Standard Operating Guidelines

Guideline 701.0
Williams County EMS Protocols

Purpose:

The following document is the current edition to the Protocols for Williams County Emergency Medical Services adopted September of 2013. The City of Bryan Fire Department in working with Williams County Emergency Medical Services shall follow the same protocols as established for the Williams County Emergency Medical Services. Any questions in regards to these protocols are to be directed to the Fire Chief.

Adopted: 5/27/92
Revised 9/13

Williams County Standing Order

Williams County Emergency Medical Service
05842 St. Rt. 15, PO Box 367
Bryan, OH 43506
(419)-636-6751 FAX: (419)-636-0554

Ohio State Board of Pharmacy
77 South High Street
Room 1702
Columbus, OH 43215-6126

Reference: Notarized Standing Orders

These standing orders are to be followed by all FIRE/EMS services that are affiliated with Williams County EMS and operate under the authority, protocols and standing orders of the Medical Director employed by Williams County EMS.

As the Medical Director of Williams County EMS, I authorize these protocols and standing orders to provide medical direction for all emergency medical technicians and paramedics employed by Williams County EMS.

S. John Pappas, MD
Medical Director (Print)

Medical Director (Signature)

Sworn to and signed before me this date:
Oct. 18, 2013
Date
Signature of Notary

**Document must be notarized:

LORI M. MOFFITT
NOTARY PUBLIC, STATE OF OHIO

LORI M. MOFFm
NOTARY PUBUC
STATE OF OHIO
My Comm. Expires September 24, 2017

Williams County Standing Order

WILLIAMS COUNTY EMS

PROTOCOLS

Rev Sept 2013

Williams County Standing Order

Williams County EMS Protocols

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Williams County Standing Order

ADMINISTRATIVE

Rev Sept 2013

Williams County Standing Order

General Standing Order

These standing orders are to be followed by all Fire/EMS services that are affiliated with William County EMS and operate under the authority, protocols and standing orders of the Medical Director employed by Williams County EMS.

1. Emergency Medical Responders & EMTs can only perform Standing Orders at their level. All affiliated Advanced EMTs & paramedics who are not employees of Williams County EMS (WCEMS) are limited to functioning within the EMT scope of practice per the authorized directive of the Williams County Emergency Medical Services Medical Director.
2. Advanced EMTs employed by WCEMS can do Basic and Advanced Standing Orders.
3. Paramedics employed by WCEMS can do Basic, Advanced, Paramedic Standing Orders.
4. Whenever there are pts involved, the highest level of care at the scene shall have medical authority at that scene.
5. Assure scene safety before approaching any scene.
6. All pre-hospital personnel are assumed to follow body substance isolation procedures.
7. Cervical spine immobilization, Airway, Breathing & Circulation are the initial treatment for all pts unless otherwise stated in Standing Order.
8. Obtain history of present illness, medical history, medications, and allergies on all pts if possible.
9. All stable pts will have their vitals assessed Q 20 minutes at a minimum. All critical pts will have their vitals assess Q 10 minutes and should be considered Q 5 minutes. Minimum vitals required include: level of consciousness, respiratory rate, heart rate, and blood pressure. Other vitals to be considered include: skin color, skin temperature, skin texture, tympanic temperature, lung sounds, end-tidal CO2 level, blood sugar.
10. On-line Medical Control is the on-duty ER physician at Bryan or Montpelier Hospital while in Williams County. When transporting out of Williams County on-line Medical Control is the receiving physician for that pt or the on-duty ER physician at the receiving hospital.
11. Standing Orders should be initiated prior to seeking on-line Medical direction as often as possible. The receiving hospital should be contacted as soon as practical to advise of pt condition and transport status. In time critical emergencies such as serious trauma, MI, and stroke it is imperative to contact the receiving hospital as soon as the situation is known so that that facility can prepare for the arrival of the pt.
12. When circumstances and situations arise which are not covered by a Standing Order, medical judgment, discretion, and training are to be utilized. Deviation from the Standing Order is not recommended but is allowed when unable to contact Medical Control and pt is in immediate danger of loss of life and/or limb.
13. Lights and siren response to the hospital should be limited to time critical emergencies only.
14. Critical, unstable pts who are not being transported from the scene by helicopter will be transported to

the closest hospital emergency room. The receiving hospital must be notified and updated on pt condition as soon as practical. **Do Not** remain on scene with a critical pt who is packaged and ready for transport for a helicopter to arrive. Divert the helicopter to the nearest hospital and begin transport.

15. Serious/critical pts with stable vitals may be transported to the most appropriate hospital emergency room in Williams County or an adjacent county hospital that is less than 30 miles transport distance from scene. These pts must have a medic present during transport. If pt becomes unstable at any point during transport diversion to the closest hospital emergency room is required.
16. Non-critical, stable pts may be transported to their hospital of choice in Williams County or to an adjacent county hospital that is less than 30 miles transport distance from scene. These pts should be advised of services available at receiving hospital to aid in selecting appropriate hospital.
17. These Standing Orders shall be reviewed, rewritten, and amended at the discretion of the Medical Director at any time.
18. New and revised Standing Orders shall supersede any and all previously written Standing Orders.

Issue Date	May 2013			
Review Date				
Revision Date				

As the Medical Director of Williams County EMS, I authorize these protocols and standing orders to provide medical direction for all emergency medical technicians and paramedics employed by Williams County EMS.

Dr. S. John Pappas, Medical Director

James Hicks, Williams County EMS Director

Williams County Standing Order

Air Transport

1. Air transport standby/dispatch may be initiated by:
    a) Williams County EMS paramedics
    b) BLS units, first responders, fire officers, police units who arrive on scene prior to the responding paramedic and believe that an air ambulance is needed will contact the responding paramedic, provide a brief scene and pt condition, and make a recommendation on air ambulance.
2. Consideration for air transport:
    a) Major trauma involving multiple body systems
    b) Head injury with significantly altered mental status
    c) Possible spinal injury with neurological compromise
    d) Significant chest or abdominal trauma
    e) Extended scene time (entrapment and/or extrication)
    f) Extremity amputations (excluding digits) (consider T.C. Level I destination)
    g) Critical burns
    h) MVA fatality in the same vehicle
    i) Scalping or degloving injury (excluding digits)
    j) Near-drowning
    k) Multiple critical patients
    l) Road conditions inhibiting rapid ground transportation
    m) ST elevation MI with extended transport distance/time
    n) Acute stroke with onset less than 30 minutes and extended transport distance/time
    o) Any issue that the Paramedic feels that flying is the best for the patient
3. Initiation of air transport dispatch
    a) The responding/on-scene paramedic will request an air ambulance standby/dispatch by notifying Williams County Communications Agency
    b) Williams County Communications will then follow their established protocols for requesting the appropriate air ambulance
    c) Williams County Communications will also dispatch the appropriate fire department to establish a landing zone
    d) The responding fire department will establish radio communications with the responding air ambulance and provide updates to air ambulance as necessary
4. Air transport may be requested to receiving hospital if ground transport time to hospital is short and/or scene dictates. Contact must be made with receiving hospital as soon as this decision has been made to ensure they are prepared to receive an air ambulance.
5. Patient care will be initiated under Williams County EMS Standing Orders and continued until patient care is released to air transport personnel.
6. Once a helicopter is placed on standby or requested to the scene they may only be cancelled or stood down by the responding paramedic. If first responders believe that a helicopter is not required they will contact the responding paramedic and provide a brief pt report. The paramedic will then contact dispatch concerning the helicopter.
7. The following are available air services:
    a. St. Vincent Life Flight – St. Vincent Hospital, Toledo, Wauseon, Lima
    b. Samaritan – Parkview Hospital, Ft. Wayne
    c. Lutheran Air – Lutheran Hospital, Ft. Wayne
    d. Promedica Air – Toledo Hospital, Defiance
8. On the Ohio Turnpike St. Vincent Life Flight is the first air ambulance requested

Williams County Standing Order

Communications

1. All radio communication will be coordinated through Williams County Communications Agency(WCCA).
2. Med 10 will be the primary UHF frequency used.
3. Med 4 will be the alternate UHF frequency used.
4. WCCA, EMS Command, or an EMS Supervisor may request radio traffic to be moved to Med 4. These individuals may also request that each unit maintain their own time logs.
5. In multi and/or unique situations, radio or phone contact should be made with the receiving hospital to advise them of the situation.
6. When circumstances and situations arise which are not covered by a Standing Order, medical judgment, discretion, and training are to be utilized. Deviation from the Standing Order is not recommended but is allowed when unable to contact Medical Control and pt is in immediate danger of loss of life and/or limb.

Williams County Standing Order

Death Determination/Field Termination of Resuscitation

Basic

1. Resuscitation efforts may be withheld under the following conditions:
   a. Decapitation
   b. Decomposition
   c. Rigor mortis
   d. Dependent lividity
   e. Injuries incompatible with life (massive head and/or chest injuries)
   f. Valid Do Not Resuscitate (DNR) order signed by patient's physician(see DNR Standing Order)
   g. Situations in which it is physically impossible to begin CPR (entrapment/pin)
   h. Potentially dangerous situation for emergency personnel
   i. Multiple casualty incidents (follow mass casualty protocol)
2. Resuscitation efforts should be started under the following conditions
   a. Potentially treatable cause of condition (hypothermia, etc…)
   b. Inability to reasonably confirm the validity of a Do Not Resuscitate (DNR) order
   c. Situations where emergency responders feel lack of resuscitation efforts would be inappropriate such as cardiac arrest in public place, perception of family is non-acceptance, communication barrier with family, safety concerns for EMS personnel
3. Once resuscitative efforts have been started they must be continued until:
   a. A physician has pronounced the pt dead
   b. A valid DNR is presented to squad members (see DNR Standing Order)
4. Once death has been confirmed:
   a. Williams County Communications Agency must be notified
   b. Williams County Coroner must be notified through Williams County Communications
   c. Williams County Coroner must release the body prior to the body being removed from scene.
   d. If the death appears to be suspicious or is a suicide then law enforcement must be requested through Williams County Communications. Every effort should be made to preserve all evidence as is at the scene. Everyone should leave the premises (including family) until law enforcement has arrived. If family refuses to leave body then only one EMT should remain with body.
5. **The following potential death scenes require EMS-1 notification as soon as practical:**

a- Multiple deaths (2or more)	e- Homicides	i- Hazmat spills
b- Industrial accidents	f- Suicides	j- Vehicle vs. train crashes
c- Drowning	g- Building collapse	k- Airplane/Helicopter crashes
d- Fire/smoke inhalation	h- Chemical exposures	l- Unusual/Suspicious cause of death

Advanced

1. Run EKG strip in two leads to confirm Asystole

Paramedic

1. If the decision is made to treat the patient, ACLS must be followed in its entirety. Transport to the nearest emergency room is expected once resuscitation has been initiated by ALS staff.

