Cardiovascular:
Tachycardia with Pulse: Stable

Goals: Maintain adequate oxygenation, ventilation and perfusion; correct the rhythm disturbance, when indicated; search for the underlying cause
Inclusion Criteria: Patients of all ages with abnormally fast heart rate for age, and a cardiac rhythm other than sinus tachycardia, with good perfusion (palpable pulses)
Exclusion Criteria: Patients with tachycardia and signs/symptoms of hemodynamic compromise (acutely altered mental status, hypotension or shock, chest pain/discomfort or acute heart failure); sinus tachycardia
Refer to: Chest Pain, Heat-Related Emergencies, Poisoned Patient and Overdose, Shock, Stroke, Tachycardia-Unstable, Toxic Chemical Exposure and other, symptom-specific CPGs

NOTES:
- **This CPG is intended to treat hemodynamically stable patients with narrow- or wide-complex tachydysrhythmia, not sinus tachycardia.**
- Sinus tachycardia should be treated according to the underlying cause.
- If signs/symptoms of hemodynamic compromise develop, refer to Tachycardia-Unstable CPG.
- If pulseless arrest develops, immediately begin CPR and refer to the Cardiac Arrest, Asystole/PEA and Vfib/pulseless VTach CPGs, as appropriate.

Basic Level

1. Assess and support ABCs according to UNIVERSAL CARE – ADULT or UNIVERSAL CARE – PEDIATRIC, as clinically indicated:
    a. A (Airway): Ensure airway patency, with suctioning and OPA or NPA, as needed
    b. B (Breathing): Provide supplemental oxygen to maintain SpO_2 of at least 94% (continuous monitoring)
    c. C (Circulation): Evaluate, document and treat signs/symptoms of shock according to the Shock CPG and treat chest pain/discomfort according to the Chest Pain CPG; initiate continuous ECG monitoring
    d. D (Disability): Assess and document GCS; assess pupillary size and reactivity; assess for and treat possible acute stroke according to the Stroke CPG
    e. E (Exposure/Environmental): Treat traumatic injuries according to the Trauma CPG and heat-related illness according to the Heat-Related Emergencies CPG
2. Positioning:
    a. Place the patient in a position of comfort
3. Perform and document a POC Glucose analysis and treat according to the Diabetic Emergencies CPG
    a. Do not administer glucose unless there is documented, symptomatic hypoglycemia
4. Obtain SAMPLE history, focusing on prescription and OTC meds, stimulants, and cardiac history (CHF)
5. Once advanced level care arrives on scene, give report and transfer care

Advanced Level

6. Maintain continuous SpO_2 and ECG monitoring until patient care has been transferred to hospital staff
7. Initiate continuous $PetCO_2$ monitoring if signs/symptoms of shock, hypoperfusion or respiratory distress are present or develop (refer to the Tachycardia-Unstable CPG)
8. Obtain and transmit a 12-Lead ECG, preferably before initiating transport:
    a. **NOTE:** 3-Lead ECG monitoring is not a substitute for a 12-Lead ECG
    b. Treatment based on 12-Lead ECG interpretation is outlined in Sections 11 and 12, below
9. Obtain a thorough "SAMPLE" history and perform a thorough physical examination to exclude sinus tachycardia as the likely cause of the patient's symptoms:
    a. ADULT: Narrow-complex tachycardia (NCT) with a rate greater than (220 – patient age (years)) is more likely to be Supraventricular Tachycardia (SVT) than Sinus Tachycardia

b. PEDIATRIC patient less than 14 years of age:
i. Child older than 1 year of age: HR greater than 180 bpm is more likely to be SVT
ii. Infant less than 1 year of age: HR greater than 220 bpm is more likely to be SVT

10. Establish IV/IO access at TKO (if signs/symptoms of shock, refer to Tachycardia-Unstable CPG)
11. Proceed to **EITHER Step 11 OR Step 12**, depending on the 12-Lead ECG interpretation

12. **STABLE** patient with **NARROW-Complex Tachydysrhythmia e.g. SVT (NOT Sinus Tachycardia):**
    a. "NARROW-Complex" definition: QRS duration less than/equal to 0.12 sec (0.09 sec in pediatric pt.)
    b. ADULT patient at least 14 years of age:
        i. If QRS is narrow and rhythm is regular: attempt Valsalva maneuver
        ii. If no response, administer adenosine: 12 mg RAPID IVP + flush with 10-20 mL NS
        iii. If no response, repeat adenosine: 12 mg RAPID IVP + flush with 10-20 mL NS
        iv. **NOTE:** ECG monitor must run continuously (preferably with paper strip printout) during Valsalva maneuver, adenosine administration and response

c. PEDIATRIC patient less than 14 years of age
i. If HR greater than 180 (child over 1 year of age) or 220 (infant) suggestive of SVT
ii. And if QRS is narrow and rhythm is regular: consider Valsalva maneuver
iii. If no response, contact BioTel and establish IV access (if not already done)
iv. BioTel may authorize adenosine: 0.1 mg/kg RAPID IVP (maximum 6 mg) + NS flush
v. If no response, BioTel may authorize repeat (0.2 mg/kg) (maximum 12 mg) + NS flush
vi. **NOTE:** ECG monitor must run continuously, as described above for ADULT patient

    d. **NOTE:** Do NOT administer adenosine if:
        i. Rhythm is irregularly-irregular (suggestive of Atrial Fibrillation)
        ii. Rhythm shows "saw-tooth" pattern (suggestive of Atrial Flutter)
        iii. Poisoning- or drug-induced tachycardia is suspected
13. **STABLE** patient with **WIDE-Complex Tachycardia (WCT) (possible Ventricular Tachycardia):**
    a. "WIDE-Complex" definition: QRS duration greater than 0.12 sec (0.09 sec in pediatric pt.)
    b. ADULT and PEDIATRIC patient with non-sustained WCT:
        i. Initiate transport and monitor vital signs, ECG and SpO_2
        ii. Prepare for clinical deterioration and the need for synchronized cardioversion or other care
    c. ADULT patient at least 14 years of age with sustained (greater than….) WCT:
        i. Initiate transport and monitor vital signs, ECG and SpO_2
        ii. Prepare for clinical deterioration and the need for synchronized cardioversion or other care
        iii. Consider lidocaine or amiodarone infusion: Contact BioTel for dosing guidance
        iv. Do not administer adenosine if ECG shows irregular WCT suggestive of Wolff-Parkinson-White

d. PEDIATRIC patient less than 14 years of age with sustained WCT:
i. Contact BioTel
ii. Prepare for possible IV/IO anti-arrhythmic administration and/or cardioversion
iii. **NOTE:** ECG monitor must run continuously, as described above for ADULT patient

14. If patient develops altered mental status, hypotension/shock, chest pain/discomfort or acute heart failure during evaluation, treatment or transport, follow the guidelines in the Tachycardia-Unstable CPG
15. For additional patient care considerations not covered under standing orders, consult BioTel