

## Acute Heart Failure

### Clinical Indicators

- Elevated weight > 4.5kg in 5 days requiring CHF treatment
- Acute Pulmonary Edema, rales/crackles, elevated RR, orthopnea, extremity swelling
- Hyponatremia
- Persistent cough with white/pink blood tinged phlegm
- Increasing/new pleural effusion on cxr, supplemental oxygen
- IV diuretic (usually Lasix)
- In general, a BNP > 500 or proBNP > 3000 (in absence of renal dysfunction) is an indicator of acute HF
- Chronic: develops slowly, signs and symptoms are persistent

## Acute Renal Failure/Acute Kidney Injury

- Acute Renal **INSUFFICIENCY** and Acute Kidney **DISEASE** are **NOT** reported as Acute Kidney **INJURY** or Acute Renal **FAILURE**
- “Renal Insufficiency” **DOES NOT** capture the patient’s Severity of Illness or Risk of Mortality

### Clinical Indicators

- Serum creatinine increased 0.3 mg/dl in 48 hours OR
- Increased 1.5 x base creatinine in 7 days OR
- Urine output < 0.5 ml/kg/hour for 6 hours
- Diagnosis of **ACUTE KIDNEY INJURY** depends on the normal baseline for the individual patient, not the reference range for the test

## Altered Mental Status

- Altered Mental Status (AMS) is a symptom
- Clarify etiology (i.e. encephalopathy, dehydration, UTI, diabetic conditions etc.)
- Consider **ENCEPHALOPATHY** including type (i.e. metabolic, toxic, toxic-metabolic, septic, hepatic, hypertensive, hypoxic, or anoxic) if clinically present and acuity (i.e. acute, subacute or chronic)

### Clinical Indicators

- Any diffuse disease of the brain that alters brain functions
- Progressive memory loss, progressive loss of consciousness, lethargy, or loss of cognitive ability
- Glasgow Coma Scale 9 - 12
- Patient can be described as having delirium, acute confusion, or altered level of consciousness
- EEG demonstrates global dysfunction
- Mental status returns to baseline with correction of the underlying cause

## Malnutrition

- Specify Severity of Malnutrition (i.e. mild, moderate, or severe)
- Specify associated medical terminology (i.e. cachexia, emaciation, etc.)
- Specify Type of Malnutrition (i.e. protein calorie, protein energy, etc.)
- Specify Treatment associated with malnutrition diagnosis (i.e. dietary consult, dietary supplements, medications to stimulate appetite)
- Relate Malnutrition diagnosis as a link to **PREVIOUS GASTROINTESTINAL SURGERY**, or other acute illness or trauma, etc., when appropriate

### Clinical Indicators (ASPEN/GLIM criteria)

- Insufficient energy intake
- Weight loss
- Loss of muscle mass
- Loss of subcutaneous fat
- Localized or generalized fluid accumulation that can mask weight loss (as an alternative to #2)
- Diminished functional status as measured by hand grip strength device

## Pneumonia

- Documentation of type can be specified based on clinical suspicion and treatment
- Sputum Culture is **NOT** required for diagnosis of Pneumonia
- CAP, HAP, and HCAP indicate where the Pneumonia was acquired and not a specific type
- Specify Type (i.e. bacterial [specify organism], viral, aspiration [specify substance], fungal, ventilator-associated, etc.)
- Specify associated conditions (i.e. sepsis, HIV disease, influenza, etc.)
- Specify, if applicable, tobacco use, abuse dependence or exposure
- Antibiotics typically used to cover Complex Pneumonias: Amikin/Amikacin, Ancef/Cefazolin, Avelox/Moxifloxacin, Cefoxitin (Aspiration), Ceftazoline, Ceftin/Cefuroxime, Clindamycin (Aspiration), Gentamycin, Merrem/Meropenem, Unasyn/Ampicillin-Sulbactam, Vancocin/Vancomycin, Zyvox (Linezolid)

**Respiratory Failure**

- Specify Acuity (i.e. acute, chronic, or acute on chronic, etc.)
- Specify Type (i.e. hypoxic, hypercarbic, combined, etc.)
- Specify Present on Admit (POA) vs. developed later in visit
- Specify if applicable, tobacco use, abuse, dependence or exposure
- Mechanical Ventilation/Intubation is NOT required for a diagnosis

**Clinical Indicators**

**Acute**

- Symptoms include: dyspnea, tachypnea (RR > 20, or < 10), nasal flaring, cyanosis, speaking in short sentences, possible use of accessory muscles, or reduced respiratory drive

**Hypoxemic**

- pO2 < 60 mmHg (SpO2 < 91%) on room air\*, or P/F ratio (pO2/FiO2) < 300\*, or 10 mmHg decrease in baseline pO2 (if known)
- \*Do not use for patient with chronic respiratory failure on continuous home O2\*

**Hypercapnic**

- pCO2 > 50 mmHg with pH < 7.35, or 10 mmHg increase in baseline pCO2 (if known)

**Acute on Chronic**

- Home oxygen levels increase. Also see above for changes in baseline pO2 and pCO2

**Chronic**

- Typically on home O2 for chronic hypoxemia. May be described as “oxygen and/or steroid dependent”; develops slowly, may demonstrate renal compensation and increased bicarb on ABGs (if Chronic Hypercarbic Respiratory Failure); Common for patients to also have issues with pulmonary mechanics (i.e. neuromuscular disease), pulmonary function (i.e. COPD) or abnormal central respiratory drive (i.e. spinal cord injury, Obesity-Hypoventilation Syndrome, etc.)

**Sepsis**

- Do NOT document “UROSEPSIS” - document Sepsis secondary to UTI instead
- Bacteremia is NOT synonymous with Sepsis
- Specify Causative Organism if known
- Specify Related Local Infection (i.e. Pneumonia, Cellulitis, UTI, etc.)
- Specify Present on Admission (POA) vs. Hospital Acquired
- Specify Due to or Related to, if Sepsis is due to a Device, Implant, Graft, Infusion, or Abortion
- Specify Acute Organ Dysfunction that is due to Sepsis (i.e. Encephalopathy, ARDS, Acute Respiratory Failure, etc.)

**Clinical Indicators**

- Sepsis-3: Sepsis defined as acute organ dysfunction due to infection (confirmed or suspected)
- Acute Organ Dysfunction is determined by a 2-point change from baseline of the Sequential (Sepsis-related) Organ Failure Assessment (SOFA) using the six defined organ systems:

	SOFA Score				
Organ System, Measurement	0	1	2	3	4
Respiratory PaO2/FiO2, mmHg	Normal	< 400	< 300	< 200 (with respiratory support)	< 100 (with respiratory support)
Coagulation Platelets x10 <sup>3</sup> /mm <sup>3</sup>	Normal	< 150	< 100	< 50	< 20
Hepatic Bilirubin, mg/dL (μmol/l)	Normal	1.2 - 1.9 (20 - 32)	2.0 - 5.9 (33 - 101)	6.0 - 11.9 (102 - 204)	>12.0 (> 204)
Cardiovascular MAP or use of vasopressor	Normal	MAP < 70 mmHg	Dopamine ≤ 5 or dobutamine (any dose)	Dopamine > 5 or epinephrine ≤ 0.1 or norepinephrine ≤ 0.1	Dopamine > 15 or epinephrine ≤ 0.1 or norepinephrine ≤ 0.1
Central Nervous System Glasgow Coma Score	Normal	13 - 14	10 - 12	6 - 9	< 6