2. If BLS caregivers start care inappropriately, ALS staff can terminate resuscitation.

Williams County Standing Order

D.N.R./A.N.D. Presentation

Basic

1. Determine LOC and evaluate ABC's
2. BLS CPR will be started if there is uncertainty about validity/presentation of DNR to caregivers
3. Obtain history from family and/or bystanders
4. Carefully review D.N.R. to determine the following:
    a) Directly identifies the patient
    b) Has expiration date
    c) Includes signature of patient or medical POA, signature of physician and date signed
5. Contact responding ALS unit for approval to withhold care due to D.N.R.
6. If the nature of the call is not clearly related to the terminal illness and/or chronic disease stated on the DNR form then resuscitation and treatment must be performed.
7. The **patient** has the right to revoke the D.N.R. at any time.

Advanced

1. If the decision is made to treat patient refer to appropriate Standing Order.

Paramedic

1. If the decision is made to treat the patient, ACLS must be followed in its entirety. Transport to the nearest emergency room is expected once resuscitation has been initiated by ALS staff.
2. If BLS caregivers start care inappropriately, ALS staff can terminate resuscitation.

DNR Comfort Care Arrest

1. EMS may perform all treatments according to Standing Orders until the patient becomes pulseless and/or apneic. Treatments include intubation, pacing, IV, BVM, CPAP, cardiac monitoring, drug administration.
2. In the event of Respiratory and/or Cardiac arrest EMS will not perform CPR.

DNR Comfort Care

1. EMS may: Suction the airway
    Splint
    Control Bleeding
    Provide Emotional Support
    Administer O2 via NRB, NC, Simple mask
    Immobilize
    Provide pain medication
    Contact Medical Control for further orders

2. EMS **WILL NOT**: Administer Chest Compressions
    Administer any Resuscitative Drugs
    Insert Artificial Airway Adjuncts
    Provide Respiratory Assistance (BVM)
    Initiate Resuscitative IV (you may continue IV if it has already been established)
    Initiate Cardiac Monitoring

Williams County Standing Order

DNR COMFORT CARE

DNR IDENTIFICATION FORM

❑ **DNRCC**
(If this box is checked the DNR Comfort Care Protocol is activated immediately.)

❑ **DNRCC—Arrest**
(If this box is checked, the DNR Comfort Care Protocol is implemented in the event of a cardiac arrest or a respiratory arrest.)

Patient Name:_____

Address:_____

City_____ State_____ Zip_____

Birthdate_____ Gender ❑ M ❑ F

Signature_____ (optional)

Certification of DNR Comfort Care Status (to be completed by the physician)*

(Check only one box)
❑ **Do-Not-Resuscitate Order**—My signature below constitutes and confirms a formal order to emergency medical services and other health care personnel that the person identified above is to be treated under the State of Ohio DNR Protocol. I affirm that this order is not contrary to reasonable medical standards or, to the best of my knowledge, contrary to the wishes of the person or of another person who is lawfully authorized to make informed medical decisions on the person's behalf. I also affirm that I have documented the grounds for this order in the person's medical record.

❑ **Living Will (Declaration) and Qualifying Condition**—The person identified above has a valid Ohio Living will (declaration) and has been certified by two physicians in accordance with Ohio law as being terminal or in a permanent unconscious state, or both.

Printed name of physician*:_____

Signature_____ Date_____

Address:_____ Phone_____

City/State_____ Zip_____

* A DNR order may be issued by a certified nurse practitioner or clinical nurse specialist when authorized by section 2133.211 of the Ohio Revised Code.

See reverse side for DNR Protocol

Williams County Standing Order

Documentation – Patient Care Report Narrative

****For every patient contact, the following must be documented at a minimum****

Dispatched To…

a. Nature of Call
b. Any Reasons for Delay (Staging, Trains, Weather)

Arrived to Find …

a. Patient Presentation Scenario
b. Medical Caregivers / Other Responders on the Scene
c. General Impression of the Patient / Level of Consciousness (AVPU)
d. Patient's Chief Complaint
e. Airway Assessment & Interventions (Head Tilt, Jaw Thrust, Suction, Head Positioning)
f. Breathing Assessment & Interventions (Pulse Oximetry, Ventilation, Lung Sounds)
g. Circulation Assessment & Interventions (Manual Pulse, Capillary Refill, Skin Color, Bleeding Control, Initiation of CPR)
h. SAMPLE History
i. OPQRST as Appropriate
j. Physical Assessment / Head to Toe Assessment

Treatments Provided:

a. Pulse Oximetry
b. Airway Management Procedures
c. Monitoring of Vital Signs
d. Heart Monitor Placement
e. Trauma Treatments
f. Medications Administered
g. Record Any On-Line Medical Orders Given

*Denote which treatments are done on the scene, and which treatments are done enroute

Response to Care:

a. Response to all treatments
b. Record improvements and decline in patient status

Transfer of Care:

a. The facility that the patient is transferred to
b. Reason for destination choice when applicable

Williams County Standing Order

_First Responder Medical Assist

1. The appropriate first responder unit shall be dispatched automatically for all emergencies not in the Bryan fire service area. Bryan first responders will be dispatched anytime EMS response time is greater than five minutes within the Bryan Fire Department response area. All Code 4s will have automatic fire dispatch.

2. EMS personnel shall, at their discretion, request or deny dispatch of first responders depending upon situational needs:
   a. Request – when additional assistance is required, prolonged time until EMS arrival, provider discretion, etc.
   b. Deny – close proximity, nursing homes, etc. Note: **Bryan first responders should not be disregarded once dispatched.**

3. Only First Responders, EMTs and Certified Fire Rescue Personnel should respond on medic assist calls. Only Williams County employees may drive a Williams County vehicle (ambulance).

4. Total number of first responders should not exceed four (4) unless scene requires additional personnel for situations within the scope of firefighter practice

5. If it is necessary within a given service area to drive private vehicles to the scene, responding personnel shall park a safe distance from the scene and in a manner that allows for easy ingress and egress of ambulance(s) and other necessary vehicles

6. Incident Command system will be established and followed for scene management.

7. Prior to arrival of EMS:
   a. Two (2) first responder personnel shall evaluate the scene and initiate patient care unless the situation mandates involvement of additional personnel
   b. Additional first responder personnel shall attend to other situations at the scene which are normally within their area of expertise
   c. Contact incoming EMS unit on EMS dispatch channel to give them a brief patient report and inform them of any special patient needs or special scene circumstances
   d. Inform dispatch of additional needs as identified:
      a) additional ambulance personnel
      b) back-up support of area fire departments
      c) presence of law enforcement personnel

8. Upon arrival of EMS:
   a. Brief patient report shall be given to EMTs taking over patient care
   b. Provide additional assistance as needed
   c. Consult EMTs following initial assessment to inquire if additional assistance is needed prior to leaving scene
   d. If no further assistance is required, reassemble equipment not in use and depart scene
   e. When possible, replace used supplies from transporting ambulance

9. After completion of run a pt run sheet must be completed. This sheet will remain on file at first responder station unless specifically requested by EMS for audit and review.

Williams County Standing Order

Patient Refusal

1. All patients are to be offered assessment including vitals and transportation to hospital emergency department.
2. Patients have the right to refuse treatment and transport if they meet the following conditions:
    a) The patient is over 18 or is an emancipated minor
    b) Drug impairment or alcohol intoxication of the pt does not prevent or complicate assessment
    c) The patient is not a risk to himself or others
    d) The patient has a normal mental status indicated by:
        Normal/Appropriate Speech
        Alert and oriented to person, place, and time
        Appropriate, rational thinking
    e) The patient has access to a phone or "significant others" to seek follow-up medical care if required.
3. All risks of refusing treatment and/or transport are to be explained to the patient.
4. If it is determined that refusing treatment could be detrimental to the patient's life or limb, or patient does not meet requirements of #2 above, then law enforcement should be contacted for review and assistance.
5. The following circumstances require ALS provider evaluation prior to patient refusal:
    a) Any circumstance where BLS provider feels ALS care is warranted
    b) Near Drowning
    c) Chest pain of any type, cardiac irregularity (too fast, too slow, irregular, weak pulse)
    d) Respiratory Distress
    e) Serious blunt or any penetrating head, neck, chest or abdominal injury
    f) Symptomatic hypotension or symptomatic hypertension
    g) Diabetic emergencies
    h) All facial burns, electrical burns, 2^{nd} or 3^{rd} degree burns on more than 10% of body
    i) Overdose or accidental poisoning
    j) First time seizure, repetitive seizure, extended postictal time
    k) Severe orthopedic injuries
    m) Head injury with loss of consciousness
    n) Signs or symptoms of spinal injury
    o) Syncope
6. A patient refusing treatment should be encouraged to follow up with his/her family physician.
7. The patient should sign a refusal form.
8. If a patient refuses to sign, this should be thoroughly documented and signed by witnesses.
9. If the patient is a minor, parents or other responsible party (such as a grandparent, principal, police officer, etc.) must sign the refusal.
10. Complete a run report documenting the assessment, treatment and discussions with the patient and/or law enforcement, family, witnesses or medical control regarding care and offer of transport.

Williams County Standing Order

_Transfers

General

1. Transfers will occur normal traffic (no lights/siren) unless:
    a) ER staff has a documented rationale for not utilizing air medical transport. (such as weather, no aircraft available, etc.)
    b) Patient condition worsens during transport and personnel believe diversion to closest facility would be inappropriate.
2. Doctor request/order is not an indication for lights/siren transport.
3. Use of lights/siren transfers must be documented and justified on the patient run report.
4. Transfers will be limited to within 75 miles of referring hospital.
5. No transfers to Urgent Care Centers, Physician Offices, Nursing Care Facilities, or Psychiatric facilities unless Court Ordered.
6. No patient termed 26A will be transferred anywhere other than to Bryan ER or Montpelier ER.
7. The total number of IVs infusing at one time during transfer is limited to four.
8. The total number of IV Infusion pumps operating at one time is limited to three.
9. Only two IV Infusion pumps may be running if the patient is also on CPAP
10. Only two IV Infusion pumps may be running if the patient is on a balloon pump.
11. An appropriately trained RN will transport with a patient who is on a balloon pump.
12. Only two IV Infusion pumps may be running if the patient is intubated and being ventilated.
13. Infusing blood may be continued during transport if the paramedic has completed the 2013 required scope of practice updates.
14. Ohio scope of practice does not permit paramedics to initiate blood transfusions
15. An appropriately trained RN will transport with a patient who has a medication running which the paramedic is uninformed about or uncomfortable with.
16. If the paramedic believes the patient requires care above what they are able to provide then an appropriately trained RN will transport with the patient and be responsible for patient care. If an RN is unavailable the transfer will be refused.
17. Only paramedics may transport patients when medications are infusing thru an Infusion pump.
18. Basic EMTs may transport patients with a saline lock. The IV site may not be accessed during transport.

Out of County Transfers

1. Only one out of county transfer will take place at a time.
2. Two squads must be in service in the county prior to taking an out of county transfer. These squads may be on another call.
3. Patient will have a receiving doctor and room number prior to transport.

