WIDE COMPLEX TACHYCARDIA – ADULT
STATEWIDE ALS PROTOCOL

Initial Patient Contact – see protocol #201

Manage Airway/ Ventilate, if needed
Apply Oxygen
Monitor ECG & Pulse Oximetry

Unstable with serious signs or symptoms
Related symptoms uncommon if HR <150

STABLE

IV/IO Access
12-Lead ECG, if available

Regular Wide QRS Rhythm?

REGULAR

First consider, Adenosine 6 mg IV/IO (if available)
May repeat 12 mg IV

Lidocaine 1.5 mg/kg IV/IO
OR
Amiodarone 150 mg IV/IO
infused over 10 minutes (if available)

Contact Medical Command

UNSTABLE

IV/IO Access
Consider Sedation, if conscious
(see box below)
DO NOT delay cardioversion

Synchronized Cardioversion
100 joules
If no conversion, repeat at 200, 300, 360 joules
until conversion

IRREGULAR

Contact Medical Command

Amiodarone
150 mg IV/IO
infused over 10 minutes (if available)
OR
Magnesium 2 g IV/IO
If torsades

Sedation Options:
(Choose one)
(Titrated to minimum amount necessary)
Midazolam 1-5 mg IV/IO (0.05 mg/kg) titrated;
OR
Diazepam 5-10 mg IV/IO (0.1 mg/kg) titrated;
OR
Lorazepam 1-2 mg IV/IO (0.1 mg/kg, max 2 mg/dose) titrated
WIDE COMPLEX TACHYCARDIA – ADULT
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Criteria:
A. Symptomatic adult patients with heart rates >100 bpm and wide QRS complex (≥ 0.12 sec). It is uncommon for serious symptoms to be related to tachycardia if heart rate is <150 bpm.

Exclusion Criteria:
A. Sinus tachycardia with aberrancy - treat underlying cause rather than rhythm. Causes may include:
   1. Trauma - Follow appropriate trauma protocol
   2. Fever
B. PEA – Follow PEA Protocol #3041A.

Possible MC Orders:
A. Synchronized cardioversion
B. Amiodarone (if available) 150 mg IV/IO infused over 10 minutes. May be repeated as needed up to 2.2 gm in 24 hours.
C. Consider sodium bicarbonate if suspected hyperkalemia or overdose.
D. Consider calcium chloride, 10 ml of 10% solution IV (if available) if suspected renal failure/dialysis patient or overdose of calcium channel blocker.
E. Consider glucagon, 3-10 mg (0.05mg/kg) IV (if available) if suspected calcium channel blocker overdose that is unresponsive to calcium chloride.

Notes:
1. Many patients who present with wide complex tachycardia have evidence of cardiovascular dysfunction (low blood pressure, chest pain, congestive heart failure, altered level of consciousness). Some of these patients are unstable (such as shock, pulmonary edema, decreased level of consciousness) and require immediate synchronized cardioversion. The rest who have mild hypotension, mild shortness of breath/scattered rales, chest discomfort and a GCS >13 may be treated with medications. If the patient develops unstable signs/symptoms at any time during treatment, proceed immediately to the cardioversion column. The following chart illustrates the continuum from borderline to critically unstable.

<table>
<thead>
<tr>
<th>Borderline</th>
<th>Unstable</th>
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</thead>
<tbody>
<tr>
<td>Low BP</td>
<td>Shock</td>
</tr>
<tr>
<td>SOB, Scattered Rales</td>
<td>Pulmonary Edema</td>
</tr>
<tr>
<td>Mild chest discomfort</td>
<td>Severe chest discomfort</td>
</tr>
<tr>
<td>Alert &amp; oriented</td>
<td>Decreased level of consciousness</td>
</tr>
<tr>
<td>GCS 14-15</td>
<td>GCS ≤ 13</td>
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</tbody>
</table>

2. Regular wide complex tachycardias include ventricular tachycardia and SVT with aberrancy. If the patient has a previous history of coronary artery disease, then VT is most likely. If VT with aberrancy is suspected, adenosine (if available) may be tried. If sinus tachycardia is noted, treat the underlying cause with other appropriate protocol.
3. Vagal maneuvers may be considered. Avoid carotid massage if patient is older than 50 y/o or has history of hypertension.
4. Adenosine must be given by rapid IV push (over 1-3 seconds) by immediate bolus of 20 mL NSS. Adenosine success may be enhanced by administration through an antecubital IV with the arm elevated above the level of the heart during injection.
5. Irregular wide complex tachycardias include atrial fibrillation, pre-excitation atrial fibrillation, polymorphic VT and torsades de pointes.
6. Begin with 100 joules if using a monophasic defibrillator or if ECG rhythm is atrial fibrillation.
7. If using a biphasic defibrillator, initial and subsequent countershock energy doses should be determined by agency medical director.
8. Unstable patients with known chronic atrial fibrillation may be refractory to cardioversion. Consider early Medical Command contact and rapid transport.

Performance Parameters:
A. Review for correct documentation of rhythm and for inclusion of rhythm strip in PCR.
B. Review for documentation of vital signs and rhythm after each medication or cardioversion.