| Top Conditions | Clinical Condition        | Definition   | Documentation Tips  | References   |
|----------------|---------------------------|--|---|--|
| Hospitalist    | AKI with Tubular Necrosis | Acute Tubular Necrosis is the dysfunction of, or damage to, the kidney tubules due to a toxin or ischemia, causing acute renal failure. ATN prerequisites include:  *Lab data meeting KDIGO criteria for AKI, with no pre-renal causes.  *Elevated serum creatinine for > 72 hours despite fluid resuscitation   | Acute tubular necrosis (ATN) is a misnomer, as tubular dysfunction is far more common than actual necrosis.  The following are supportive of but not required to document true ATN:  FENa > 2%  Muddy brown casts Biopsy evidence of ATN  Less severe descriptors of true ATN that do not fully capture patient severity include:  Contrast-induced nephropathy  Tubular necrosis (without acuity documented)  Acute Kidney Injury (without specifying the etiology as ATN)   | M. Hanif et.al, Acute Renal Tubular Necrosis. NIH National Library of Medicine Stat Pearls February 2023. S. Negi, et. al, Acute kidney injury: Epidemiology, outcomes, complications, and therapeutic strategies. Seminars in Dialysis 2018 Sep;31(5):519-527. S. Rosen and I. Stillman: Acute Tubular Necrosis Is a Syndrome of Physiologic and Pathologic Dissociation. Journal of the American Society of Nephrology 19(5): p 871-875, May 2008. |
|                | Acidosis/Alkalosis        | Clinically significant acidosis and alkalosis when the condition is evident, linking all the clinical criteria validating the diagnosis, such as:  *Apparent primary derangement and compensatory mechanism  *Presenting signs and symptoms and related blood gas data  *Treatments correcting specified acidosis or alkalosis or directed at the underlying cause                                 | ■Less severe descriptors that fail to capture the severity of true acidosis or alkalosis include:  "Abnormal blood gas  "High or low pH  "High or low base excess  "Increased lactate  "Decreased bicarbonate  "High PaCO2 or low PaCO2  ■Always specify the primary cause as metabolic, respiratory, or a mixed acid-base disorder, along with any known etiologies.  ■Renal tubular acidosis is best documented as a non-anion gap hyperchloremic metabolic acidosis to reflect true severity reporting.  | E. Hopkins et.al: Physiology, Acid Base Balance. National Library of Medicine: StatPearls September 12, 2022.  T. Vallipuram: Approach to Acid Base Disorders. McGill Journal of Medicine. July 5, 2022.  J. Kaimori et.al: Diagnosing metabolic acidosis in chronic kidney disease: importance of blood pH and serum anion gap. Kidney Research and Clinical Practice. January 10, 2022.  |
|                | Acute Blood Loss Anemia   | Acute Blood Loss Anemia is defined by the presence of two major criteria:  1. Acute blood loss from any source (e.g. GI bleeding, post-surgical blood loss, epistaxis, or retroperitoneal bleeding)  2. A clinically significant drop in hemoglobin: This encompasses patients who have pre-existing anemia and become more anemic due to bleeding, or red blood cells given to address blood loss | ■Less severe descriptors of true acute blood loss anemia include:  °Anemia without acuity or etiology  °Blood loss anemia without acuity  °Acute anemia without etiology  ■The following clinical scenarios do not meet the criteria for true ABLA:  °A hemoglobin decrease not considered clinically significant and lacks close monitoring and/or ongoing evaluation and treatment  °A hemoglobin decrease as a result of hemodilution from IV hydration  °Precipitous drops in hemoglobin not linked to a clear source of blood loss   | R. Killeen and A. Tambe: Acute Anemia. NIH National Library of Medicine. Stat Pearls. August 17, 2023. M. McEvoy and A. Shander: Anemia, Bleeding, and Blood Transfusion in the Intensive Care Unit. Am J Crit Care (2013) 22 (6): eS1–eS13. P. Kim, et.al: Impact of Acute Blood Loss Anemia and Red Blood Cell Transfusion on Mortality after Percutaneous Coronary Intervention Clin. Cardiol. 30 (Suppl. II), II-35 – II-43 (2007)               |
| Hospitalist    | Acute Heart Failure       | Acute heart failure should always be assessed and documented through to the discharge summary, with clinical validation and other criteria to support the acuity and specific type of heart failure.   | Both acuity (acute; acute-on-chronic) and type (systolic; diastolic; combined) must be documented  Less severe clinical descriptors of true acute heart failure:  °CHF  °Acute CHF  °Left or right-sided heart failure  °Systolic or diastolic dysfunction  °New York Heart Association Functional Classifications  °Abbreviations for heart failure type without acuity documented  *Always document the etiology and systolic or diastolic subtype when known in cases of right heart failure. E.g.  "acute diastolic right heart failure due to pulmonary hypertension"  *Preserved and reduced ejection rejection fraction are acceptable synonyms of diastolic and systolic heart failure types respectively  *Documentation of acute cor pulmonale most commonly applies to and is reported on patients with acute right ventricular failure secondary to a large acute pulmonary embolus | S. Emmons-Bell et. al: Prevalence, incidence and survival of heart failure: a systematic review. Heart 2022 Aug 11;108(17):1351-1360. doi: 10.1136/heartjnl-2021-320131 M. Riccardi et. al: Heart failure: an update from the last years and a look at the near future. ESC Heart Fail. 2023 Jun; 10(3): 2143. S. Kurmani and I. Squire: Acute Heart Failure: Definition, Classification and Epidemiology Curr Heart Fail Rep. 2017; 14(5): 385–392. |

| Hospitalist | Acute Kidney Failure        | ■AKI is defined as a sudden reduction in renal function within a period of hours or days. Per KDIGO, AKI is indicated by any one of the following:  "Serum creatinine increases greater than or equal to 1.5 times the baseline within the prior 7 days, or  "Serum creatinine increases greater than or equal to 0.3 milligrams per deciliter within a 48-hour period over the course of the admission, or  "Urine output less than 0.5 milliliters per kilogram per hour for 6 – 12 hours  ■Baseline creatinine  "May be established from values up to 1 year prior  "If the baseline is unknown, utilize the lowest serum creatinine recorded during an admission | Acute Kidney/Renal Injury and Acute Kidney/Renal Failure all capture true patient severity  Less severe and inaccurate descriptions of true acute kidney injury include:  Acute Renal Insufficiency  Azotemia  Oliguria  Renal Failure  Kidney Failure  Abbreviations should be spelled out in their entirety in at least one note for the admission  Clinical criteria validating AKI include:  Apparent risk factors  Clinical indicators  Treatments for AKI  Conflicting documentation around AKI should be resolved by the attending provider by the time of discharge  | Acute Kidney/Renal Injury and Acute Kidney/Renal Failure all capture true patient severity Less severe and inaccurate descriptions of true acute kidney injury include: Acute Renal Insufficiency Azotemia Oliguria Renal Failure Kidney Failure Abbreviations should be spelled out in their entirety in at least one note for the admission Clinical criteria validating AKI include: Apparent risk factors Clinical indicators Treatments for AKI Conflicting documentation around AKI should be resolved by the attending provider by the time of discharge |
|-------------|-----------------------------|--|--|---|
| Hospitalist | Acute Myocardial Infarction | Acute myocardial infarction is reflected by both troponin elevation (with at least one value above the 99th percentile) AND evidence of ischemic etiology (symptoms, new EKG changes, cardiac imaging abnormalities)   | ■Inaccurate less severe descriptors of true acute myocardial infarction:  °Demand Ischemia  °Unstable Angina  °Acute Coronary Syndrome  °Acute Myocardial Ischemia  °Hypertroponinemia  ■Demand Ischemia is associated with a troponin elevation below the 99th percentile of the reference range, and is NOT synonymous with an acute Type 2 MI  ■Acute myocardial injury is an elevation of cardiac troponin values, with at least one value above the 99th percentile, and unaccompanied by the ischemic symptoms, EKG changes, or cardiac imaging abnormalities defining acute myocardial injury features constantly elevated but stable troponin levels | O. Mechanic et.al: Acute Myocardial Infarction. Stat Pearls: August 8, 2022. Y. Sandoval and A. Jaffe: Type 2 Myocardial Infarction: JACC Review Topic of the Week. JACC Vol 73 Issue 14 (1846 – 60) April 2019 K. Thygesen et. al: Fourth Universal Definition of Myocardial Infarction. Circulation Vol. 138, No. 20. @4 Aug 2018 P. Deedwania. Silent myocardial ischemia. Up to Date April 26, 2022.  |
|             | Acute Pancreatitis          | Acute pancreatitis along with all the clinical criteria validating the diagnosis, when explicitly documented, ensures accurate reporting.  | Less severe and inaccurate of descriptors of true acute pancreatitis include:  °Elevated amylase and lipase  °Pancreatic inflammation or necrosis  °Pancreatitis, not specified as acute  °Relapsing / recurrent pancreatitis, not specified as acute-on-chronic  Pancreatitis treatments clinically validate, rather than define, the acuity of true pancreatitis  Accurate reporting always requires pancreatitis acuity to be explicitly documented in ongoing provider assessments   | J. Gapp et. al: Acute Pancreatitis. NIH National Library of Medicine: StatPearls 2023 Feb 9 A. Crosignani et. al: Intravenous fluid therapy in patients with severe acute pancreatitis admitted to the intensive care unit: a narrative review. Ann Intensive Care 2022 Oct 17 A. Chatila et. al: Evaluation and management of acute pancreatitis. World J Clin Cases. 2019 May 6; 7(9): 1006–1020  |
|             | Acute Pulmonary Embolism    | <ul> <li>Acute pulmonary embolism (Acute PE) is a sudden disruption to pulmonary artery blood flow and assessments should also include supporting clinical validation criteria and risk factors</li> <li>Please refer to your local facility resources and policies for the specific criteria and predictive clinical tools used to assess the likelihood of acute PE</li> </ul>   | Less severe and inaccurate descriptors of true acute PE include:  Pulmonary embolism or PE, without documented acuity  PE "due to acute venous thrombo-embolism / thrombophlebitis", without PE acuity  Elevated D-dimer / other clinical data, unaccompanied by acute PE diagnosis  "Massive" or "Saddle" PE, without related acute comorbidities documented  PE "due to hypercoagulable state"  PE with "acute right heart strain"  Explicitly document acute PE and any clinically evident acute or acute-on-chronic cor pulmonale, heart failure exacerbation, or cardiogenic shock associated   | V. Vyas and A. Goyal: Acute Pulmonary Embolism. NIH National Library of Medicine:<br>StatPearls August 8, 2022<br>N. Cheng et.al: COVID-19 related thrombosis: A mini-review. Phlebology. 2022 June<br>37(5):326-337<br>D. Morrone and V. Morrone: Acute Pulmonary Embolism: Focus on the Clinical Picture.<br>Korean Circ J. 2018 May; 48(5): 365–381  |

| Hospitalist |                                   | Acute respiratory failure is defined as:  • A significant change in respiratory status, presenting as either difficulty breathing or an interruption of breathing, with            | ■Use caution when interpreting P/F ratios < 300 for chronic respiratory failure patients to diagnose acute-on-chronic respiratory failure  ■Always document, when known, the suspected etiology for acute respiratory failure  ■Less severe and inaccurate descriptors of true acute respiratory failure include:  °Shortness of breath / SOB  °Dyspnea / Severe dyspnea  °Apnea  | E. Shebl et.al: Respiratory Failure NIH. National Library of Medicine. Stat Pearls. February 15, 2023 V. Mirabile et. al: Respiratory Failure. NCBI Bookshelf. National Library of Medicine, National Institutes of Health, July 2022  |
|-------------|-----------------------------------|--|---|--|
|             |                                   | ■Evidence of hypoxia and/or hypercapnia. Refer to local institutional or health system guidelines for any specific parameters defining hypoxic and hypercapnic respiratory failure | °Hypoxia / Hypoxemia °Hypercarbia °Labored respirations °Respiratory distress °Respiratory insufficiency °Respiratory failure, without acuity specified   | J. Stocking et. al: Postoperative respiratory failure Am J Surg. 2020 Jul; 220(1): 222–228<br>K. See. Approach to acute respiratory failure for frontline clinicians. Singapore Med J. 2022<br>Dec; 63(12): 740–745  |
|             |                                   | Documentation should always specify the acuity, severity (mild, moderate, severe) and frequency (intermittent vs persistent) of asthma symptoms, when applicable.                  | ■The following less severe descriptors DO NOT capture the severity of true asthma in acute exacerbation:  °Chronic Obstructive Pulmonary Disease or COPD  °Asthma, without acuity specified  °Bronchospasm  °Severe dyspnea  °Steroid-dependent asthma  ■Explicitly document status asthmaticus when applicable, along with clinical validation criteria such as presenting symptoms, supporting data, and relevant treatments.   | Madison JM et.al. Identifying patients at risk for fatal asthma. UpToDate. February 2024. American Lung Association Website: Current Demographics 2024. M. Hashmi et.al. Asthma. NIH National Library of Medicine: StatPearls. August 8, 2023.   |
|             | Atelectasis                       | Atelectasis, when clinically significant, should be documented with supporting clinical criteria, evaluation and treatment for accurate severity reporting.                        | ■Radiologists are not considered healthcare providers for admissions. Provider assessments much include documentation and supporting clinical validation criteria of atelectasis for accurate reporting.  ■Evaluation and treatment of post-operative atelectasis that exceeds your facility's standard level of care, atelectasis after surgery is not considered a complication.  | K. Grott et. al: Atelectasis. NIH: National Library of Medicine – StatPearls. June 19, 2023 A. Mingote et. al: Prevalence and clinical consequences of atelectasis in SARS-CoV-2 pneumonia: a computed tomography retrospective cohort study. BMC Pulm Med. August 2021; 21: 267 Y. Liu et.al: A Nomogram Based on Atelectasis/Obstructive Pneumonitis Could Predict the Metastasis of Lymph Nodes and Postoperative Survival of Pathological N0 Classification in Non-small Cell Lung Cancer Patients. Biomedicines. January 2023, 11(2), 333 |
|             | Cerebral Edema, Initial Encounter | Clinically significant cerebral edema along with supporting clinical validation criteria must be explicitly documented for accurate severity reporting                             | Less severe and inaccurate descriptors of true cerebral edema:  Increased intracranial pressure  Midline shift  Mass effect  Obliteration of the cisterns  Effacement of cerebral sulci  Radiologists are not considered healthcare providers for admissions. Providers must independently and explicitly document clinically significant cerebral edema in ongoing assessments.  | S. Munakomi and J. Das: Brain Herniation. NIH National Library of Medicine StatPearls. August 13, 2023 R. Stevens et.al: Emergency Neurological Life Support: Intracranial Hypertension and Herniation. Neurocrit Care. 2015 Dec; 23(Suppl 2): S76–S82 E. Liotta. Management of Cerebral Edema, Cerebral edema, and Intracranial Pressure. Continuum (Minneap Minn). 2021 Oct 1;27(5):1172-1200  |
|             | Cholecystitis/Cholangitis         | Acute cholecystitis or cholangitis and all clinically validating criteria, when explicitly documented, ensures accurate severity reporting.  | Less severe inaccurate descriptors for true acute cholecystitis or cholangitis include:  Biliary cirrhosis  Inflammatory cholelithiasis or choledocholithiasis  Gallbladder wall thickening  Acalculous cholecystitis without specified acuity  Document any suspected or confirmed link between acute cholecystitis or cholangitis and related complications, including:  Gallbladder gangrene  Gallbladder perforation  Biliary peritonitis  Intraabdominal abscess  Sepsis | M. Jones et.al: Acute Cholecystitis. NIH National Library of Medicine. StatPearls. May 22, 2023 M. Jones and T. Ferguson: Acalculous Cholecystitis. NIH National Library of Medicine. StatPearls. April 24, 2023 M. Pisamo et.al: 2020 World Society of Emergency Surgery updated guidelines for the diagnosis and treatment of acute calculus cholecystitis. World J Emerg Surg. 2020 Nov 5;15(1):61  |

|             | Chronic Heart Failure          | <ul> <li>Chronic heart failure documentation should always include the type in ongoing assessments using local institutional and clinical department guidelines</li> <li>Common classifications of chronic heart failure type include:         <ul> <li>Diastolic:Preserved ejection fraction (EF ≥ 50%, in the absence of acute heart failure symptoms)</li> <li>Systolic: Reduced ejection fraction (EF &lt; 50%, in the absence of acute heart failure symptoms)</li> <li>Includes mid-range / mildly reduced ejection fraction (EF 41-49%)</li> <li>Combined: Chronic systolic and diastolic heart failure</li> <li>*Both reduced ejection fraction and decreased ventricular compliance</li> <li>Recovered ejection fraction:</li> <li>*EF &lt; 40% at baseline, and</li> <li>*≥ 10% absolute improvement in EF resulting in ongoing EF measurements of &gt; 40%</li> </ul> </li> </ul> | ■Less severe descriptors of true chronic heart failure include:  °CHF  °Heart failure  °HFPEF and HFrEF without acuity specified  °Left or right-sided heart failure  °Systolic or diastolic dysfunction  °Signs and symptoms unaccompanied by a chronic heart failure diagnosis  ■Document the type of any right-sided chronic heart failure (systolic, diastolic, combined), along with suspected etiology (for example – chronic systolic heart failure due to pulmonary hypertension)   | S. Greene et. al.: Worsening Heart Failure: Nomenclature, Epidemiology, and Future Directions: JACC Review Topic of the Week. Volume 81, Issue 4, 31 January 2023, Pages 413-424  N.Nair: Epidemiology and pathogenesis of heart failure with preserved ejection fraction. Rev. Cardiovasc. Med. 2020, 21(4), 531–540  Wilcox JE et. al: Heart Failure with Recovered LVEF: JACC Scientific Expert Panel; J Am Coll Cardiol 2020;76:719-734  |
|-------------|--------------------------------|--|---|--|
| Hospitalist | Chronic Kidney Disease, Staged | Per KDIGO guidelines, chronic kidney disease (CKD) is defined as the presence of at least one of the following criteria, for 3 months or longer:  ■A glomerular filtration rate less than 60 mL/min, or  ■Lab data or biopsy findings suggesting kidney damage  CKD Stages are defined by the most recent and stable GFR, using the following ranges:  ■Stage 1: ≥ 90  ■Stage 2: 60 – 89  ■Stage 3a: 45 – 59  ■Stage 3b: 30 – 44  ■Stage 4: 15 – 29  ■Stage 5: <15  ■End Stage: <15 and chronic dialysis dependence  | ■When inpatient evaluation and treatment support CKD, documenting suspected, probable, or likely CKD is acceptable  ■Less severe and inaccurate descriptors of true chronic kidney disease include:  □Less severe and inaccurate descriptors of true chronic kidney disease include:  □Chronic renal or kidney insufficiency  □Chronic kidney disease (without stage)  ■Less severe clinical descriptors failing to capture accurate severity for true end stage renal disease (ESRD) include:  □CKD 5, on hemodialysis  ■*"On hemodialysis" may refer to inpatient dialysis, as CKD 5 does not presume chronic hemodialysis  □History of kidney transplant  ■Documenting a renal transplantation history does not imply ongoing ESRD  □Dialysis dependence  ■*Dialysis Dependence" does not delineate between acute inpatient dependence and a chronic dialysis requirement  ■Document comorbid conditions commonly accompanying ESRD whenever clinically valid, including:  □Hyperkalemia  □Metabolic acidosis  □Hyponatremia  □Secondary hyperparathyroidism | R. Gupta et.al: Epidemiology of end-stage kidney disease. Semin Vasc Surg. 2021 Mar; 34(1): 71–78.  