In County Transfers

1. In county non-emergency transfers will take place per Life Squad II as time permits.
2. If Life Squad I is on a transfer, one other squad must be in service prior to taking a non-emergency transfer.
3. A transfer from Hicksville Hospital back to a Williams County Facility will be treated as an in county non-emergency transfer.

Williams County Standing Order

Transfers (OB)

1. Williams County EMS shall not transport patients identified to be in active labor unless administrative approval has been obtained from the Director of EMS or his/her designee.
2. If such transport is approved, the EMS personnel shall be accompanied by a labor and delivery nurse competent to perform a routine, as well as a complicated vaginal delivery. This person shall also be deemed competent in the resuscitation and cardiopulmonary support of the critically ill newborn.
3. Patients in pre-term labor shall also be accompanied by a respiratory therapist competent in airway management of such infants.
4. If transport of such patients is not felt to be safe by EMS transport personnel, then contact shall be made with the physician requesting patient's transport by the labor and delivery personnel, for assistance with other arrangements for patient management.
5. The proficiency and competence of the hospital personnel accompanying the personnel of Williams County EMS shall be the responsibility of the transferring hospital.
6. Patients in active labor must have a paramedic accompanying them during transport.
7. Refer to Child Birth Standing Order for care during transport.

STANDING ORDERS

Rev Sept 2013

Williams County Standing Order

Universal Patient Care Protocol

Scene Size-Up

a. Is the scene safe
b. Mechanism of injury/nature of injury
c. Number of pts
d. Is additional recourses necessary
e. Consider stabilization of spine

Arrived to Fin d …

k. Patient Presentation Scenario
l. Medical Caregivers / Other Responders on the Scene
m. General Impression of the Patient / Level of Consciousness (AVPU)
n. Patient's Chief Complaint
o. Airway Assessment & Interventions (Head Tilt, Jaw Thrust, Suction, Head Positioning)
p. Breathing Assessment & Interventions (Pulse Oximetry, Ventilation, Lung Sounds)
q. Circulation Assessment & Interventions (Manual Pulse, Capillary Refill, Skin Color, Bleeding Control, Initiation of CPR)
r. SAMPLE History
s. OPQRST as Appropriate
t. Physical Assessment / Head to Toe Assessment

Treatments Provided:

h. Pulse Oximetry
i. Airway Management Procedures
j. Monitoring of Vital Signs
k. Heart Monitor Placement
l. Trauma Treatments
m. Medications Administered
n. Record Any On-Line Medical Orders Given

*Denote which treatments are done on the scene, and which treatments are done enroute

Response to Care:

c. Response to all treatments
d. Record improvements and decline in patient status

Transfer of Care:

c. The facility that the patient is transferred to
d. Reason for destination choice when applicable

Williams County Standing Order

Airway

Basic

1. Assess airway patency on all patients
2. Provide oxygen to maintain O2 saturation greater than 95%.
3. Suction as needed. This may include oral cavity, ET tube, tracheostomy tube, and stoma.
4. If airway found to be compromised, open with head-tilt, chin lift (jaw thrust if potential for cervical spine injury exists)
5. For patients without an intact gag reflex, place Oropharyngeal airway
6. Consider placement of nasopharyngeal airway for patients with intact gag reflex
7. Assist ventilations as needed.
8. Consider placement of a supraglottic airway or blind insertion device for patients in cardiac arrest who are pulseless and apneic. Confirm placement with continuous waveform capnography, observation of chest rise, auscultation of lung sounds, and absence of sounds over the epigastrium.
9. If patient's airway is occluded with a foreign object, use Heimlich maneuver, if unresponsive start CPR; look into pts mouth while opening airway during CPR, use finger sweep only to remove visible foreign body
    a) Obese and pregnant pts use chest thrust
    b) For infants, use 5 back blows and 5 chest compressions
    c) Consider strong suction
    d) Supplemental oxygen to maintain O2 sat greater than 95% and rapid transport for partial obstruction
    e) Strongly encourage transport even if obstruction relieved

Advanced

1. Continue basic airway procedures
2. May remove and/or replace tracheostomy tube if necessary
3. Initiate IV
4. Cardiac Monitor

Paramedic

1. Consider CPAP.
2. If patient unable to protect airway, consider intubation
3. Consider Medication Assisted Intubation if intubation is indicated in a patient with an intact gag reflex
4. If airway is occluded by a foreign body and it is unable to be cleared using the Heimlich maneuver, visualize the epiglottis and attempt the removal of the object with Magill forceps
5. If airway compromise is due to medical problem, consider pharmacological interventions
6. If unable to manage airway by any other means, consider cricothyrotomy
    a) Do not perform a surgical cricothyrotomy on a pt under 12 years of age

Williams County Standing Order

ALLERGIC REACTION/ANAPHYLAXIS

Basic

1. Supplemental oxygen with pulse oximetry to maintain O2 saturations greater than 95%
2. Assist pt with their own EpiPen if they meet the four rights (right patient, right medication, right dose, and right date)
3. If patient shows signs of shock, elevate lower extremities
4. Monitor vitals

Advanced

1. Establish IV access
   a. if normotensive, give normal saline at maintenance rate
   b. if hypotensive, give normal saline in 250mL boluses and reassess
2. Place cardiac monitor
3. Consider Epinephrine 1:1,000
   a. Adult Dose: 0.3-0.5mg IM/SQ Q 3-5 min max 2 doses
   b. Peds Dose: 0.01mg/kg IM/SQ Q 3-5 min, 0.5mg max single dose, 2 doses max
4. Consider Benadryl:
   a. Adult Dose: 25-50mg IV/IO or deep IM
   b. Peds Dose:
      2-6 years max 6.25mg IV/IO/IM
      6-12 years 12.5-25mg IV/IO/IM
   c. >12 years use adult doses
4. Consider Albuterol/Atrovent aerosol treatment via nebulizer
   a. Adult Dose: Albuterol- 2.5mg in 3ml normal saline; and
      Atrovent- 500mcg/2.5ml, both medications mixed together
   b. Peds Dose: Same as adult (>12 years of age)
      Peds Dose: (<12 years of age), Albuterol- 2.5mg in 3ml normal saline; and
      Atrovent- 250mcg or ½ ampule; both medications mixed together

