

CLINICAL PATHWAYS - INTRODUCTION

Clinical Pathways are guidelines used to assist in the delivery of high-value, effective, efficient, safe, and family-centered care. Pathways have been shown to improve the quality of care for hospitalized children with many conditions and in different settings (1)

A definition of a clinical 'pathway' needs to satisfy four criteria (2)

- (1) It is a structured multidisciplinary plan of care.
- (2) It is used to translate guidelines or evidence into local practices.
- (3) It details the steps in a course of treatment of care in a plan, pathway, algorithm, guideline, protocol, or other "inventory of actions."
- (4) It is aimed to assist in standardizing care of a specific population.

These Clinical Decision-Support (CDS) tools are aimed to assist clinicians at the bedside to deliver evidence-based care. The **Algorithm (SECTION 2**) is a visual aid that helps guide clinicians, step-by-step through the timing, indications, and details of recommended tests and treatments for managing specific conditions. In this case, **Traumatic Cardiac Arrest** is being addressed.

These PATHWAYS and their specific SECTIONS were developed by a consensus of a subject-matter-expert (SME) team, organized by the Clinical Effectiveness and Pathways (CEP) program at Nicklaus Children's Health System (NCHS). The SME team included clinicians from multiple disciplines and pediatric sub-specialties (see SECTION 7).

These clinical pathways are intended to be used as a compilation of best practice recommendations for practitioners. The practice of evidence-based pediatric medicine involves the use of pathways, the clinicians' experiences and judgment, and finally the patient's perspectives and values.

However, these clinical pathways are not intended to constitute specific medical recommendations for treatment. The practitioners must exercise their own independent judgment in applying these tools. These clinical pathways are not a script or 'cookbook' applicable to all patients. NCHS cannot certify that CDS documents are accurate or complete in every aspect. NCHS is not responsible for any errors or omissions in the use of clinical pathways or for any outcomes a patient might experience where a clinician consulted or followed these CDS in providing clinical care.

1-Rising utilization of inpatient pediatric asthma pathways. Kaiser SV, et al. J Asthma. 2017.
2-Lawal AK RT, Kinsman L, Machotta A, Ronellenfitsch U, Scott SD, Goodridge D, et al. What is a clinical pathway? Refinement of an operational definition to identify clinical pathway studies for a Cochrane systematic review. BMC Med 2016;14)

Traumatic Cardiac Arrest Nicklaus Children's **ED Phase Health System** Patient meets inclusion criteria **Inclusion Criteria** Patient in cardiac arrest from a traumatic Assess mechanism · Central pulses Respirations • Place on monitor Obtain IV/IO access **Considerations for Terminating Resuscitation** Massive head trauma inconsistent with survival • If no pulse, initiate CPR: • Blunt traumatic arrest with no signs of life upon • Ensure patent airway; intubate as indicated EMS arrival · Control external bleeding • Prolonged pulselessness (>10 min) despite • Initiate fluid resuscitation (20 mL/kg NS/LR resuscitative efforts bolus or blood as required) Evidence of nonsurvivable injuries (e.g., • Initiate warming decapitation, transection) Consider activation of massive transfusion protocol as indicated Continue CPR for 2 minutes Return of spontaneous circulation? No Identify reversible causes Hypovolemia (massive hemorrhage) Hypoxemia Tension Pneumothorax • Pericardial Tamponade Consider bilateral chest tubes Continue Return of Manage as Resuscitation Chest tubes spontaneous clinically placed? efforts as per circulation? indicated **ATLS** No Blunt Penetrating Mechanism Mechanism **Consider** resuscitative

Continue

Resuscitation

efforts as per

ATLS

Patient goes to OR

transfusion protocol

Activate massive

thoracotomy

Thoracotomy

performed?



References

- 1. Advanced Trauma Life support. (n.d.). ACS. https://www.facs.org/quality-programs/trauma/education/advanced-trauma-life-support/
- 2. ATLS Algorithms | Pocket ICU Management. (n.d.). https://anesth.unboundmedicine.com/anesthesia/view/Pocket-ICU-Management/534159/all/ATLS_Algorithms
- 3. ATLS Subcommittee; American College of Surgeons' Committee on Trauma; International ATLS working group. Advanced trauma life support (ATLS(R)): the ninth edition. J Trauma Acute Care Surg. 2013 May;74(5):1363-6. doi: 10.1097/TA.0b013e31828b82f5. PMID: 23609291.
- 4. pubhtml5.com. (2021, January 9). *ATLS 10th Edition Student Manual*. Pubhtml5. https://pubhtml5.com/oxsy/uctd/ATLS_10th_Edition_Student_Manual/167#google_vignette
- 5. Shafafy R, Suresh S, Afolayan JO, Vaccaro AR, Panchmatia JR. Blunt vertebral vascular injury in trauma patients: ATLS (R) recommendations and review of current evidence. J Spine Surg. 2017 Jun;3(2):217-225. doi: 10.21037/jss.2017.05.10. PMID: 28744503; PMCID: PMC5506306.

Return to UCC Phase

Return to ED Phase

Approval and Citation



Emergency Department

- 1. Pathway Utilization
- 2.LOS
- 3. Revisits to the ED
- 4. Direct Cost

ICD-10 Codes

- Cardiac Arrest (I46.9)
- Traumatic Cardiac Arrest (I46.8)

Return to UCC Phase

Return to ED Phase

Return to Inpatient Phase

Approval and Citation



CLINICAL EFFECTIVENESS / PATHWAYS PROGRAM

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Approval by CEP: 4/29/25 NCHS- SYSTEM-WIDE Go-live date: