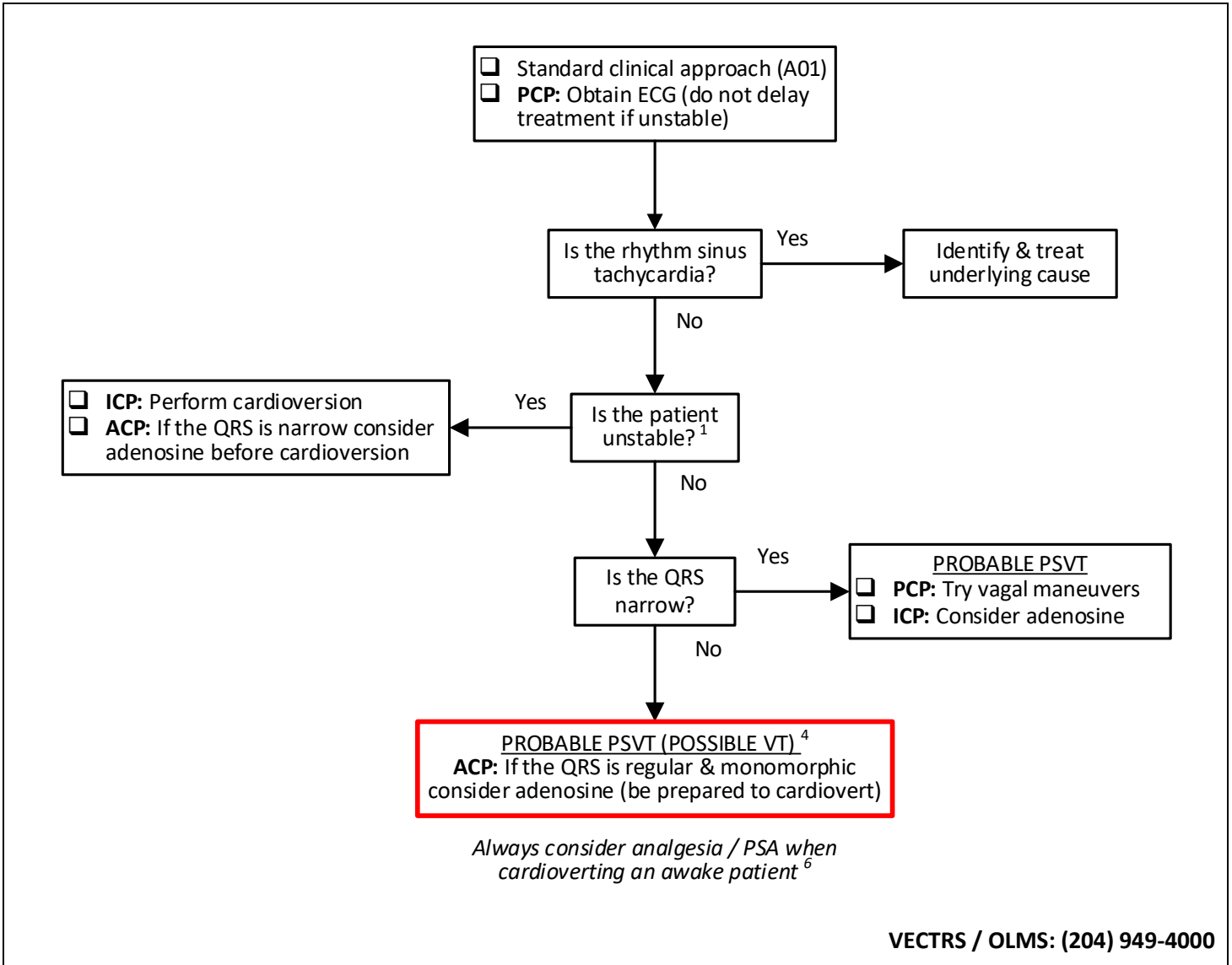
	<b>C06.2 - TACHYCARDIA (PEDIATRIC)</b>	
	Version date: 2025-02-20	Effective Date: 2025-04-30 (07:00)
PCP = PCP - ACP	ICP = ICP & ACP	ACP = ACP only
None = EMR - ACP		