M. Hashmi et.al: End-Stage Renal Disease. NIH National Library of Medicine. February 19, 2023.  KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. Kidney International Supplements 2013; 3: 19–62  N. Burrows et.al: Reported cases of end-stage kidney disease—United States, 2000–2019. American Journal of Transplantation. Volume 22 Issue 5, Pgs 1483 – 1486. May 2022. |

| Coagulation Defects                      | Coagulation Defects and Hemorrhagic Conditions refer to a spectrum of disorders characterized by abnormalities in the body's hemostatic mechanisms, resulting in an increased risk of bleeding (hemorrhage) or impaired clot formation. These conditions may be:  **Congenital, such as hemophilia A/B or von Willebrand disease, involving genetic deficiencies or dysfunctions of specific clotting factors; or  **Acquired, due to liver dysfunction, vitamin K deficiency, anticoagulant therapy (e.g., warfarin, DOACs), or systemic conditions like disseminated intravascular coagulation (DIC). | <ul> <li>Always document:         <ul> <li>Etiology (e.g., drug-induced, congenital, immune-mediated, infection-related)</li> <li>Clinical manifestation (e.g., bleeding, bruising, transfusion requirement)</li> <li>Severity and treatment required (e.g., transfusions, reversal agents)</li> <li>Supporting evidence (e.g., labs like INR, platelet counts, D-dimer)</li> </ul> </li> <li>Avoid vague or incomplete terms like:         <ul> <li>"Coagulopathy"</li> <li>"Bleeding disorder"</li> <li>"Anemia" or "Low platelets"</li> </ul> </li> <li>Special considerations:         <ul> <li>DIC: Must include linkage to underlying cause and supportive labs (e.g., prolonged PT/PTT, low fibrinogen)</li> <li>"Chemotherapy-Induced Pancytopenia must reflect the connection between treatment and cytopenias</li> <li>"Numerical lab values (e.g., platelet count or INR) require clinical interpretation or relevance</li> </ul> </li> </ul> | National Hemophilia Foundation. Guidelines on the diagnosis and management of blee disorders. National Hemophilia Foundation. [n.d.]. Levi M. Disseminated Intravascular Coagulation in Clinical Practice. Thromb Res. 2022;218:125–133. Williams M, Makris M. Rare inherited coagulation disorders: no longer orphan and neglected. Res Pract Thromb Haemost. 2024;8(3):e12911.                 |
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| Coma, Brain Compression/Anoxic<br>Damage | Accurate risk adjustment reporting for inpatients with impaired consciousness and neurological comorbidities requires explicit documentation of the following when present, along with validating etiologies, evaluations, and treatments:  Brain compression  Cerebral edema  Persistent vegetative state  Anoxic brain injury, or Anoxic encephalopathy  Coma, with:  GCS scores for traumatic coma, including eye opening, verbal, and motor components  Suspected etiology for non-traumatic coma   | Avoid the following less severe descriptors, to describe specific neurological conditions:  "Midline shift", "mass effect", and "ventricular effacement", which do not substitute for brain compression or cerebral edema  "Anoxia", "oxygen deprivation", and "cerebral hypoperfusion", which are not equivalent to anoxic brain injury  "Disoriented", "unaware of surroundings", and "non-responsive", which fail to provide the risk adjustment value of a vegetative state  When pending workup of coma prevents identifying a clear etiology, explicitly documenting "coma" in provider assessments without further specificity still provides inpatient risk adjustment value   | Y. Deng et.al. Explainable time-series deep learning models for the prediction of mortal prolonged length of stay and 30-day readmission in intensive care patients. Front Med (Lausanne). 2022 Sep 28:9:93303  D. Fry, et.al. Risk-adjusted outcomes of inpatient Medicare medical admissions. Medic (Baltimore). 2018 Sep; 97(37): e12269.   |
| Compression of Brain                     | Clinically significant brain compression along with supporting clinical validation criteria, when documented, ensures accurate reporting.   | Less severe and inaccurate clinical descriptors of true brain compression include:  Increased intracranial pressure  Midline shift  Mass effect  Cranial nerve impingement or compromise  Effacement of the ventricles  Radiologists are not considered healthcare providers for admissions. Providers must independently and explicitly document clinically significant brain compression and supporting clinical validation criteria.  | S. Munakomi and J. Das: Brain Herniation. NIH National Library of Medicine StatPearls. August 13, 2023 R. Stevens et.al: Emergency Neurological Life Support: Intracranial Hypertension and Herniation. Neurocrit Care. 2015 Dec; 23(Suppl 2): S76–S82 E. Liotta. Management of Cerebral Edema, Brain Compression, and Intracranial Pressu. Continuum (Minneap Minn). 2021 Oct 1;27(5):1172-1200 |
| Dementia                                 | Dementia is an acquired and progressive decline in cognitive function that interferes with activities of daily living and episodic memory loss is most commonly affected. For accurate severity reporting, dementia must be explicitly documented with:  The type or suspected etiology, Severity level (mild, moderate, or severe), and Presence or absence of behavioral disturbances.  | ■Less severe descriptors that fail to capture the severity of true dementia include:  "History of dementia" (this suggests the condition has resolved)  "Cognitive decline" without further detail  "Listing dementia on the problem list without linking it to an active assessment  ■Document the following in your assessment to ensure true severity capture:  "Etiology when known or suspected (e.g., Alzheimer's, vascular, Lewy body or Parkinson's-related)  "Severity level (mild, moderate, or severe)  "Behavioral disturbances when present (e.g., agitation, psychosis, aggression or apathy)  ■Support behavioral disturbance documentation with clinical indicators found in:  "Nursing notes  "Consults (e.g., psychiatry or neurology)  "Medication use (e.g., antipsychotics or mood stabilizers)  "Social work or care team assessments  "Refer to your institutional Dementia Severity Rating Scale when determining severity level | Alzheimer's Association. 2023 Alzheimer's Disease Facts and Figures. Alzheimer's Dement. 2023;19(4):597-676.  American Psychological Association. APA Guidelines for the Evaluation of Dementia ar Age-Related Cognitive Change (PDF). 2021.  Dementia Action Collaborative of Washington State. Dementia Care Plan and Clinical Beyond Diagnosis. 2022.   |

|   | Embolism and Thrombosis    | Document systemic venous thrombo-embolism with clinical validation criteria, including:  Acute versus chronic disease  Specifically affected veins, including:  Superficial versus deep vein  Laterality  Risk factors and likely etiology  Presenting signs, symptoms and clinical manifestations  Relevant lab and imaging results  All associated clinical manifestations  Condition-specific treatments | ■Less severe, inaccurate descriptors of true systemic venous thromboembolic disease include:  °Elevated D-dimer  °Hypercoagulable state  °Low Protein C or Low Protein S level  °Low Anti-thrombin level  °Elevated Factor VIII level  °Clotting factor mutation  °Venous occlusion  °Blood clot  °Phlebitis  ■When applicable, delineate between:  °Phlebitis, as an inflammatory risk factor for true venous thrombosis, and  °Thrombophlebitis, with criteria validating true phlebitis and venous thrombosis  ■Use local facility resources and policies to guide the specific laboratory, imaging, and clinical parameters validating a documented assessment of acute or chronic venous thrombosis, and any related embolic complications. | B. Alomair et. al. Mixed storm in SARS-CoV-2 infection: A narrative review and new term in the Covid-19 era. Immune Inflammatory Disease; 2023 Apr 11(4) N. Cheng at. al. COVID-19 related thrombosis: A mini-review. Phlebology. 2022 Jun; 37(5): 326–337 A, Mintz and M. Levy. Upper Extremity Deep Vein Thrombosis. American College of Cardiology: Expert Analysis  |
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| l | Encephalopathy             | Encephalopathy is a diffuse brain disease resulting from an alteration in brain function or structure. The hallmark of encephalopathy is an altered mental state.   | ■Documenting acuity and type of encephalopathy ensures accurate reporting  ■Less severe and inaccurate descriptors of true specified encephalopathy include  °AMS / Altered Mental Status  °Deltirium, Stupor, or Confusion  °Obtunded  °Dementia  °Encephalopathy (without reference to acuity or type)  ■Special Considerations:  °Encephalopathy vs Delirium  *Delirium is a symptom that may characterize the acute phase of encephalopathy  °Encephalopathy may change the baseline mental status for demented patients   | J. Zelaya and L. Al-Khoury: Posterior Reversible Encephalopathy Syndrome NIH National Library of Medicine. Stat Pearls 5/1/2022 H. Chung et. al: Sepsis-Associated Encephalopathy: From Delirium to Dementia? J. Clin. Med. 2020, 9 (3), 703 J. Francis and G.B. Young: Diagnosis of delirium and confusional states. UptoDate.com July 18, 2022  |
| l | Hemiplegia                 | Hemiplegia documentation along with clinical criteria validating the diagnosis ensures accurate severity reporting.   | Less severe inaccurate descriptors of true hemiplegia include:  Paralysis or Hemiparalysis  Weakness  Decreased motor strength  Motor deficit  Muscle, joint, or limb contracture  Cocument links in assessments between clinically valid hemiplegia or hemiparesis and a suspected or known etiology, including prior CVA  Explicitly clarify these diagnoses as probable sequelae of stroke or other specified underlying cause whenever applicable  | J. Wang et.al: Analysis of the Surgical Outcomes in Elderly Patients with Hip Fractures Combined with Hemiplegia. Clin Interv Aging. 2022; 17: 1093–1098 K. Min and J. Min: Health-related quality of life is associated with stroke deficits in older adults. Age and Ageing, Volume 44, Issue 4, July 2015, Pages 700–704 E. Donkor: Stroke in the 21st Century: A Snapshot of the Burden, Epidemiology, and Quality of Life. Stroke Res Treat. 2018; 2018: 3238165 |
| ı | Hyponatremia/Hypernatremia | ■Clinically significant hyponatremia or hypernatremia documentation should include clinical criteria validating these diagnoses for accurate reporting ■Refer to your local institutional resources and policies for specific reference ranges and additional facility criteria used to assess hyponatremia or hypernatremia  | ■Less severe and inaccurate descriptors of true hyponatremia or hypernatremia include:  °Abnormal sodium  °Electrolyte changes  °The abbreviation "Na", or word "sodium", preceded by upward or downward-facing arrows, or the words  "high" or "low"  °The abbreviation "Na", or word "sodium", followed by a specific laboratory value  ■True hyponatremia and/or hypernatremia should only be documented when the sodium abnormalities have clinical significance and require ongoing monitoring and treatment  ■Patient population severity reporting for true hyponatremia excludes admissions with pseudohyponatremia (e.g. significant hyperglycemia as the principal etiology for low serum sodium)                                      | H. Rondon and M. Badireddy. Hyponatremia. NIH National Library of Medicine: StatPearls. June 14, 2023 J. Hirsch et. al: Prevalence and outcomes of hyponatremia and hypernatremia in patients hospitalized with COVID-19. Nephrol Dial Transplant. 2021 Jun; 36(6): 1135–1138 Q. Qian. Hypernatremia. Clin J Am Soc Nephrol. 2019 Mar 7; 14(3): 432–434   |

|             | Intestinal Obstruction                     | Clinically significant intestinal obstruction along with criteria validating the diagnosis must be explicitly documented for accurate severity reporting.   | Less severe and inaccurate descriptors of true intestinal obstruction include:  Constipated Air-fluid level in loop of bowel Abnormal bowel sounds Abdominal or surgical adhesions Bowel compression or kinking Fecal impaction  | D. Smith et.al: Bowel Obstruction. NIH National Library of Medicine. StatPearls July 31, 2023 M. Schick et. al: Small Bowel Obstruction. NIH National Library of Medicine. StatPearls April 10, 2023 P. Jackson and M. Cruz: Intestinal Obstruction: Evaluation and Management. Am Fam Physician. 2018;98(6):362-367  |
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|             | Major Depressive Disorders                 | Major depressive disorder along with severity, recurrence and remission status ensures accuracy of severity reporting (often available in the admitting history or psychiatric consultant assessments).   | Less severe descriptors failing to capture the severity of true MDD include:  Depression / Depressed  MDD (without specified severity, recurrence, and remission status)  Blunt affect  Psychomotor retardation  Mood disturbance  | N. Bains and S. Abdijadid: Major Depressive Disorder. NIH National Library of Medicine. Stat Pearls. April 10, 2023 A. Arnaud, et.al. Impact of Major Depressive Disorder on Comorbidities. The Journal of Clinical Psychiatry. October 19, 2022 M. Mazza et.al. Post-COVID-19 Depressive Symptoms: Epidemiology, Pathophysiology, and Pharmacological Treatment. CNS Drugs 2022; 36(7): 681–702            |
| Hospitalist | Malnutrition, Mild, Moderate and<br>Severe | ASPEN Criteria define malnutrition by the presence of at least two of the following six characteristics:  Insufficient caloric intake Unintentional weight loss Decreased muscle mass Decreased subcutaneous fat Decreased functional status (for example, diminished hand grip strength) Edema or fluid accumulation To review the specific criteria used by your dieticians, please refer to your local institutional resources and policies. | Less severe clinical descriptors that fail to capture the severity of true protein-calorie malnutrition:  #Failure to thrive  #Underweight or Low Body Mass Index  #Low muscle mass or Frailty  #Weight loss  #Emaciation, without a documented link to malnutrition  The Registered Dietician is not considered a provider; therefore, one should always document true protein-calorie malnutrition in ongoing assessments and discharge summaries, along with the risk factors, severity level (mild, moderate, or severe), and related treatments.  | Malnutrition Solution Center. American Society for Parenteral and Enteral Nutrition (ASPEN): Malnutrition Diagnosis and Documentation: Strategies for Success 2021 A. Kesari and J. Noel. Nutritional Assessment. Stat Pearls April 10, 2023 J. White et. al. Consensus Statement: Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition. JPEN April 2012 36:275-283 |
|             | Metastatic Malignancy                      | When evident, metastatic cancer must be explicitly documented in ongoing assessments, including clinical criteria validating the diagnosis, such as:  *Specific metastatic cancer location(s)  *Presenting signs and symptoms  *Suspected or known primary cancer site  *Associated abnormal lab and imaging data  *Gross and microscopic pathology results  *Condition-specific treatment plan   | ■Less severe descriptors that fail to capture the severity of true metastatic cancer include:  °Cancer Relapse °Cancer Recurrence °Tumor Cell Migration °Lymph Node Involvement °Cancer, Neoplasm, or Malignancy, unspecified as primary or secondary °History of Metastases ■Document non-infectious SIRS in ongoing assessments, with a link to metastatic cancer, when suspected to be related to active metastases rather than infection or sepsis. ■When gross and microscopic pathology findings are available after discharge, explicitly document the findings in an addendum to the final note. ■Explicitly document malignant pleural effusion in assessments, with a link to metastatic cancer, whenever applicable and clinically valid. | National Cancer Institute: Division of Cancer Control and Population Sciences Website<br>Loh KP, Kansagra A, Shieh MS, Pekow P, Lindenauer P, Stefan M, Lagu T. Predictors of In-<br>Hospital Mortality in Patients With Metastatic Cancer Receiving Specific Critical Care<br>Therapies. J Natl Compr Canc Netw. 2016 Aug;14(8):979-87   |
| Hospitalist | Morbid Obesity With Exact BMI              | Morbid (Class III) obesity describes a BMI ≥ 40 when the patient's weight is at baseline.   | ■Less severe descriptors of true morbid obesity with an exact BMI:  °Morbid obesity (without exact BMI)  °Severely obese (without exact BMI)  °BMI ≥ 40 without a formally documented morbid obesity diagnosis  ■Class III Obesity with the exact BMI is acceptable  ■Always document morbid obesity with a specific baseline BMI value, rather than a range  ■Always validate your assessment by documenting any pertinent required resources, including:  °The need for special inpatient equipment  °Multiple inpatient staff requirements for patient mobility  °inpatient orders for nutritional and lifestyle counseling   | A. Kranjac and D. Kranjac: Explaining adult obesity, severe obesity, and BMI: Five decades of change. Heliyon 2023 May; 9(5): e16210 C. Weir and A. Jan: BMI Classification Percentile And Cut Off Points NIH National Library of Medicine. StatPearls June 27, 2022 National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Website: Overweight & Obesity Statistics                      |

| MVEIONATHV      | Myelopathy must be explicitly documented and include clinical criteria validating the diagnosis for accurate severity reporting.   | Less severe and inaccurate descriptors of true myelopathy include:  "Spastic paralysis  "Hyperreflexia or Clonus  "Positive Babinski Sign  "Radiculopathy  "Upper motor neuron disease  "Dura mater compression  Myelopathy is not a presumed outcome of extensive degenerative disc disease or serious injury. Explicitly document the diagnosis in assessments with validating clinical criteria to support true severity reporting.   | C. Donnally et. al: Cervical Myelopathy. NIH National Library of Medicine: StatPearls. January 15, 2023 S. Alomari et. al: Does Myelopathy Increase the Morbidity and Mortality of Elective Single-Level Anterior Cervical Discectomy and Fusion? Neurosurgery 89(1):p 109-115, July 2021 S. Kane et.al: Degenerative Cervical Myelopathy: Recognition and Management. Am Fam Physician. 2020;102(12):740-750   |
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| Osteomyelitis   | Osteomyelitis must be clearly documented as a definitive diagnosis and supported by clinical evidence, such as imaging findings or lab markers, to ensure accurate severity and risk adjustment. Avoid vague or uncertain terms when describing bone infections. | ■Avoid documenting only symptoms or nonspecific terms to represent true osteomyelitis such as:  "Bone pain"  "Cellulitis near bone"  "Infection of unknown depth"  ■Support osteomyelitis with clinical findings like:  "Elevated inflammatory markers (ESR/CRP)  "Imaging showing bone involvement (MRI preferred)  "Positive bone biopsy or culture  ■Do not document osteomyelitis unless it is explicitly diagnosed—suspected or possible cases should be clearly stated as such.  ■Specify type (acute vs. chronic) and site (e.g., "acute osteomyelitis of the left tibia") when applicable.   | Lew DP, Waldvogel FA. Osteomyelitis. Lancet. 2004 Jul 24-30;364(9431):369-79. Hatzenbuehler J, Pulling TJ. Diagnosis and management of osteomyelitis. Am Fam Physician. 2011;84(9):1027-1033. Cierny G, Mader JT, Penninck JJ. A clinical staging system for adult osteomyelitis. Clin Orthop Relat Res. 2003;414:7-24.   |
| Pancytopenia    | Clinically significant pancytopenia and supporting criteria validating the diagnosis should be explicitly documented for accurate reporting Refer to your facility's lab reference ranges and local policies when monitoring for pancytopenia                    | Whether caused by marrow suppression, peripheral destruction, or cell sequestration, severity reporting for true or suspected pancytopenia requires documented etiologies for all 3 decreased cell lines.  | S. Chiravuri and O. De Jesus. Pancytopenia. NIH National Library of Medicine. StatPearls February 12, 2023 J. Gnanaraj et al: Approach to pancytopenia: Diagnostic algorithm for clinical hematologists. Blood Reviews. Volume 32 Issue 5 September 2018  |
| Paralytic Ileus | Clinically significant paralytic ileus along with criteria validating the diagnosis should be explicitly documented for accurate reporting.  | ■Less severe and inaccurate descriptors of true paralytic ileus include:  °Constipated  °Obstructed  °Absent bowel sounds  °Abdominal distension  °Delayed passage of flatus or feces  ■Severity reporting for true paralytic ileus does not include cases of transient opioid-related bowel hypoactivity that resolve without additional bowel care or nasogastric tube placement  ■Paralytic ileus is often an expected outcome of surgery, typically resolving spontaneously within 2-3 days  °Use local facility and departmental policies to guide the documentation of paralytic ileus as a true post-procedural complication vs. an expected comorbidity developing after admission | E. Beach and O. DeJesus. Ileus. NIH National Library of Medicine: StatPearls. June 20, 2023 J. Cromwell and L. Lund. Hospital Coding of Postoperative Ileus: A Prospective Study. Cureus. 2022 May; 14(5): e24946 G. Elgar et.al. Age Increases the Risk of Mortality by Four-Fold in Patients with Emergent Paralytic Ileus: Hospital Length of Stay, Sex, Frailty, and Time to Operation as Other Risk Factors. Int J Environ Res Public Health. 2022 Aug; 19(16): 9905 |

| Hospitalist | Pneumonia      | Pneumonia, the suspected causative organism, and clinical criteria validating the diagnosis ensures accurate severity reporting of pneumonia.  | ■Commonly used clinical descriptors that fail to capture true patient severity, unless providers also speculate on the most likely causative organism:  °Community Acquired Pneumonia  °Hospital Acquired Pneumonia  °Healthcare Acquired Pneumonia  °Ventilator Associated Pneumonia  °Atypical Pneumonia  °Atypical Pneumonia  °Bacterial Pneumonia  ■Positive cultures alone cannot be used to determine the type of pneumonia without the provider explicitly linking the two in the documentation  ■Positive sputum and blood cultures, abnormal white blood cell counts, and aberrant x-ray findings are helpful but not necessary to document a specific type of pneumonia being treated  ■Your clinical suspicion, antibiotic treatment based on the most likely pathogen, and your clinical assessment are sufficient to support the diagnosis and documentation of a specific type of pneumonia  ■Documenting gram-positive or gram-negative pneumonia is an acceptable alternative to documenting the specific organism  °For example, gram negative pneumonia or Klebsiella pneumonia are both acceptable | S. Sattar and S. Sharma: Bacterial Pneumonia. NIH National Library of Medicine. Stat Pearls. August 14, 2023 American Lung Association: Trends in Pneumonia and Influenza Morbidity and Mortality. Research and Health Education Division. Nov 2015 M. Pletz et. al: Unmet needs in pneumonia research. Respir Res 2022 Sep 10;23(1):239. doi: 10.1186/s12931-022-02117-3 H. Regunath and Y. Oba: Community-Acquired Pneumonia. NIH National Library of Medicine. Stat Pearls. November 15, 2022              |
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|             | Pneumonitis    | Aspiration pneumonia/pneumonitis with supporting clinical criteria validating the diagnosis ensures accurate reporting.  | "Suspected", "probable", or "likely" aspiration pneumonia aligns with accurate severity capture for true aspiration pneumonia, when documented through to discharge  Less severe descriptors of true aspiration pneumonia include:  "Aspiration "Aspiration event  "Aspirated "Covering for aspiration "Concern for aspiration "Impending aspiration "Threatened aspiration   | J. Metlay et al: Diagnosis and Treatment of Adults with Community-acquired Pneumonia. Am J Respir Crit Care Med 200(7): e45–e67, 2019 V. Dragan et.al Prophylactic antimicrobial therapy for acute aspiration pneumonitis. Clin Infect Dis. 2018 Feb;67(4): 513-18 R. Sanivarapu and J. Gibson: Aspiration Pneumonia NIH National Library of Medicine: Stat Pearls December 9, 2022 P. Kositova and P. Mikolka: Aspiration Syndromes and Associated Lung Injury Physiol Res. 2021 Dec; 70(Suppl 4): S567–S583 |
|             | Pressure Ulcer | Pressure ulcer documentation should always include:  Exact location with laterality  Suspected stage  Present on admission status  Apparent risk factors  Associated treatments  | <ul> <li>Wound care nurses are not considered health care providers. Ongoing provider assessments must validate any pressure ulcers from the wound care team for true severity reporting.</li> <li>Staging may be left to wound care personnel whenever a provider is uncertain.</li> </ul>   | N. Mondragon and P. Zito: Pressure Injury; NIH National Library of Medicine: Stat Pearls<br>August 25, 2022<br>S. Zaidi and S. Sharma: Pressure Ulcer; NIH National Library of Medicine: Stat Pearls August<br>9, 2022<br>A. Al Aboud and B. Manna; Wound Pressure Injury Management; NIH National Library of<br>Medicine: Stat Pearls April 29, 2023   |
|             | Quadriplegia   | ■Neurological and functional quadriplegia are both equally important to inpatient severity reporting. ■Functional quadriplegia is complete immobility requiring total or near total care, commonly associated with neurologic pathologies. | <ul> <li>Include any applicable Braden Scale assessments and immobility statements in your documentation to validate any true functional quadriplegia.</li> <li>The following less severe and inaccurate descriptors of true functional quadriplegia:         <ul> <li>Severe physical limitations</li> <li>Bedridden</li> <li>Inability to feed or groom</li> <li>Turning assistance required</li> <li>Needs total care (without a formal diagnosis)</li> </ul> </li> </ul>  | 2023 National Spinal Cord Injury Statistical Center. Facts & Figures at a Glance P. Charilaou et.al: Functional Quadriplegia: A Nationwide Matched Study of Trends in Hospital Resource Utilization and Associated Comorbidities. Annals of Long-Term Care. March 2019  |

|             | Sepsis, Severe Sepsis and Septic<br>Shock | For true severity reporting, document sepsis, including any apparent severe sepsis or septic shock, whenever applicable in ongoing assessments, and include clinical criteria validating these diagnoses, such as:  *Apparent risk factors for sepsis  *Characteristic presenting signs and symptoms suggestive of sepsis, severe sepsis, or septic shock  *Abnormal lab, imaging, pathology, or culture findings consistent with sepsis  *Acute organ failure and refractory hypotension associated with severe sepsis and septic shock respectively  *A sepsis-specific treatment plan | The following less severe descriptors fail to capture the severity of true sepsis:  "Bacteremia" "Infection with SIRS" "Systemic" infection "Impending sepsis" "Urosepsis" "Central line-associated" infection "Covering for Sepsis"  Documented provider assessments of severe sepsis must include suspected or confirmed links to associated acute organ failure, including:  "Acute hypoxemic respiratory failure "Acute thrombocytopenia "Acute hepatic injury "Acute and refractory hypotension or septic shock "Acute central nervous system compromise "Acute kidney injury Refer to local facility guidelines for the specific laboratory values, mean arterial pressure ranges, vasopressor regimens, and clinical assessment scores that define sepsis, severe sepsis, and septic shock. | M. Guarino et. al: 2023 Update on Sepsis and Septic Shock in Adult Patients. J Clin Med. 2023 May; 12(9): 3188 J. Poston and J. Koyner: Sepsis associated acute kidney injury. BMJ. 2019; 364: k4891 B. Bullock and M. Benham: Bacterial Sepsis. NIH National Library of Medicine StatPearls. May 21, 2023 |
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| Hospitalist | Specified Shock                           | Shock, its specified type, and supporting clinical validation criteria should always be assessed and documented through to the discharge summary.  Please refer to your local policies and institutional guidelines for the parameters defining a specified form of shock, including systolic or mean blood pressure thresholds and recommended vasopressor regimens.  | ■Less severe clinical descriptors of Shock:  "Hypotension "Cardiovascular Collapse "Low Blood Pressure "Relative Hypotension "latrogenic Hypotension "Descriptors of shock reflecting true patient severity:  "Hypovolemic shock "Cardiogenic or obstructive shock "Septic shock "Anaphylactic shock "Anaphylactic shock "Neurogenic shock "Endocrine shock "Other specified forms of shock  "Post-Operative Shock:  "Always clarify if it is the result of a true procedural complication or an expected outcome due to pre-existing patient pathophysiology  "Unexpected or prolonged use of inotropes and vasopressors in the post-surgical environment may be misinterpreted as a procedural complication unless clarified in the documentation  | D. Gaieski and M. Mikkelsen: Definition, classification, etiology, and pathophysiology of<br>shock in adults. Up to Date March 2022<br>A. Kalil and M. Pinsky: Septic Shock. Medscape October 2020<br>X. Ren: Cardiogenic Shock. Medscape August 2019  |

| Tachycardia      | Always use independent medical judgment to explicitly document clinically significant tachycardia and the specific type if known, as well as it being a likely manifestation of:  The presenting illness requiring admission (e.g. – integral to infection or sepsis) An acute exacerbation of chronic comorbidities (e.g. – poorly controlled atrial fibrillation)  The effects of ongoing treatment (e.g. – tachycardia secondary to breathing treatments) A combination of multiple etiologies | Less severe etiologic descriptors of true clinically significant tachycardia are reported as unspecified tachycardia with no severity impact. These include:  *Tachycardia due to:  "Neurogenic Mechanism"  "Autonomic Dysregulation"  "Underlying Presentation"  "Poorly Controlled Arrhythmia"  "Current Treatment Modalities"  "Multifactorial Causes"  Document the likely type of clinically significant tachycardia when known or suspected:  Re-entry ventricular arrhythmia  *Supraventricular tachycardia  *Torsades de pointes  *Ventricular tachycardia  *Inappropriate sinus tachycardia  When sepsis presents with other plausible mechanisms for tachycardia, it is especially important to explicitly document when tachycardia represents a true SIRS indicator validating sepsis vs reflecting a non-infectious etiology or a treatment manifestation. | A. Henning and C. Krawiec. Sinus Tachycardia. NIH National Library of Medicine. StatPearls. March 2023. M. Katz et.al. Long-Term Outcomes of Tachycardia-Induced Cardiomyopathy Compared with Idiopathic Dilated Cardiomyopathy. J Clin Med. 2023 Feb; 12(4): 1412.   |
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| Thrombocytopenia | ■Clinically significant thrombocytopenia must be explicitly documented and include clinical criteria validating the diagnosis for accurate reporting  ■Refer to your facility's lab reference ranges and institutional guidelines when monitoring for thrombocytopenia  | ■Less severe and inaccurate descriptors of true clinically significant thrombocytopenia include:  °Abnormal or decreased platelet count  °The abbreviation "plts", or word "platelets", preceded by "low", or a downward-facing arrow  °The abbreviation "plts", or word "platelets", followed by a specific laboratory value  ■In the setting of severe sepsis, document any applicable link between successful sepsis treatment and resolution of associated thrombocytopenia in assessments and at discharge   | S. Jinna and P. Khandhar. Thrombocytopenia. NIH National Library of Medicine: StatPearls July 4, 2023 X. Zong et. al: Thrombocytopenia Is Associated with COVID-19 Severity and Outcomes. Lab Med September 2020 F. Vardon-Bounes et. al: Platelets Are Critical Key Players in Sepsis. Int J Mol Sci. 2019 Jul; 20(14): 3494 |