

GUIDELINE

Title:	Resuscitative Thoracotomy Guidelines				
Department/Service Line:	Trauma Services				
Approver(s):	Dr. Michael Foreman, Trauma Medical Director; Trauma PIPS/OPS Committee				
Location/Region/Division:	Baylor University Medical Center				
Document Number:	BUMC.Trauma.30.G				
Effective Date:	10/26/2016	Last Review/ Revision Date:	10/2016	Origination Date:	10/2/2013

SCOPE

This guideline applies to all healthcare providers caring for trauma patients at Baylor University Medical Center (BUMC).

DEFINITIONS

None.

GUIDELINE

- Resuscitative thoracotomy can be lifesaving in the appropriate patient. It can also be futile, invasive care
 that exposes the operators and resuscitation team to serious biohazard. As with all medical procedures, a
 balance between potential risk and benefit must be sought.
- Resuscitative Thoracotomy can be considered futile if:
 - 1) Asystole is the initial rhythm in the absence of pericardial tamponade
 - 2) Prehospital CPR exceeding 15 minutes without response in penetrating or blunt injury
 - 3) Concomitant clearly mortal injuries present with CPR (e.g. hemipelvectomy, alanto-occipital dislocation, fatal brain injury)
 - Systolic pressure of 60 mmHg<u>OR</u> palpable carotid or femoral pulse <u>WITH</u> a sustained rhythm for 20 seconds cannot be obtained after resuscitative thoracotomy

ATTACHMENTS

Resuscitative Thoracotomy Algorithm

RELATED DOCUMENTS

None.

REFERENCES

1. Powell DW. Moore EE. Cothren CC. Ciesla DJ. Burch JM. Moore JB. Johnson JL. Is emergency department resuscitative thoracotomy futile care for the critically injured patient requiring prehospital cardiopulmonary resuscitation? Journal of the American College of Surgeons.

199(2):211-5, 2004 Aug

2. Sikka R. Millham FH. Feldman JA. Analysis of occupational exposures associated with emergency department thoracotomy. Journal of Trauma-Injury Infection & Critical Care. 56(4):867-72, 2004 Apr.

3. Hoth JJ. Scott MJ. Bullock TK. Stassen NA. Franklin GA. Richardson JD. Thoracotomy for blunt trauma: traditional indications may not apply. American Surgeon. 69(12):1108-11, 2003 Dec.

4. Hopson LR. Hirsh E. Delgado J. Domeier RM. Krohmer J. McSwain NE Jr. Weldon C. Friel M. Hoyt DB. National Association of EMS Physicians Standards and Clinical Practice Committee. American College of Surgeons Committee on Trauma. Guidelines for withholding or termination of resuscitation

in prehospital traumatic cardiopulmonary arrest. Journal of the American College of Surgeons. 196(3):475-81, 2003 Mar.

5. Balkan ME. Oktar GL. Kayi-Cangir A. Ergul EG. Emergency thoracotomy for blunt thoracic trauma. Annals of Thoracic & Cardiovascular Surgery. 8(2):78-82, 2002 Apr.

6. Ladd AP. Gomez GA. Jacobson LE. Broadie TA. Scherer LR 3rd. Solotkin KC. Emergency room thoracotomy: updated guidelines for a level I trauma center. American Surgeon. 68(5):421-4, 2002 May

7. Grove CA. Lemmon G. Anderson G. McCarthy M. Emergency thoracotomy: appropriate use in the resuscitation of trauma patients. American Surgeon. 68(4):313-6; 316-7, 2002 Apr

8. Miglietta MA. Robb TV. Eachempati SR. Porter BO. Cherry R. Brause J. Barie PS. Current opinion Regarding indications for emergency department thoracotomy. Journal of Trauma-Injury Infection & Critical Care. 51(4):670-6, 2001 Oct.

9. Working Group, Ad Hoc Subcommittee on Outcomes, American College of Surgeons. Committee on Trauma. Practice management guidelines for emergency department thoracotomy. Working Group, Ad Hoc Subcommittee on Outcomes, American College of Surgeons-Committee on Trauma. Journal of the American College of Surgeons. 193(3):303-9, 2001 Sep.

10. Feldman JA. Provider risk during medically futile emergency department thoracotomy. Annals of Emergency Medicine. 38(3):349, 2001 Sep.

11. Aihara R. Millham FH. Blansfield J. Hirsch EF. Emergency room thoracotomy for penetrating chest injury: effect of an institutional protocol. Journal of Trauma-Injury Infection & Critical Care. 50(6):1027-30, 2001 Jun.

12. Rhee PM. Acosta J. Bridgeman A. Wang D. Jordan M. Rich N. Survival after emergency department thoracotomy: review of published data from the past 25 years. Journal of the American College of Surgeons. 190(3):288-98, 2000 Mar.

13. Warren RL. Critical analysis of two decades of experience with postinjury emergency department thoracotomy in a regional trauma center. Journal of Trauma-Injury Infection & Critical Care. 46(5):983, 1999 May.

Mittal V. McAleese P. Young S. Cohen M. Penetrating cardiac injuries. American Surgeon. 65(5):444- 8, 1999 May.
 Frezza EE. Mezghebe H. Is 30 minutes the golden period to perform emergency room thoratomy (ERT) in penetrating chest injuries? Journal of Cardiovascular Surgery. 40(1):147-51, 1999 Feb.

16. Branney SW. Moore EE. Feldhaus KM. Wolfe RE. Critical analysis of two decades of experience with postinjury emergency department thoracotomy in a regional trauma center. Journal of Trauma-Injury Infection & Critical Care. 45(1):87-94, 1998 Jul.

17. Asensio JA. Berne JD. Demetriades D. Chan L. Murray J. Falabella A. Gomez H. Chahwan S. Velmahos G. Cornwell EE. Belzberg H. Shoemaker W. Berne TV. One hundred five penetrating cardiac injuries: a 2-year prospective evaluation. Journal of Trauma-Injury Infection & Critical Care. 44(6):1073-82, 1998 Jun.

18. Asensio JA. Murray J. Demetriades D. Berne J. Cornwell E. Velmahos G. Gomez H. Berne TV. Penetrating cardiac injuries: a prospective study of variables predicting outcomes. Journal of the American College of Surgeons. 186(1):24-34, 1998 Jan.

19. Fahoum B. Schein M. Wise L. Emergency department (ED) thoracotomy is occasionally a life-saving procedure. Journal of Trauma-Injury Infection & Critical Care. 41(3):575, 1996 Sep.

20. Brown SE. Gomez GA. Jacobson LE. Scherer T 3rd. McMillan RA. Penetrating chest trauma: should indications for emergency room thoracotomy be limited? American Surgeon. 62(7):530-3,1996 Jul.

21. Salen P. Melniker L. Chooljian C. Rose JS. Alteveer J. Reed J. Heller M. Does the presence or absence of sonographically identified cardiac activity predict resuscitation outcomes of cardiac arrest patients? American Journal of Emergency Medicine (2005) 23, 459–462.

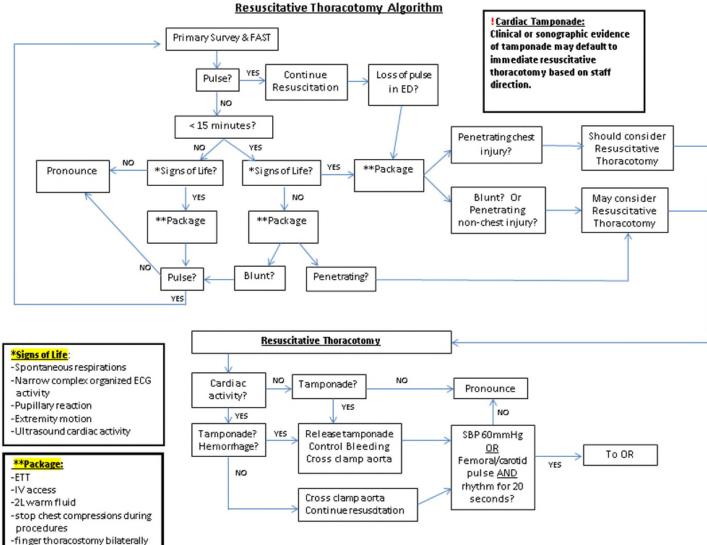
22. Moore EE, Knudson MM, Burlew CC, et al. Defining the limits of resuscitative emergency department thoracotomy: a contemporary Western Trauma Association perspective. *J Trauma*. Feb 2011;70(2):334-339.

23. Burlew CC, Moore EE, Moore FA et al. (2012) Western Trauma Association critical decisions in trauma: resuscitative thoracotomy. J Trauma Acute Care Surg, 73:1359-1363

24. Seamon MJ, et al. (2015). An evidence-based approach to patient selection for emergency department thoracotomy: A practice management guideline from the Eastern Association for Surgery of Trauma. J Trauma Acute Care Surg, 79(1): 159-173.

The information contained in this document should not be considered standards of professional practice or rules of conduct or for the benefit of any third party. This document is intended to provide guidance and, generally, allows for professional discretion and/or deviation when the individual health care provider or, if applicable, the "Approver" deems appropriate under the circumstances.

Attachment Name:	Resuscitative Thoracotomy Algorithm				
Attachment Number:	BUMC.Trauma.30.A	Last Review/Revision Date:	10/2016		



-pelvic binder/sheet (Blunt only)