Children's Surgery Verification™
QUALITY IMPROVEMENT PROGRAM

Appendix 2 Reference Guide

These definitions coincide with the Optimal Resources for Children's Surgical Care Appendix 2 Children's Surgery Safety Report.

These perioperative events should be captured and reviewed in the PIPS process for all patients younger than 18 years. Those events so designated must be captured with review documented and improvement demonstrable when appropriate. The events will be collected in the Prereview Questionnaire (PRQ) via the online application portal. You will be required to designate the number of events performed in the past 12-month period.

Intraoperative events or those events occurring within 48 hours of operation:

Event		*Should*	*Must*
Airway			
Inadvertent extubation	Inadvertent or unplanned removal or dislodgement of airway device resulting in loss of airway control and requiring reinsertion or repositioning of airway device (either intraop or postop)[1] *		■
Unanticipated reintubation	Postoperative placement of an endotracheal tube or other similar breathing tube (Laryngeal Mask Airway [LMA], nasotracheal tube, orotracheal tube) and ventilatory support, which was not intended or planned at the time of the principal operative procedure (up to 30 days after surgery)[1]		■
Respiratory			
Definite aspiration	The entry of material (for example, food, liquid, gastric contents) into the respiratory tract and accompanied by clinical signs, including coughing or respiratory distress (even transient) and confirmed on radiography, which requires intervention		■
Cardiovascular			
Severe anaphylaxis with hives, wheezing, or hemodynamic effects	Severe, life-threatening response, characterized by a sudden drop in blood pressure, especially if epinephrine is administered, and/or respiratory insufficiency[3]		■
Cardiac arrest (chest compressions or defibrillation)	The use of cardiac compressions or defibrillation during an anesthetic or during the first 24 hours from the end of the operation[2,3]		■
Malignant hyperthermia: Definite, suspected, or use of dantrolene (during or after exposure to anesthetic gases or succinylcholine	Signs include increasing end-tidal CO2, trunk or total body rigidity, masseter spasm or trismus, tachycardia, tachypnea, mixed respiratory and metabolic acidosis, increased temperature, and myoglobinuria[3]		■
Hemorrhage (U25 mL/kg)	Red blood cell and whole blood products or reinfusion of autologous red blood cell or cell-saver products utilized/initiated during the principal operative procedure and up to 72 hours postoperatively	■	

Event		*Should*	*Must*
Institution of massive transfusion protocol	Triggering of the institutional massive transfusion protocol either intraop or within 72 hours postoperatively. If there is no institutional massive transfusion protocol then indicate N/A		■
Unanticipated need for hemodynamic (vasopressor) support	An unplanned significant change in global or regional perfusion for more than 30 minutes that may not adequately support normal organ function as indicated by abnormalities in one or more of the following parameters: heart rate, mean arterial blood pressure, or cardiac index that requires treatment with multiple doses or continuous administration of vasoactive agents	■	
Unanticipated need for ECMO[2]			■
Vascular access complication with vascular injury or pneumothorax	Any size hemothorax or pneumothorax that requires intervention	■	
Neurologic			
Stroke or coma	An interruption or severe reduction of blood supply to the brain resulting in motor, sensory, or cognitive dysfunction (within 30 days of operation)[3]		■
Unanticipated seizure	Physical findings or changes in behavior that occur after an episode of abnormal electrical activity in the brain in a patient without a known pre-operative seizure disorder (within 30 days of operation)[1]	■	
Regional			
Epidural hematoma		■	
Major systemic local anesthesia toxicity	Following the injection of local anesthetic, new onset of: Seizure, somnolence, loss of consciousness, respiratory depression/apnea, bradycardia/asystole, or ventricular tachycardia/fibrillation thought to be related to the injection[3]	■	
Peripheral neurologic deficit following regional anesthesia: Residual sensory, motor, or autonomic block	Residual sensory and/or motor and/or autonomic block 72 hours after last injection when no infection is present[3]		■
Unanticipated high spinal with bradycardia, respiratory insufficiency, or intubation	Neuraxial anesthesia in which the level of sensory denervation extends at least to the second thoracic dermatome and that produces symptomatic hypotension, bradycardia, and/or respiratory insufficiency that requires intubation and ventilatory support		■
Infection following epidural or spinal anesthesia: Abscess, meningitis, or sepsis	Swelling, erythema, radiologic evidence of abscess in combo with any of the following: Fever >38.0, drainage, positive culture, leukocytosis, focal back pain, neurologic deficit, headache, stiff neck[3]	■	
Infection following peripheral nerve block	Superficial (swelling, local erythema, and tenderness) or deep (abscess) with any of the following: Fever >38.0C, drainage, positive culture, leukocytosis, neurologic deficit[3]	■	
Postdural headache	Headache after intended or unintended dural puncture that is worsened in the upright position and improved in the supine position and requires either prolonged bedrest or an epidural blood patch	■	
Intraoperative and Perioperative Events Occurring as Delineated			
Death within 30 days[1]			■
Dental trauma: Unanticipated loss of permanent tooth (teeth)	Any trauma to permanent tooth (teeth) that requires intervention	■	

Event		*Should*	*Must*
Intraoperative awareness: Explicit awareness during anesthesia	Patient memory of events in the OR that occurred while the patient was under general anesthesia[2,3]		■
Medication error: Wrong medication or dosing within 48 hours	Wrong drug, wrong patient, infusion error or administration of drug that patient is known to be allergic to, resulting in need for ongoing care, not a result of underlying disease[2,3]	■	
Operation on incorrect patient	Start of surgery or induction of anesthesia on the wrong patient[2,3]		■
Operation on incorrect side	Start of surgery or anesthesia on the wrong body part or wrong side of patient[2,3]		■
Operation: Wrong operation performed			■
Surgical fires and/or patient burns	Spark or flame in the OR resulting in patient injury or damage to surgical supplies or equipment including surgical drapes[2]		■
Transfusion reaction within 48 hours			■
Unanticipated ICU admission within 48 hours	Any occurrence in which a patient was admitted to a non-ICU bed after a surgical procedure and within 48 hours was transferred to any ICU bed	■	
Unanticipated return to OR within 30 days	A return to the OR that was not planned at the time of the principal operative procedure, that is likely related to the principal operative procedure[1]	■	
Unanticipated inpatient admission within 30 days	Patients who were discharged from their index hospital stay or encounter (whether inpatient or outpatient basis) after their principal operative procedure, and within 30 days of the principal operative procedure, are subsequently formally readmitted by a qualified practitioner as an inpatient to an acute care bed; this variable is for admissions which are unplanned and likely related	■	
Unanticipated transfer to another institution for higher level of patient care within 30 days		■	
Visual loss	Any permanent impairment or total loss of sight		■
Pressure injury related to events in the OR within 30 days	Include mucosal, stage II, III, IV, deep tissue injuries and unstagable pressure injuries (National Pressure Injury Advisory Panel)[4]	■	
VTE within 30 days	New diagnosis of blood clot or thrombus within the venous system (superficial or deep) which may be coupled with inflammation and requires treatment[1]		■

References – data collection programs. If the institution already reports data to this source, then a calendar year of reporting data may be used for CSV reporting.

[1]*ACS NSQIP Pediatric. Please note, this report should include all events over a calendar year, not just those found in the NSQIP sampling.*

[2] *Wake Up Safe anesthesia safety program.*

[3] *Anesthesia Quality Institute / ASA Critical Incidents Reporting System.*

[4] *Solutions for Patient Safety. Only report events related to an operative episode rather than the hospital wide incidence.*

**Please note the ACS NSQIP Pediatric definition is only an intraoperative occurrence*