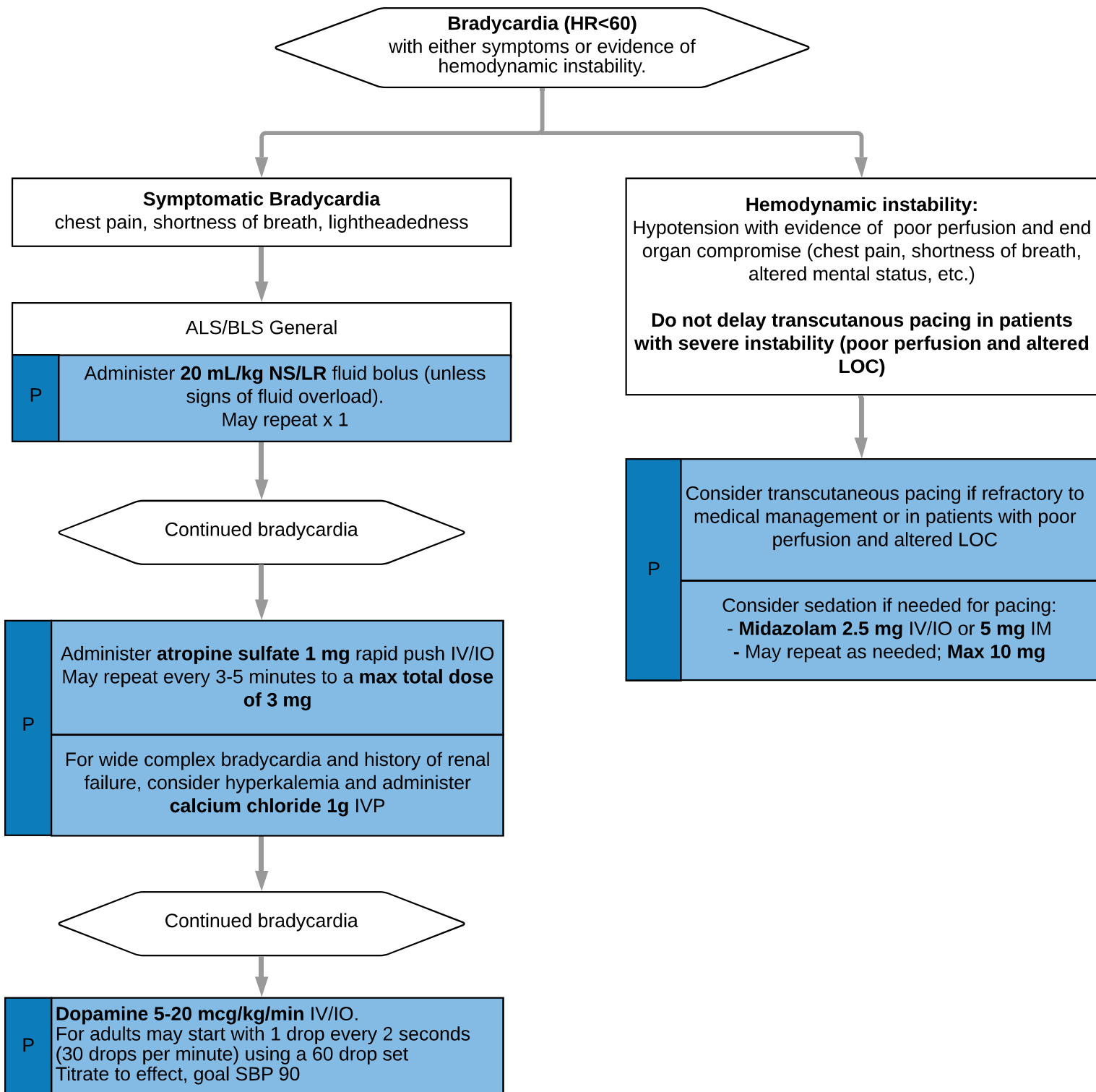


Adult Bradycardia Administrative Guideline (Age ≥ 14)



History <ul style="list-style-type: none"> Past medical history Medications <ul style="list-style-type: none"> Beta-Blockers Calcium channel blockers Clonidine Digoxin Pacemaker 	Signs and Symptoms <ul style="list-style-type: none"> Chest pain Respiratory distress Hypotension or Shock Altered mental status Syncope Lightheadedness/Dizziness 	Differential <ul style="list-style-type: none"> Acute myocardial infarction Hypoxia / Hypothermia Pacemaker failure Sinus bradycardia Head injury (elevated ICP) or Stroke Spinal cord lesion Sick sinus syndrome AV blocks (1°, 2°, or 3°) Overdose
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Education/Pearls

Bradycardia

- Identifying signs and symptoms of poor perfusion caused by bradycardia is paramount.
- Rhythm should be interpreted in the context of symptoms and pharmacological treatment given **ONLY** when symptomatic; otherwise, closely monitor the patient and reassess.
- **Do not delay transcutaneous pacing for patients with evidence of severe hemodynamically instability, with poor perfusion, or altered mental status.**
- Bradycardia typically causes symptoms at a rate of <50 beats/minute.
 - Bradycardia may present with altered mental status, chest pain, congestive heart failure, seizure, syncope, shock, pallor, diaphoresis, or evidence of hemodynamic instability.
- Consider treatable causes for bradycardia
 - Common causes: electrolyte abnormalities (e.g. hyperkalemia), myocardial ischemia, medication overdose (see below for more details), infections, hypoxemia, and hypothyroidism
 - Consider hyperkalemia in patients with ECG evidence of wide complex bradycardic rhythms. Administer calcium chloride 1 g IV/IO for suspicion of hyperkalemia.
 - Hypoxemia is a common cause of bradycardia. Ensure oxygenation and support respiratory efforts.
- Atropine
 - **Do NOT delay Transcutaneous Pacing to administer Atropine in bradycardia with poor perfusion.**
 - Caution in setting of:
 - Acute MI, as elevated heart rate can worsen ischemia.
 - Overdoses, as administration may cause worsening bradycardia in certain scenarios (such as alpha agonist overdose, like Clonidine.)
 - Cardiac transplant, as it may cause paradoxical bradycardia.
- Transcutaneous Pacing Procedure (TCP)
 - Immediately utilize TCP in patients with evidence of poor perfusion or with high-degree AV block (2nd or 3rd degree) without IV/IO access.
 - If time allows, transport to a cardiac receiving center because transcutaneous pacing is a temporizing measure.
 - Consider sedation or pain control for TCP
 - Use EtCO₂ for all patients receiving sedation
- Overdose
 - Bradycardia is a consequence of medication overdoses, including beta blockers, calcium channels, and alpha-2 agonists (Clonidine)
 - In Clonidine overdoses, avoid use of atropine in the setting of normotension, as atropine may cause reflex hypertension in this unique setting