

Supplemental Appendix 4: Definitions of SSI, post-operative sepsis and maternal sepsis

Below are the definitions of SSI, post-operative sepsis and maternal sepsis that will be used to diagnose study participants, consistent with the CDC criteria and Second (2001) International Consensus on Sepsis. [30,32]

SSI

- **Superficial SSI** is defined as an infection which occurs within 30 days after the operation and infection involves only skin and subcutaneous tissue of the incision and at least one of the following:
 - a. Purulent drainage with or without laboratory confirmation, from the superficial incision
 - b. Organisms isolated from an obtained culture of fluid or tissue from the superficial incision
 - c. At least one of the following signs or symptoms of infection: pain or tenderness, localised swelling, redness, or heat and superficial incision is deliberately opened by surgeon, unless incision is culture-negative
 - d. Diagnosis of superficial incisional SSI made by a surgeon or attending physician
- **Deep SSI** is defined as an infection which occurs within 30 days after the operation and the infection appears to be related to the operation and the infection involves deep soft tissue (e.g. fascia, muscle) of the incision and at least one of the following:
 - a. Purulent drainage from the deep incision but not from the organ/space component of the surgical site
 - b. A deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms: fever ($>38^{\circ}\text{C}$), localised pain or tenderness, unless incision is culture-negative
 - c. An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination
 - d. Diagnosis of deep incisional SSI made by a surgeon or attending physician
- **Organ/Space SSI** is defined as an infection which occurs within 30 days after the operation, the infection appears to be related to the operation and infection involves any part of the anatomy (e.g., organs and spaces) other than the incision which was opened or manipulated during an operation and at least one of the following:
 - a. Purulent drainage from a drain that is placed through a stab wound into the organ/space
 - b. Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space
 - c. An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination
 - d. Diagnosis of organ/space SSI made by a surgeon or attending physician.

Post-operative Sepsis

- **Post-operative sepsis** is defined as having an infection or suspected infection AND two more of the SIRS criteria: tachycardia (heart rate >90 beats/min); tachypnea (respiratory rate >20 breaths/min); fever or hypothermia (temperature $>38.3^{\circ}\text{C}$ or $<36^{\circ}\text{C}$); leukocytosis (WBC count $>12,000 \mu\text{L}^{-1}$); leukopenia (WBC count $< 4000 \mu\text{L}^{-1}$); hyperglycemia (plasma glucose >140 mg/dL); altered mental status.

- **Severe sepsis** is defined as sepsis complicated by one or more organ dysfunction criteria: systolic blood pressure <90mmHg or mean arterial pressure <65mmHg; a systolic blood pressure decrease >40 mmHg from baseline; urine output < 0.5 ml/kg/hour for 2 hours or Creatinine > 2.0 mg/dl (176.8 mmol/L); platelet count <100,000 μ L; coagulopathy (INR >1.5 or aPTT >60 secs); bilirubin > 2 mg/dl (34.2 mmol/L)
- **Septic shock** is defined severe sepsis complicated by one or of the following criteria: serum lactate level >2 mmol/L; persistently hypotensive (systolic blood pressure < 90 mmHg or mean arterial pressure < 65 mmHg), or requiring vasopressors despite volume resuscitation

Maternal Sepsis

- **Maternal sepsis** is defined as having an infection or suspected infection AND two more of the SIRS criteria: tachycardia (heart rate >110 beats/min); tachypnea (respiratory rate >24 breaths/min); fever or hypothermia (temperature >38.3°C or <36°C); leukocytosis (WBC count >15,000 μ L⁻¹); leukopenia (WBC count < 4000 μ L⁻¹); hyperglycemia (plasma glucose >140 mg/dL); altered mental status.
- **Severe maternal sepsis** is defined as sepsis complicated by one or more organ dysfunction criteria: systolic blood pressure <90mmHg or mean arterial pressure <65mmHg; a systolic blood pressure decrease >40 mmHg from baseline; urine output < 0.5 ml/kg/hour for 2 hours or Creatinine > 2.0 mg/dl (176.8 mmol/L); platelet count <100,000 μ L; coagulopathy (INR >1.5 or aPTT >60 secs); bilirubin > 2 mg/dl (34.2 mmol/L)
- **Septic shock** is defined severe sepsis complicated by one or of the following criteria: serum lactate level >2 mmol/L; persistently hypotensive (systolic blood pressure < 90 mmHg or mean arterial pressure < 65 mmHg), or requiring vasopressors despite volume resuscitation