

## **Pilot Study Definition of Postoperative Morbid Events**

### **1.0) Cardiac Events**

1.1) Myocardial ischaemia without myocardial infarction Definition: Myocardial oxygen delivery inadequate to meet myocardial oxygen demand without causing myocardial injury.

Diagnosis: Clinical impression and two or more of the following, which are not supported by diagnostic serum levels CK- MB fractions or serum Troponin -1 levels.

Angina; Electrocardiograph (ECG) ST segment depression 1mm or more compared to baseline ECG in 2 or more contiguous leads; ECG inverted T waves compared to baseline ECG in two contiguous leads; new dysrhythmias or bundle branch block; Unexplained haemodynamic instability; Physical documentation of myocardial ischaemia.

1.2) Myocardial infarction

Definition: Myocardial ischaemia resulting in myocardial injury.

Diagnosis: Clinical impression supported by: ECG ST segment elevation of 1 mm or more; New Q waves on ECG; Serum CK-MB fraction equal to or greater than 5%; A Serum Troponin-1 of 1.4 or higher (excluding renal failure patients); Physician documentation of myocardial infarction

1.3). Dysrhythmias and conduction abnormalities

Definition: Any cardiac rhythm or conduction pattern other than normal sinus rhythm, or a new or exaggeration of a preexisting dysrhythmia or conduction defect.

Diagnosis: Evidence of above definitions on ECG tracing; Physician documentation of dysrhythmia and/or conduction abnormalities

1.4) Congestive heart failure

Definition: Decreased myocardial contractility resulting in signs and/or symptoms of pulmonary or systemic congestion.

Diagnosis: Clinical impression supported by: Evidence of systemic venous congestion and/or pulmonary congestion on physical exam; Chest Radiographic evidence of pulmonary oedema and/or cardiomegaly (cardiothoracic ratio > 0.5), Indications of right, left, or biventricular myocardial failure via pulmonary artery occlusion pressure (> 18mmHg) and/or echo cardiography ejection fraction < 40%; Physician documentation of congestive heart failure.

1.5) Postoperative vasopressors

Definition: Any postoperative patient requiring vasopressor support by continuous IV infusion in the postoperative period.

Diagnosis: History of/or presently receiving vasopressors postoperatively.

1.6) Cardiac arrest with successful resuscitation

Definition: Sudden cessation of cardiac functions with disappearance of arterial blood pressure, and successfully resuscitated.

### **2.0) Respiratory Events**

2.1) Prolonged Intubation

Definition: Patient intubated from the end of the operation for over 24 h.

Diagnosis: Evidence of patient being intubated for over 24 h in chart.

2.2) Reintubation Postoperation

Definition: Any patient who postoperatively was extubated within the 10-day period of monitoring and has to be reintubated for any reason within the monitoring period.

Diagnosis: Evidence of reintubation during the monitoring period from the patient's chart; Physician documentation of reintubation

2.3) Acute respiratory distress syndrome (ARDS)

Definition: Noncardiogenic pulmonary oedema

Diagnosis: PaO<sub>2</sub>/FIO<sub>2</sub> less than or equal to 200; chest radiograph = Bilateral pulmonary infiltrates; No clinical evidence of atrial hypertension; Pulmonary artery occlusion pressure less than or equal to 18 mmHg; No Cardiac explanation for impaired oxygenation; Physician documentation of ARDS

#### 2.4) Hypoxaemia

Definition: Deficient oxygenation of tissue

Diagnosis: PaO<sub>2</sub>/FIO<sub>2</sub> less than or equal to 300 or pulse oximetry < 90%; Physician documentation of hypoxaemia

#### 2.5) Pneumonia

Definition: Lower respiratory tract infection

Diagnosis: Clinical impression along with 2 or more of following: abnormal breath sounds compared to baseline; body temperature greater than or equal to 38 degrees C , New productive cough; (+) sputum cultures; CXR documentation of atelectasis or new infiltrates; Physician documentation of pneumonia

#### 2.6) Acute Respiratory Failure

Definition: The inability to independently support one's ventilatory and/or oxygenation needs without medical intervention

Diagnosis: Clinical impression supported by: Progressive dyspnoea; PaO<sub>2</sub>/FIO<sub>2</sub> less than or equal to 300; Pulse oximeter less than or equal to 90%; Physician documentation of respiratory failure

### **3.0) Vascular Events**

#### 3.1) Venous Thrombus

Definition: Formation or extension of blood clot or thrombus within the venous system

Diagnosis: Clinical suspicion confirmed by ultrasound or venogram;

Physician documentation of venous thrombus

#### 3.2) Pulmonary Emboli

Definition: Development of an embolus obstructing or partially obstructing the pulmonary artery inflow tract to the lungs.

Diagnosis: Clinical suspicion supported by: Positive pulmonary arteriogram and/or moderate to high probability ventilation perfusion scan; Physician documentation of pulmonary emboli

### **4.0) Renal Events**

#### 4.1) Renal insufficiency

Definition: Increased serum creatinine from preoperative levels indicating decreased renal function.

Diagnosis: Postoperative creatinine level > 1.5 mg/100 ml in a patient who's preoperative creatinine was less than 1.5 mg/100 ml or a 20% increase in serum creatinine postoperatively from a preoperative level in a patient who preoperatively had a creatinine of greater than 1.5 mg/100 ml; Physician documentation of increased in serum creatinine.

#### 4.2) Acute renal failure

Definition: Acute renal dysfunction sufficient to need dialysis

Diagnosis: This is a clinical decision secondary to the patient's state of renal dysfunction documented by the physician in the patient's chart.

### **5.0) Infectious Events**

#### 5.1) Wound infection

Definition: Wound healing delayed by microbial infection

Diagnosis: Purulent material draining or aspirated from wound and/or a positive culture from wound. Antibiotics must be documented as given. Physician documentation of wound infection in the chart.

#### 5.2) Sepsis

Definition: The presence in the blood of pathologic microorganisms or their toxins.

Diagnosis: Clinical impression along with the following: Signs of systemic response to infection, tachypnea, tachycardia (> 90 beats/min), hyper or hypothermia (>38.4°C or < 35.6°C), Physician documentation in chart.

#### **6.0) Gastrointestinal Events**

Definition: Gastrointestinal obstruction and/or paralytic ileus

Diagnosis: Clinical impression, documentation of interruption of oral or enteric (gastric or jejunum) feedings (clear liquids to solids) supported by appropriate therapeutic interventions and diagnosis test; Physician documentation of event in patient's event

#### **7.0) Re-operative Events**

Definition: Patient undergoes an invasive procedure not limited to the operating room secondary to a complication resulting from the initial elective surgical procedure.

Diagnosis: Physician documentation of invasive procedure in chart

#### **8.0) Readmission Event**

Definition: Readmission after the initial discharge, due to a complication derived from the initial surgical procedure within 30 days of the surgery

#### **9.0) Death:**

Definition: Patient dies within this hospital admission.