



How to Use The Society for Pediatric Anesthesia (SPA) Pedi Crisis Critical Event Cognitive Aids In Anesthesia Education

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- Critical events are emergencies during which specific actions must be prioritized by the anesthesia team to result in a favorable patient outcome.^{1,2}
- The SPA critical event cognitive aid provides evidence-based and peer-reviewed information on diagnosing and managing 28 critical events. The scope of these checklists is limited to the information that an attending would want to know in an emergency¹; however, the checklists are also useful for anesthesia education.
- These checklists are available in pdf format at <https://pedsanesthesia.org/critical-events-checklist/> and as an app for [iPhone/iPad](#) and for [android](#) operating systems.
- The app is organized into sections so that users can obtain the needed information as quickly as possible. For each event, tabs exist for information on diagnosis ‘Dx,’ Differential Diagnosis ‘DDx,’ Treatment ‘Tx,’ Drugs, and Crisis Management.¹

4) Pick a level of realism.

Simulation Fidelity	Description
Low	<ul style="list-style-type: none"> • Discuss scenarios in a ‘what would you do next’ format • In-person or virtual setting • Can discuss in perioperative setting (be sure to warn people nearby that you are discussing hypothetical cases!)
Medium	<ul style="list-style-type: none"> • Empty OR (operating room) or perioperative area • +/- non-functional mannequin
High	<ul style="list-style-type: none"> • Empty OR or perioperative area • Functional mannequin • Important to create a safe learning environment ‘what happens in Vegas, stays in Vegas’ • Start with a comprehensive introduction to the mannequin and environment to maximize learning and minimize time spent wondering ‘is the heartbeat supposed to be real?’

EDUCATION TO PREPARE FOR REAL-TIME CRITICAL EVENT USE

- 1) Have learners download the app or print out copies of the paper checklist.
- 2) Ask learners to describe recent emergencies (either from real-life or hypothetical) and use these as impromptu scenarios. This method may increase learner engagement.
- 3) Pick a scenario. More are available at <https://pedsanesthesia.org/critical-events-checklist/> (scroll to the bottom of the webpage)

References:

1. Clebone A, et al. The Development and Implementation of Cognitive Aids for Critical Events in Pediatric Anesthesia: The Society for Pediatric Anesthesia Critical Events Checklists. *Anesth Analg.* 2017;124(3): 900-907.
2. Marshall S. Use of Cognitive Aids During Emergencies in Anesthesia: A Review of the Literature. *Anesth Analg.* 2013;117(5):1162-71.

EDUCATION FOR TEAMWORK DURING CRITICAL EVENTS

- The team leader will identify themselves at the start of the scenario.
- All communication should go through the team leader, who should not be doing other tasks.
- If the team leader needs to perform another task (e.g., put in a central line), the team leader role should be verbally transferred to another team member.
- Practice closed-loop communication. When the team leader gives a message, e.g., ‘Myron, could you put in an IV’, this is repeated back by the receiver, e.g., ‘Confirm, will put in an IV.’ Assume if the loop is not closed, the communication did not occur. Use the person’s name or tap them on the shoulder. If unsure, can say ‘remind me of your name,’ then use their name. Emphasize that the perioperative setting is loud and highly distracting; therefore, closed-loop communication is essential.