Complication | ACS NSQIP Outcome | Definition
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Acute Kidney Injury | Progressive Renal Insufficiency | The reduced capacity of the kidney to perform its function as evidenced by a rise in creatinine of >2 mg/dl from preoperative values, but with no requirement for dialysis within 30 days of the operation.

Acute Renal Failure | | A patient who did not require dialysis preoperatively, worsening of renal dysfunction postoperatively requiring hemodialysis, peritoneal dialysis, hemofiltration, hemodiafiltration, or ultrafiltration.

- If the patient requests a recommendation for dialysis, you would answer "Yes" to this variable because the patient required hemodialysis.
- However, if the patient refused dialysis, you would answer "No" to this variable.
- Placement of a dialysis catheter is indicative of the need for dialysis, if used within 48 hours of placement.

Acute Respiratory Failure | Mechanical Ventilation | Total duration of ventilation-assisted respirations during postoperative hospitalization was greater than 48 hours. This can occur at any time during the 30-day period postoperatively. This time assessment is CUMULATIVE, not necessarily consecutive. Ventilation-assisted respirations can be via endotracheal tube, nasotracheal tube, or tracheostomy tube.

Unplanned Intubation | | Patient required placement of an endotracheal tube or other similar breathing tube [Laryngeal Mask Airway (LMA), nasotracheal tube, etc] and was not intubated intraoperatively or within 30 days following surgery which was not intended or planned.

- The variable intent is to capture all cause unplanned intubations, including but not limited to unplanned intubations for refractory hypoxia, cardiac arrest, inability to protect airway.
- Unplanned intubation requiring reintubation would be assigned.
- Emergency tracheostomy would be assigned.
- Patients with a chronic long-term tracheostomy who are on and off the ventilator would not be assigned, unless the tracheostomy tube itself is removed and the patient requires reintubation (endotracheal or a new tracheostomy tube) or an emergency tracheostomy.
- Patients undergoing time off the ventilator during weaning trials and who fail the trial and are placed back on the ventilator would not be assigned.
- Intubations for an unplanned return to the OR would not be assigned, as the intubation is planned, it is the return to the OR which is unplanned.
- In patients who were intubated for a return to the OR for a surgical procedure unplanned intubation occurs after they have been extubated after surgery. In patients who were not intubated for a return to the OR, intubation at any time after their surgery is considered unplanned.

Deep Vein Thrombosis/Pulmonary Embolus | Deep Vein Thrombosis | New diagnosis of a blood clot or thrombus within the venous system (superficial or deep) which may be coupled with inflammation and requires treatment.

Pulmonary Embolus | | Lodging of a blood clot in the pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clot usually originates from the deep leg veins or the pelvic venous system.

The identification of a new blood clot in a pulmonary artery causing obstruction (complete or partial) of the blood supply to the lungs. However, since there are not always preoperative studies proving that a clot or thrombus was not present preoperatively, the technical specification of the variable require only a "new diagnosis" - in other words the clot or thrombus was not previously known.

A pulmonary embolus must be noted within 30 days after the principal operative procedure AND the following criteria, A AND B below:

A. New diagnosis of a blood clot in a pulmonary artery

B. The patient has a V/Q scan interpreted as high probability of pulmonary embolism or a positive CT exam, TEEM, pulmonary angiogram, CT angiogram, or any other definitive imaging modality (including direct pathology examination such as autopsy).

Myocardial Infarction | Myocardial Infarction | An acute myocardial infarction which occurred intraoperatively or within 30 days following surgery as manifested by one of the following:

- ST elevation > 1 mm in two or more contiguous leads

- New left bundle branch

- New q wave in two of more contiguous leads

- New elevation in troponin greater than 3 times upper level of the reference range in the setting of suspected myocardial ischemia

- Pulmonary embolus

Sepsis/Septic Shock | Sepsis | Sepsis is a vast clinical entity that takes a variety of forms. The spectrum of disorders spans from relatively mild physiologic abnormalities to septic shock. The intent is to capture the patient whose physiology is compromised by an ongoing infectious process after surgery. Present at the time of surgery is a modified criteria prevent patients from being counted as having complications if there is significant evidence that the sepsis or septic shock outcome was under way prior to the surgery performed. Please report the most significant level using the criteria below.

1. Sepsis: Sepsis is the systemic response to infection. Report this variable if the patient has two of the following clinical signs and symptoms of SIRS:

   - Temp >38 °C (100.4 °F) or < 36 °C (96.8 °F)

   - White blood count >12,000 or < 4,000

   - Respiratory rate >20 or < 12 breaths/min

   - WBC <12,000 cells/mm3

   - An immunocompromised state or bacterial infection

   - An immunocompromised state or viral infection

   - An immunocompromised state or fungal infection

   - An immunocompromised state or parasitic infection

   - An immunocompromised state or mycobacterial infection

   - An immunocompromised state or other infection

2. Septic Shock: Sepsis is considered severe when it is associated with organ and/or circulatory dysfunction. Report this variable if the patient has SIRS AND documented organ and/or circulatory dysfunction. Examples of organ dysfunction include: oliguria, acute alteration in mental status, acute respiratory distress. Examples of circulatory dysfunction include: hypotension, requirement of inotropic or vasoconstrictor agents. Septic Shock is assigned when it appears to be related to Sepsis and not a Cardiogenic or Hypovolemic etiology.

Guidance: If the patient meets criteria to assign preop sepsis, assign the risk factor; if the patient meets the criteria to assign postop sepsis, assign the occurrence and then assess for PATOS and assign if appropriate.

Septic Shock | | For Sepsis and Septic Shock within 30 days of the operation, please report the most significant level using the criteria that follow. Severe Sepsis/Septic Shock:

- Sepsis is considered severe when it is associated with organ dysfunction. Report this variable if the patient has the clinical signs and symptoms of SIRS or sepsis AND documented organ and/or circulatory dysfunction. Examples of organ dysfunction include: oliguria, acute alteration in mental status, acute respiratory distress. Examples of circulatory dysfunction include: hypotension, requirement of inotropic or vasoconstrictor agents. Septic Shock is assigned when it appears to be related to Sepsis and not a Cardiogenic or Hypovolemic etiology.

Guidance: If the patient meets criteria to assign preop septic shock assign the risk factor; if the patient meets the criteria to assign postop septic shock assign the occurrence and then assess for PATOS and assign if appropriate.

Stroke | Stroke | Patient develops an embolic, thrombotic, or hemorrhagic vascular accident or stroke with motor, sensory, or cognitive dysfunction (e.g., hemiplegia, hemisensory loss, aphasia, sensory deficit, impaired memory) that persists for 24 or more hours. If a specific time frame for the dysfunction is not documented in the medical record, but there is a diagnosis of a stroke, assign the occurrence, unless documentation specifically states that the motor, sensory, or cognitive dysfunction resolved.

Transfusion | Bleeding Transfusions | At least 1 unit of packed or whole red blood cells given from the surgical start time up to and including 72 hours postoperatively. If the patient receives shed blood, autologous blood, cell saver blood or plasuevoc postoperatively, count this blood in terms of equivalent units. For a cell saver, every 500 ml of shed or cell saver = 1 unit of packed cells. If there are less than 250 ml of cell saver, round down and report as 0 units. If there are 250 cc, or more of cell saver, round up to 1 unit. The blood may be given for any reason. If greater than 200 units, enter 200 units. Record the number of units given.

Record the date the blood was initially started (intra-operatively or postoperatively).

Note: Intra-operative blood to prime the bypass pump for CABG is not counted as blood and should not be included as cell-saver blood.