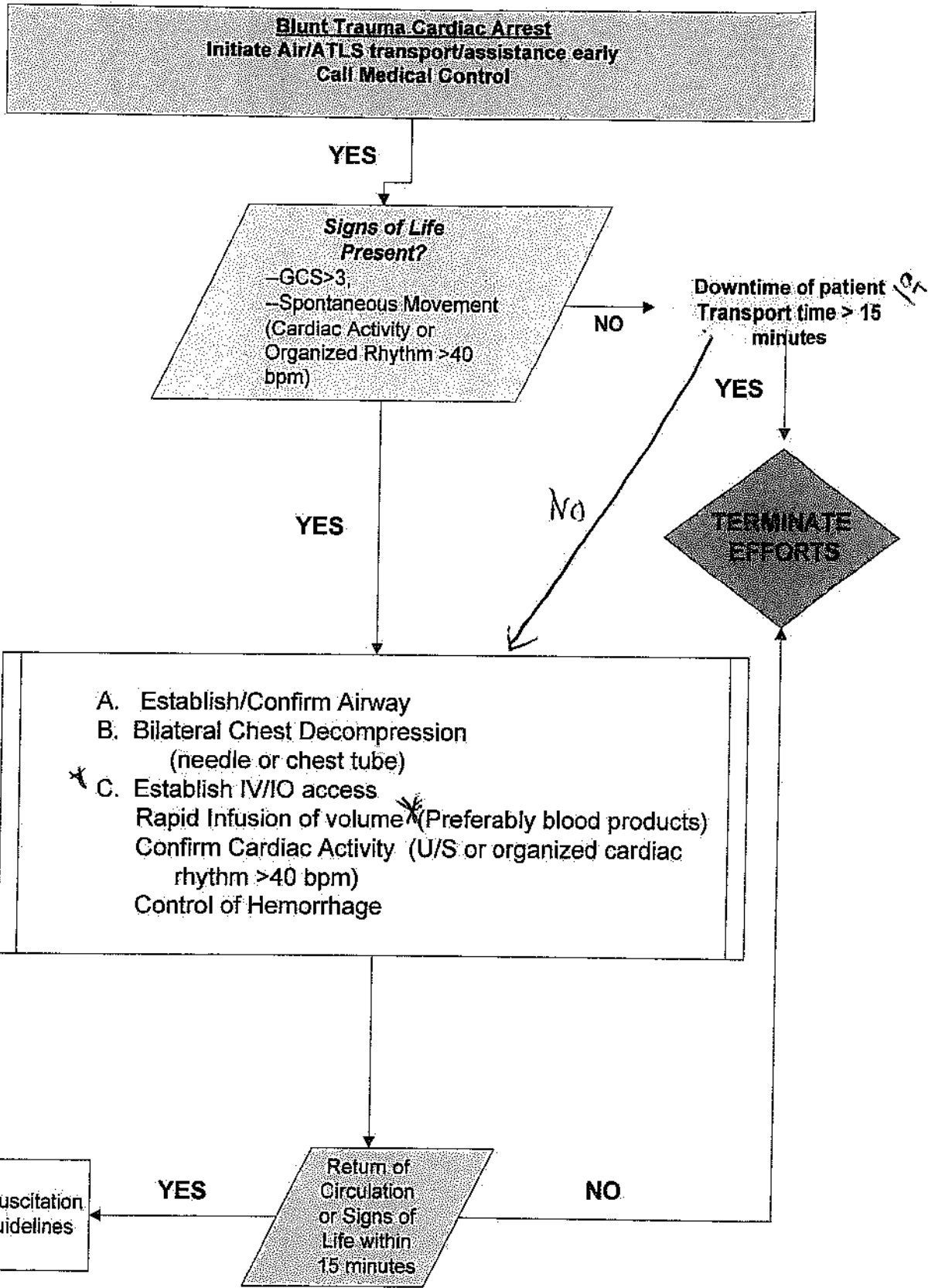
### Resuscitation algorithm

5. Airway:
  - a. Non-intubated patient
    - i. Obtain definitive airway
  - b. Confirmation of Airway placement
    - i. Visualization of ETT placement through vocal cords
    - ii. Colorimetric CO2 detector (may not be reliable in arrest)
    - iii. Auscultation of bilateral breath sounds; absence of delivered breath sounds over epigastrium
    - iv. Appropriate O2 Saturation
  - c. Intubated Patient
    - i. Clear communication of assessment to Trauma Team Leader
    - ii. Confirmation of airway placement by Airway provider
    - iii. Colorimetric CO2 detector (may not be reliable in arrest)
    - iv. Direct laryngoscopy may be considered in setting of any question of placement of ETT. Direct laryngoscopy in presence of ETT has a risk of dislodgement of appropriately placed ETT.
    - v. Auscultation of bilateral breath sounds; absence of delivered breath sounds over epigastrium
    - vi. Appropriate O2 saturation
6. Breathing:
  - a. Bilateral Needle Thoracostomy
  - b. Bilateral Chest Tube Thoracostomy when able
7. Circulation:
  - a. Rapid assessment of central (femoral) and peripheral pulses (radial, pedal)
  - b. Clear communication of assessment to Trauma Team Leader
  - c. Control of life-threatening external hemorrhage
  - d. Obtain manual blood pressure (will not be present if no pulse)
  - e. Confirmation of in-place intravenous (IV) access
  - f. If no IV access:
    - i. Establish IV, Intraosseous (IO) or central access
    - ii. Rapid, early delivery of Packed Red Blood Cells/plasma
      1. Consider initiation of Massive Blood Transfusion (MBT) protocol
  - g. Attach cardiac leads/monitor
  - h. Check Cardiac window on Focused Assessment with Sonography in Trauma (FAST)
    - i. Assess for pericardial effusion
    - ii. Assess cardiac kinetic activity
8. Disability
  - a. Glasgow Coma Scale (GCS) measurement
  - b. Pupillary response
9. Exposure/Environment
  - a. Rapid and complete patient exposure
  - b. Rapidly cover the exposed patient with warmed blankets (allow above assessment and procedures)