Repeat doses of Albuterol may be given, **only one dose** of Atrovent is given during pre-hospital care

Paramedic

1. Consider Solumedrol after breathing treatments have been started:
   a. Adult Dose: 125mg IV/IO/IM over 30-60 seconds
   b. Peds Dose: 1-2mg/kg IV/IO/IM max dose 125mg over 30-60 seconds
2. Consider Epinephrine 1:10,000 for severe anaphylaxis/asthma/bronchospasm
   a. 0.3 – 0.5mg slow IV/IO epinephrine 1:10,000 may be administered after the second dose of epinephrine 1:1000 fails to show any clinical improvement in the adult patient

Williams County Standing Order

Altered Mental Status/Unresponsive

Basic

1. Assure patent airway, assist ventilation as needed
    a. Oxygen with pulse oximetry to maintain O2 saturation greater than 95%.
    b. May use blow-by O2 or nasal cannula if patient unable to tolerate non-rebreather.
    c. Consider OPA/NPA.
2. Determine blood glucose level, treat as indicated
3. **Do not** administer oral glucose to a patient who has altered mental status or is unresponsive

Advanced

1. If pt is hypoglycemic, follow "Hypoglycemia" Standing Orders
2. Continuous cardiac monitoring
3. Establish IV, bolus as needed to maintain adequate perfusion
4. Consider Narcan:
    a. Adult Dose: 0.5-2mg slow IV/IO/IM Q 2-3 min PRN
    b. Peds Dose: Less than 5yrs old 0.1mg/kg IV/IO/IM. Pts older than 5yrs same as adult.

Paramedic

1. Perform 12 lead EKG.
2. If cardiac dysrhythmia present, follow ACLS guidelines.
3. Consider Intubation if unable to maintain patent airway.
4. Consider other possible causes (AEIOU-TIPS), treat as indicated.
    A: Acidosis, alcohol
    E: Epilepsy
    I: Infection
    O: Overdose
    U: Uremia (kidney failure)
    T: Trauma, tumor, toxin
    I: Insulin (hypoglycemia or diabetic ketoacidosis)
    P: Psychosis, poison
    S: Stroke, seizure

Williams County Standing Order

Asthma/COPD

Basic

1. Supplemental oxygen with pulse oximetry to maintain O2 saturation greater than 95%
2. Monitor vitals
3. Assist patient with own Inhaler if patient meets five rights (right patient, right medication, right route, right dose, right date)

Advanced

4. Establish IV access
5. Place cardiac monitor
3. Consider Albuterol/Atrovent aerosol treatment via nebulizer
    a. Adult Dose: Albuterol- 2.5mg in 3ml normal saline; and
       Atrovent- 500mcg/2.5ml, both medications mixed together
    b. Peds Dose: Same as adult (>12 years of age)
       Peds Dose: (<12 years of age), Albuterol- 2.5mg in 3ml normal saline; and
       Atrovent- 250mcg or ½ ampule; both medications mixed together

Repeat doses of Albuterol may be given, **only one dose** of Atrovent is given during pre-hospital care

Paramedic

1. Consider CPAP
    a. Start with 5 cm/H20 adaptor and titrate to patient response
2. Consider Epinephrine 1:1,000:
    a. Use only in immediately life threatening condition. Use with caution in heart disease, hypertension, tachyarrhythmias, age greater than 50.
    b. Adult Dose: 0.3-0.5mg IM
    c. Peds Dose: 0.01mg/kg IM; 0.5mg max
3. Consider Epinephrine 1:10,000 for severe anaphylaxis/asthma/bronchospasm
    a. 0.3 – 0.5mg slow IV/IO epinephrine 1:10,000 may be administered after the second dose of epinephrine 1:1000 fails to show any clinical improvement in the adult patient
4. Consider Solumedrol following breathing treatments:
    a. Adult Dose: 125mg IV/IO/IM over 30-60 seconds
    b. Peds Dose: 1-2mg/kg IV/IO/IM max dose 125mg over 30-60 seconds
5. Consider Medication Assisted Intubation

Williams County Standing Order

Atrial Fibrillation/Atrial Flutter

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
2. Support ABCs

Advanced

1. Cardiac Monitor
2. IV placement

Paramedic

1. 12 Lead
2. Treat accompanying symptoms as indicated
3. Consider cardioversion if tachycardias (rate>150bpm) with serious signs and symptoms related to the tachycardia. See cardioversion standing order.
    a. Atrial flutter often responds to lower energy levels; start with 50 to 100J. If initial dose fails, increase in stepwise fashion.
    b. For atrial fibrillation, use 120 to 200J initial (selected) biphasic shock and then increase in stepwise fashion.