### INDICATIONS

- A sustained heart rate greater than the age-related maximum (appendix A) that is causing symptoms or instability in an infant, child, or adolescent (up to 18 years of age)

### WARNINGS

- For tachycardia without a palpable refer to C01 (EMR) or C02.2 (PCP / ICP / ACP)
- For tachycardia in adults refer to C06.1

### NOTES

*This care map has been adapted from the Heart&Stroke™ 2020 Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care, and the Pediatric Advanced Life Support (PALS) course content (appendix B).*

1. Symptoms and signs of unstable tachycardia in a pediatric patient include:
  - Acutely altered level of consciousness (LOC)
  - Hypotension / hypoperfusion / shock
  - Acute decompensated heart failure
2. Try to differentiate if the instability is due to the tachycardia itself or the result of something else (e.g. hypovolemia, fever). **DO NOT DELAY TREATMENT IF THE PATIENT IS UNSTABLE.**
3. It may be difficult to differentiate a very fast sinus tachycardia from paroxysmal supraventricular tachycardia (PSVT).
 

Sinus tachycardia will usually have normal appearing P waves, slight variability to the RR interval, and a rate of less than 220 beats per minute (bpm) in infants and 180 bpm in children.

PSVT will usually have absent or abnormal (retrograde) P waves, a tightly fixed RR interval, and a rate of more than 220 bpm in infants and 180 bpm in children.
4. Patients with PSVT may have a wide QRS interval (greater than 90 milliseconds) if it is accompanied by aberrant conduction, but the complexes are always very regular and monomorphic.
 

Polymorphic complexes (especially if bizarre-appearing) strongly suggest ventricular tachycardia (VT).
5. Begin cardioversion in pediatric patients with 0.5 to 1 Joule per kilogram. If a single shock fails to convert, increase the current to 2 Joules per kilogram and repeat up to two more times.
 

When performing cardioversion on a patient with an implanted cardioverter defibrillator (ICD) or pacemaker, place the electrodes at least 8 centimeters (3 inches) away from the pulse generator.
6. Synchronized cardioversion is painful, albeit temporarily. If time and the patient's hemodynamics allow, paramedics with the intermediate (ICP) should provide analgesia before the procedure. Paramedics with the ACP work scope should consider full procedural sedation and analgesia (PSA).
 

Watch for hypotension in the patient who may be compensating for poor cardiac output.

LINKS
<ul style="list-style-type: none"> <li>• A01 - Standard Clinical Approach</li> <li>• A13 - Procedural Sedation &amp; Analgesia</li> <li>• C01 - Basic Cardiac Arrest &amp; Post Resuscitation Care</li> <li>• C02.2 - Advanced Cardiac Arrest (Pediatric)</li> <li>• C06.1 - Tachycardia (Adult)</li> <li>• M01 - Adenosine</li> </ul>



APPROVED BY	
	
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VERSION CHANGES (refer to X03 for change tracking)
<ul style="list-style-type: none"> <li>• Retitled</li> <li>• Addition of advanced work scope</li> <li>• Separation into pediatric and adult (C06.1) protocols</li> </ul>

<b>APPENDIX A - MAXIMUM HEART RATE BY AGE</b>			
<b>AGE IN YEARS</b>	<b>HR (BPM)</b>	<b>AGE IN MONTHS</b>	<b>HR (BPM)</b>
> 18	100	24 - 36	140
15 - 18	105	18 - 24	150
12 - 15	110	12 - 18	155
8 - 12	115	9 - 12	160
6 - 8	120	6 - 9	170
4 - 6	130	3 - 6	175
3 - 4	135	0 - 3	180

# Pediatric Tachycardia With a Pulse Algorithm



## Pediatric Advanced Life Support