  - c. Ensure underbody Bair Hugger functional (or provide warmth by another means)

10. If circulation is restored, consider transfer to local trauma center or tertiary care (dependent on location of patient). Call for transport early.
11. If possible, attempt to contact family members and inform them of the need for transfer.



# ADULT TRAUMATIC BLUNT AGONAL ARREST



**Resources/Links**

Trauma patients receiving CPR: Predictors of Survival. *J Trauma* 2005 58:951-958. Pickens JJ, Copass MK, Bulger EM.

Blunt Trauma Patients with Prehospital Pulseless Electrical Activity (PEA): Poor Ending Assured. *J Trauma* 2002 53:876-881. Martin SK, Shatney CH, Sherck JP, Ho C, Homan SJ, Neff J.

Confusion Surrounding the Treatment of Traumatic Cardiac Arrest. *Journal of the American College of Surgeons*. Fulton RL, Voigt WJ, Hilakos AS.

Role of External Cardiac Compression in Truncal Trauma. *J Trauma* 1982 Vol. 22 No.11. Mattox KL, Feliciano DV.

Hemodynamic Effects of External Cardiac Massage in Trauma Shock. *J Trauma* 1989 Vol. 29 No. 10. Luna GK, Pavilin EG, Kirkman T, Copass MK, Rice CL.

Guidelines for Withholding or Termination of Resuscitation In Prehospital Traumatic Cardiopulmonary Arrest: A Joint Position Paper From the National Association of EMS Physicians Standards and Clinical Practice Committee and the American College of Surgeons Committee on Trauma. *Prehospital Emergency Care* January / March 2003 Vol 7 / No. 1 141-146

Withholding of Resuscitation for Adult Traumatic Cardiopulmonary Arrest: National Association of EMS Physicians and American College of Surgeons Committee on Trauma. *Prehospital Emergency Care* 2013 17:291

<b>Prepared by: SMRTAC leadership</b>
---------------------------------------

<b>Approvals:</b>
-------------------

SMRTAC membership 10/08/2015
------------------------------

*Disclaimer: This is a general guideline and is not intended as a substitute for clinical judgment or as a protocol for the management of all trauma patients.*

Proposed Audit Filters: Mechanism of Injury, EMS Service and Times, Injury Date and Time, GCS on arrival, Trauma Activation Code, Arrival Date and Time at Initial Hospital