Cardiac Dysrhythmias (Tachycardia) – 10.061

Treat per Universal Patient Care

Are signs or symptoms of poor perfusion caused by the dysrhythmia present?
(Altered mental status, ischemic chest discomfort, acute heart failure, hypotension or other signs of shock)

Rate related symptoms uncommon if HR<150 bpm. Consider alternate causes such as sepsis or toxidrome and fluid bolus of 500 mL, repeating as necessary (unless patient is demonstrating findings of heart failure exacerbation such as rales, JVD, or significant peripheral edema).

In asymptomatic patients (or those with only minimal symptoms, such as palpitations), consider close observation or treatment with fluid bolus rather than immediate therapy with antiarrhythmic medication.

No – Pt Stable. Obtain 12-lead ECG

Yes – Pt Unstable

- **Immediate synchronized cardioversion**
- If pt is conscious consider sedation with **Midazolam 2.5 mg IV/IO/IN**, may repeat once. Do not delay cardioversion.
- Repeat synchronized cardioversions x 3 if no change in rhythm

Narrow regular QRS (< 0.12 sec)

Attempt vagal maneuvers

Adenosine 6 mg rapid IV

Adenosine 12 mg rapid IV

Adenosine 12 mg rapid IV

Irregular

Narrow QRS

Consider:
- Atrial fib/flutter
- Multifocal atrial tachycardia
- **Diltiazem 0.25 mg/kg IV/IO** over 2 minutes. Repeat prn with 0.35 mg/kg IV/IO over 2 minutes.

Wide QRS

Consider:
- WPW
- Afib w/aberrancy
- Torsades

If Torsades

Magnesium Sulfate 1-2 grams in 10 ml NS IV/IO over 5 minutes

Wide regular QRS (> 0.12 sec)

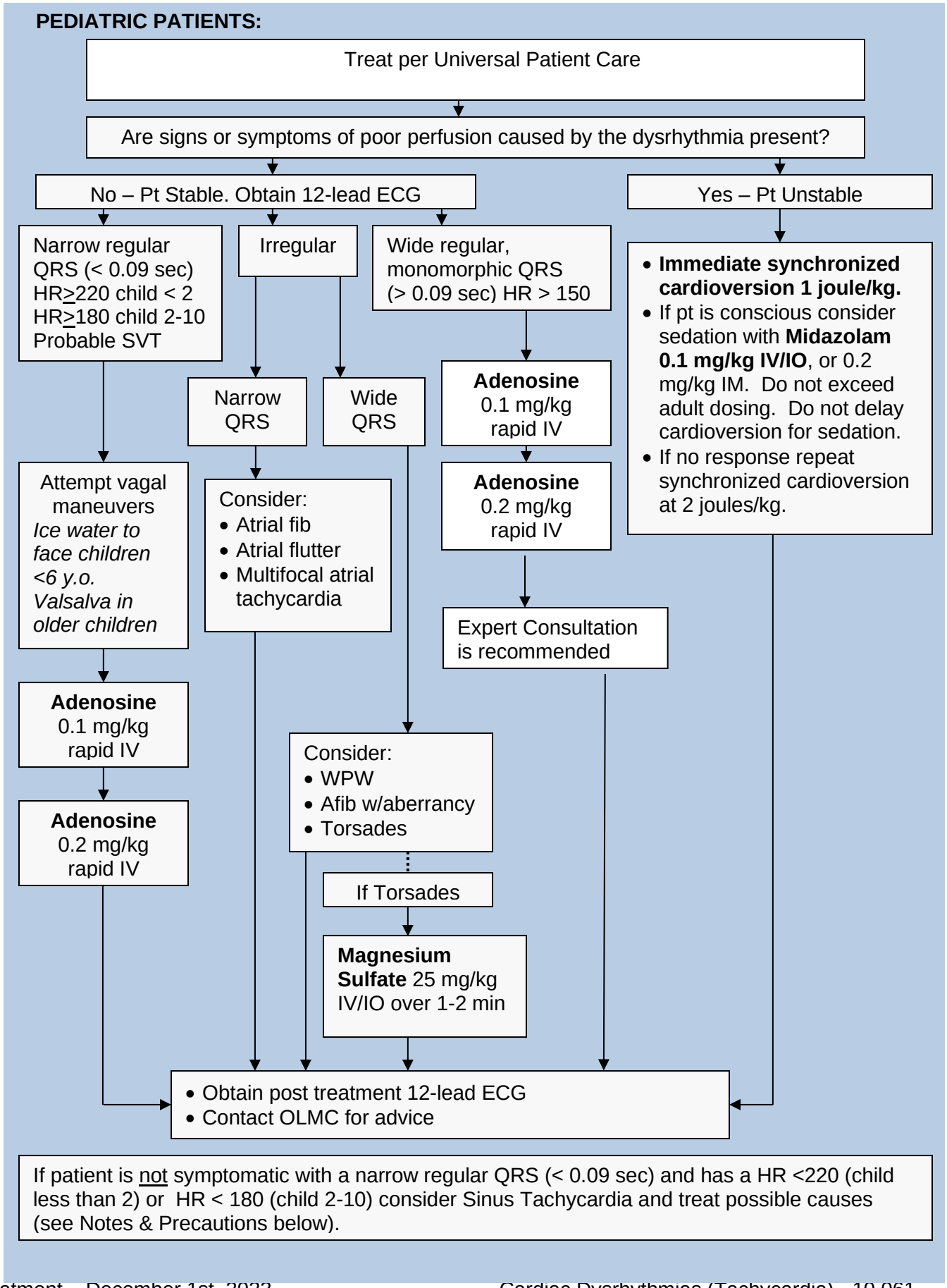
Amiodarone 150 mg IV/IO over 10 min or **Lidocaine 1-1.5 mg/kg IV/IO**

Amiodarone 150 mg IV/IO over 10 min OR **Lidocaine 0.5 - 0.75 mg/kg IV/IO** every 5 min to max of 3 mg/kg.

May consider **Lidocaine infusion at 1 - 4 mg/min** prophylactically during EMS transport.

- Obtain post treatment 12-lead ECG
- Contact OLMC for advice
- Consider contributing factors and other treatments

Cardiac Dysrhythmias (Tachycardia) – 10.061



Cardiac Dysrhythmias (Tachycardia) – 10.061

NOTES & PRECAUTIONS:

A. In stable narrow complex irregular tachycardia, consider **Calcium Chloride 500 mg slow** IV/IO before Diltiazem if systolic BP < 90 mmHg. If patient is unstable at any time, perform synchronized cardioversion.
B. In stable regular wide complex tachycardia which is monomorphic, consider **Adenosine** if SVT with aberrancy is suspected.
C. If the patient is asymptomatic, tachycardia may not require treatment in the field. Continue to monitor the patient for changes during transport. The acceptable upper limit for heart rate for sinus tachycardia is 220 minus the patient's age.
D. Other possible causes of tachycardia include:
    1. Acidosis
    2. Hypovolemia
    3. Hyperthermia/fever
    4. Hypoxia
    5. Hypo/Hyperkalemia
    6. Hypoglycemia
    7. Infection
    8. Pulmonary embolus
    9. Tamponade
    10. Toxic exposure
    11. Tension pneumothorax
E. If pulseless arrest develops, follow Cardiac Arrest protocol.
F. All doses of **Adenosine** should be reduced to one-half (50%) in the following clinical settings:
    1. History of cardiac transplantation.
    2. Patients who are on Carbamazepine (Tegretol) and Dipyridamole (Persantine, Aggrenox).
    3. Administration through any central line.
G. Adenosine should be given with caution to patients with asthma.
H. Patients with Atrial fibrillation duration of >48 hours are at increased risk for cardioembolic events. Electric or pharmacologic cardioversion should not be attempted unless patient is unstable. Contact OLMC.

KEY CONSIDERATIONS:

Medical history, medications, shortness of breath, angina or chest pain, palpitations, speed of onset

HEART MONITOR ADULT SYNCHRONOUS CARDIOVERSION SETTINGS

- **Medtronics Lifepak® – 100j, 200j, 300j, 360j**
- **Philips MRX® – 100j, 120J, 150J, 150J**
- **Zoll E-Series® – 70j, 120j, 150j, 200j**