Williams County Standing Order

Behavioral Emergency/Combative Patient

Basic

1. Police assistance should be requested for any combative patient regardless of etiology
2. Consider all potential causes of combativeness and treat as indicated
   a) Hypoxia
   b) Drug/alcohol overdose
   c) Hypo/hyperglycemia
   d) Head injury
   e) Seizure
   f) Stroke
   g) Psychosis
   h) Dementia
3. If patient is felt to be a threat to self or to others, soft restraints may be used.
   a) Continuous assessment of distal circulation is mandatory.
4. If patient is handcuffed, law enforcement must accompany patient.
   a) Patient may only be handcuffed to cot. Do not secure pt to transport vehicle.
5. Mandatory documentation includes:
   a) Indications for restraints
   b) Time placed
   c) Type of restraints
   d) Effectiveness of restraints
   e) Assessment of circulation, motor response, and sensation distal to restraints
6. Perform glucose check

Advanced

1. Consider IV or saline lock if can be safely performed
2. Consider cardiac monitor

Paramedic

1. Consider Ativan:
   a) Adult Dose: 1-2mg IV/IO/IM Q 5 min PRN, max total dose 8mg
   b) Pediatric Dose: 0.5-1mg IV/IO/IM Q 5 min PRN, max total dose 4mg
2. Consider Versed:
   a) Adult Dose: 2.5-10mg slow IV/IO/IM, Q 5 min PRN
   b) Pediatric Dose: 0.1mg/kg slow IV/IO/IM Q 5 min PRN, max single dose 2.5mg

Williams County Standing Order

Bradycardia (Adult)

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
2. Support ABCs

Advanced

1. Place heart monitor and consider defibrillation pads.
2. IV placement with normal saline hung.

Paramedic

1. 12 Lead EKG (don't delay treatment)
2. Search for and treat possible contributing factors (5Hs and Ts)
3. Prepare for transcutaneous pacing; use without delay for high-degree block (type II 2nd degree or 3rd degree AV block)
4. Consider sedation prior to pacing:
    a. Versed 2.5-5mg IV/IO/IM
    b. Ativan 1-2mg IV/IO/IM
5. Consider Atropine:
    a. 0.5mg IV/IO Q 3-5min PRN max total dose 3mg
6. Consider Dopamine:
    a. 2-20mcg/kg/min IV/IO

Williams County Standing Order

Adult Bradycardia
(With Pulse)

1

Assess appropriateness for clinical condition.
Heart rate typically <50/min if bradyarrhythmia.

2

Identify and treat underlying cause

- Maintain patent airway; assist breathing as necessary
- Oxygen (if hypoxemic)
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry
- IV access
- 12-Lead ECG if available; don't delay therapy

3

Persistent bradyarrhythmia causing:

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

4

Monitor and observe = No

Yes ↓

5

Atropine

If atropine ineffective:

- Transcutaneous pacing

OR

- Dopamine infusion

OR

- Epinephrine infusion

↓

6

Consider:

- Expert consultation
- Transvenous pacing

Doses/Details

Atropine IV Dose:
First dose: 0.5 mg bolus
Repeat every 3-5 minutes
Maximum: 3 mg

Dopamine IV Infusion:
2-10 meg/kg per minute

Epinephrine IV Infusion:
2-10 meg per minute

Williams County Standing Order

Bradycardia with a Pulse (Pediatric)

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
2. Support ABCs
3. If HR < 60/min with poor perfusion despite oxygenation and ventilation initiate CPR.

Advanced

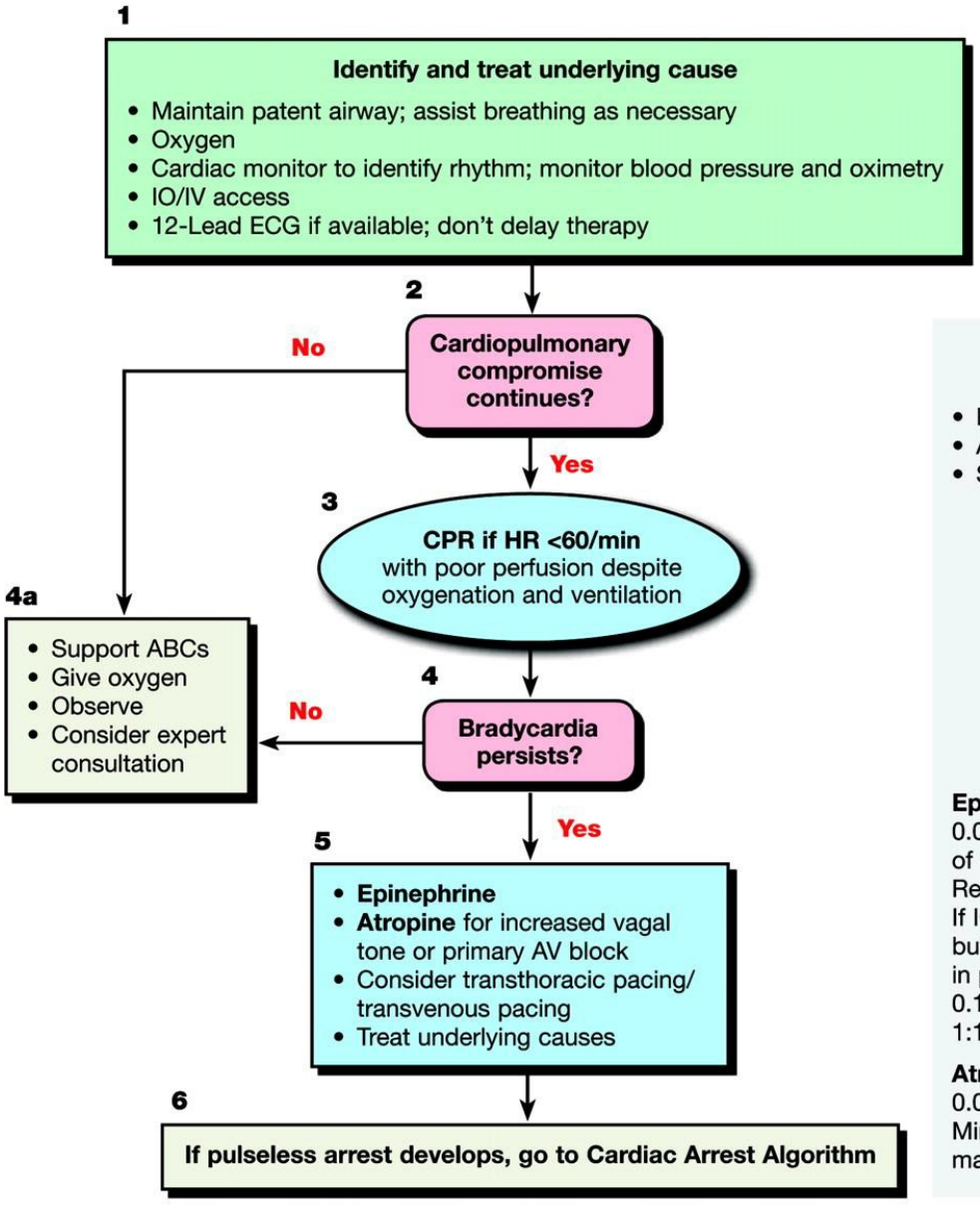
1. Place cardiac monitor and defibrillation pads
2. IV/IO placement with normal saline hung

Paramedic

1. 12 Lead EKG (don't delay treatment)
2. Search for and treat possible contributing factors (5Hs and Ts)
3. Consider Epinephrine:
    a. 0.01mg/kg of 1:10,000 IV/IO Q 3-5 min
4. Consider Atropine:
    a. 0.02mg/kg IV/IO Q 3-5 min max 2 doses. Minimum single dose 0.1mg and maximum single dose 0.5mg
5. Consider Pacing:
    a. Set demand rate to approx 80 bpm
    b. Increase power (mA) from minimal setting until consistent capture is achieves as characterized by a widening QRS and a broad T wave after each pacer spike
    c. Add 2mA for safety margin

Williams County Standing Order

Pediatric Bradycardia
With a Pulse and Poor Perfusion



Cardiopulmonary Compromise

- Hypotension
- Acutely altered mental status
- Signs of shock

Doses/Details

Epinephrine IO/IV Dose:
0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes. If IO/IV access not available but endotracheal (ET) tube in place, may give ET dose: 0.1 mg/kg (0.1 mL/kg of 1:1000).

Atropine IO/IV Dose:
0.02 mg/kg. May repeat once. Minimum dose 0.1 mg and maximum single dose 0.5 mg.

Williams County Standing Order

BURNS

Basic

5. Supplemental oxygen with pulse oximetry to maintain O2 saturation greater than 95%
6. If patient shows signs of shock, elevate lower extremities
7. Monitor vitals
8. Wrap burns in dry, sterile dressing. Use burn sheet for large burns
9. Separate fingers and toes with gauze prior to wrapping.
10. Remove jewelry and clothing from burn areas. Do not attempt to remove clothing that is adhered to skin.
7. Minor burns may be cooled with cool, moist dressings.
8. Keep pt warm to prevent hypothermia.
9. Consider helicopter transport for critical burns, including:
    a. 2nd and 3rd degree burns of greater than 10% TBSA in pts < 10 years or > 50 years
    b. 2nd and 3rd degree burns of greater than 20% TBSA in all other age groups
    c. 2nd and 3rd degree burns that involve the face, hands, feet, genitalia, perineum or major joints
    d. 3rd degree burns of greater than 5% of the TBSA in any age group
    e. Electrical burns, including lightning injury
    f. Pts with pre-existing medical disorders that could complicate management or prolong recovery
    g. Burns with concomitant trauma

Advanced

1. Establish one or two large-bore IVs based on patient presentation
    a. Adult – Administer fluid bolus up to 1000mL, Re-assess and repeat as necessary
    b. Watch for signs of over-hydration, esp in geriatric pts
    c. Peds – Bolus at 10-20mL/kg, Re-assess and repeat as necessary
2. Cardiac monitor for electrical and lightning burns or pts with cardiac history

Paramedic

1. Consider early intubation for facial and airway burns.
2. If laryngeal edema prevents intubation, consider cricothyrotomy
3. Consider Morphine for pain (Preferred for burn patients):
    a. Adult: 2-5mg IV/IO/IM Q 10 min PRN
    b. Peds: 0.1-0.2mg/kg IV/IO/IM max single dose 5mg Q 10 min PRN
4. Consider Fentanyl for pain:
    a. Adult: 25-100mcg IV/IM/IO Q 10 min, max cumulative dose 300mcg
    b. Peds: 1-2mcg/kg IV/IM/IO Q 30 min
5. Consider Versed for sedation:
    a. Adult: 2.5-5mg slow IV/IO/IM Q 5 min PRN
    b. Peds: 0.1mg/kg slow IV/IO/IM Q 5 min PRN, max single dose 2.5mg

Williams County Standing Order

Burns – Special Considerations

Thermal

1. Stop the burning process
2. Consider possibility of associated trauma or spinal injury
3. Assure airway patency, be alert for signs of inhalation injury
4. High-flow O2 or assisted ventilations as needed
    a) Paramedics – consider early intubation if there is a possibility of airway compromise due to swelling

Electrical

1. Determine the scene is safe prior to approaching patient
2. Look for both entrance and exit wounds (multiple entrance and exits wounds possible)
3. