



Bradycardia With Pulses

Approval: Troy M. Falck, MD – Medical Director

Effective: 06/01/2024

Approval: John Poland – Executive Director

Next Review: 01/2027

- Symptomatic bradycardia exists clinically when the following 3 criteria are present:
 - 1) The HR is slow (<60/min), 2) The pt has symptoms & 3) The symptoms are due to the slow HR.
- Bradycardia that causes symptoms is typically <50/min. The pt’s cardiac rhythm should be interpreted in the context of symptoms, & atropine/TCP utilized only for symptomatic bradycardia.

BLS

- Manage airway & assist ventilations as necessary
- Assess V/S, including SpO₂ - reassess V/S every 3 - 5 min if possible
- O₂ at appropriate rate if hypoxemic (SpO₂ <94%), short of breath, or signs of heart failure/shock

ALS

- Cardiac monitor, 12-lead ECG at appropriate time (do not delay therapy)
- IV/IO NS at appropriate time (may bolus up to 1000 mL for hypotension)

Persistent bradycardia with SBP <90 & any of the following signs/symptoms of hypoperfusion?

- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure

YES →

NO ↓

- Monitor & reassess
- Contact base/modified base hospital for consultation if necessary

***Transcutaneous Pacing Sedation/Pain Control**

- For pts receiving transcutaneous pacing in need of sedation/pain control, consider one of the following:
 - **Midazolam:** 2 - 5 mg IV/IO; **OR**
 - **Fentanyl:** 25 - 50 mcg IV/IO
- May repeat dose x 1 after 5 mins
- Fentanyl is preferred for pts with chest pain or suspected MI

**** For pts ≥65yo Midazolam dosing is limited to 2mg. Fentanyl dosing is limited to 25mcg.**

Atropine

- 1 mg IV/IO
- May repeat every 3 - 5 mins (max total: 3 mg)
- Should not be used for wide-complex rhythms or for second-degree Type II or third-degree heart blocks

Wide-complex rhythms, second-degree Type II or third-degree heart blocks, or atropine ineffective:

Transcutaneous Pacing (TCP)

- Set initial rate at 60/minute
- Set initial current at 10 mA and increase by 10 mA increments while assessing for mechanical capture
- Once mechanical capture is achieved, adjust rate based on clinical response - most pts will improve with a rate of 60 - 70/min if the symptoms are primarily due to bradycardia
- Monitor/re-evaluate frequently, increase current as necessary to maintain mechanical capture.
- Consider sedation/pain control as needed*

If SBP remains <90 after atropine/TCP:

Push-Dose Epinephrine

- Eject 1 mL NS from a 10 mL pre-load flush syringe
- Draw up 1 mL epinephrine 1:10,000 concentration and gently mix
- Administer 1 mL IV/IO push every 1 - 5 mins
- Titrate to maintain SBP >90