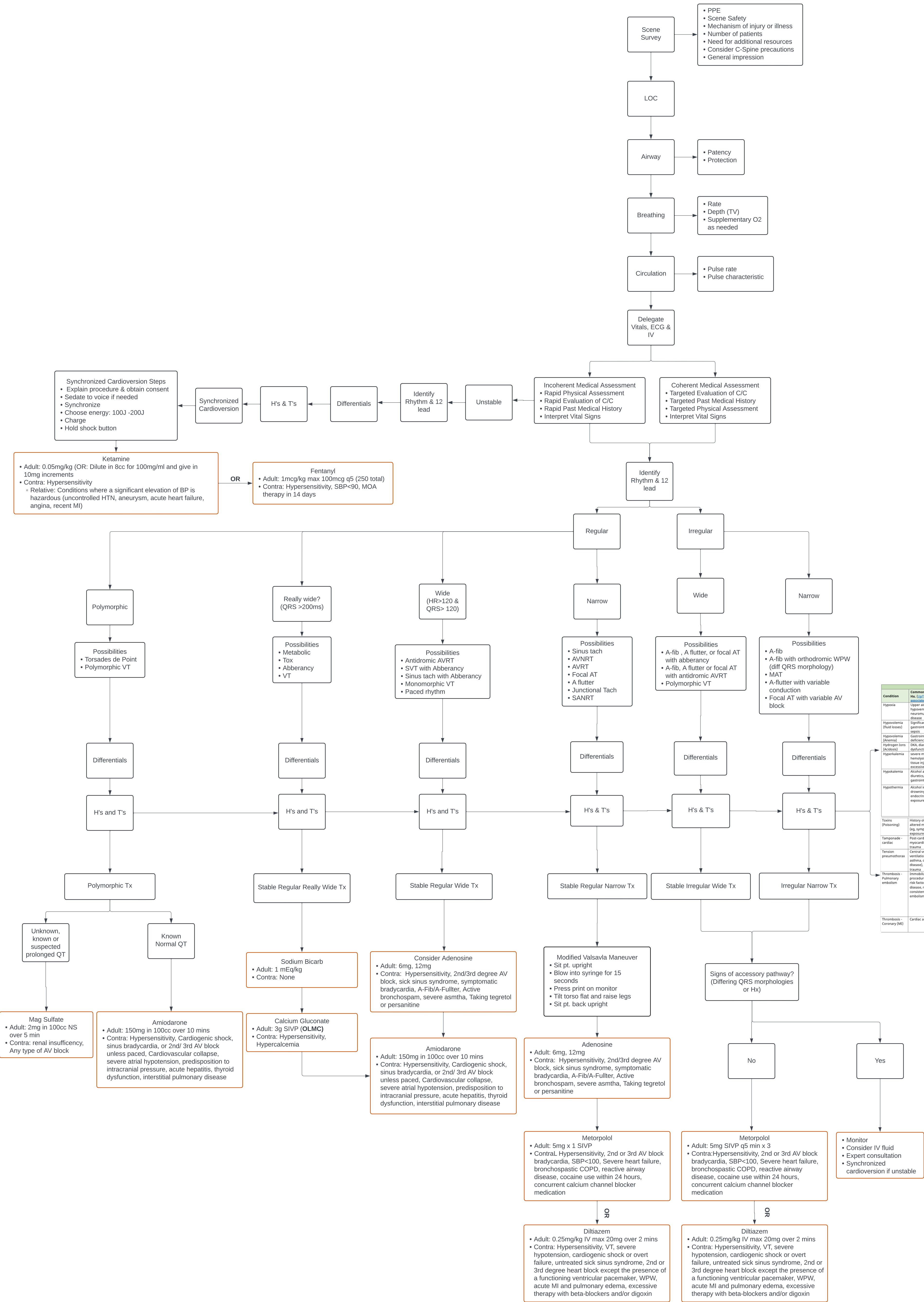


Stable/ Unstable Tachycardia



H's and T's (ACLS Reversible Causes)				
Condition	Common associated clinical settings / Hx, UpToDate, Treatable conditions associated with cardiac arrest	Pre-Cardiac Arrest Findings	Cardiac Arrest Findings	treatment
Hypoxia	Upper airway obstruction, hypoventilation (CNS dysfunction, neuromuscular diseases), pulmonary disease	*Abnormal lung sounds, ↓ MV with ↑ CO2 and ↓ SpO2	*Abnormal breath sounds	PPV, 100% O2, advanced airway, specific treatments
Hypovolemia (Fluid losses)	Significant burns, diabetes, gastrointestinal losses, malignancy, hemorrhage	Compensated shock (↑ HR, ↓ BP), conjunctival pallor	↓ CVP	Fluid boluses
Hypovolemia (Anemia)	Gastrointestinal bleeding, nutritional deficiencies, recent trauma	Compensated shock (↑ HR, ↓ BP), conjunctival pallor	↓ CVP	Fluid boluses until Blood products available
Hydrogen Ions (Acidosis)	DKA, diarrhea, drug overdose, renal dysfunction, sepsis, shock	Respiratory compensation (MV, ↑ HR)	Adequate Mn, NaHCO3	
Hyperkalemia	severe metabolic acidosis (see above), hemolysis, rhabdomyolysis, major soft tissue injury, tumor lysis syndrome, excessive potassium intake	ECG changes: peaked T, Prolonged PR interval, all blocks, brady arrhythmias, wide QRS widening, ...	Adequate Mn, NaHCO3, Calcium gluconate	
Hypokalemia	Alcohol abuse, diabetes mellitus, diuretics, drug overdose, profound gastrointestinal losses	ECG changes: Prolonged PR interval, ST depression and T wave flattening / inversion, prominent U waves, long QT interval due to hypomagnesemia	Rapid Transfer for assessment of potassium levels	
Hypothermia	Alcohol intoxication, significant burns, drowning, drug overdose, elder patient, endocrine disease, environmental exposure, spinal cord disease, trauma	ECG changes: Bradycardia, Osborne waves, PVCs	Warms (> 35 °C)	
Toxins (Poisoning)	History of alcohol or drug abuse, altered mental status, classic toxidrome (eg. sympathomimetic), occupational exposure, psychiatric disease	See BCJHS - Toxidrome Chart Below	Specific treatment / antidotes	
Tamponade - cardiac	Post-cardiac surgery, malignancy, post-myocardial infarction, pericarditis, trauma	JVD, muffled heart sounds, ECG may show low voltage, or electrical alternans	↑ CVP	IV bolus, pericardiocentesis
Tension pneumothorax	Central venous catheter, mechanical ventilation, pulmonary disease (eg. asthma, chronic obstructive pulmonary disease), recent thoracostomy, thoracic trauma	High airway pressure, JVD, asymmetric lung sounds / cx risk	↑ CVP	Needle decompression
Thrombosis - Pulmonary embolism	Immobolized patient, recent surgical procedure (eg. orthopedic), peripartum, risk factors for thromboembolic disease, recent trauma, presentation consistent with acute pulmonary embolism	DVT, Unexplained hypoxemia, sudden onset pleuritic or pain and SOB, lower ext. swelling (DVT), ↑ CVP	↑ CVP	O2, OMC consult re thrombolysis or Rapid transport to cath lab
Thrombosis - Coronary (MI)	Cardiac arrest	ECG ischemic, or cx pain with major risk for CAD, arrhythmias, Cardiogenic shock (VAD, crackles) abnormal heart sounds		O2, OMC consult re thrombolysis or Rapid transport to cath lab

(MacLeod, 2024d)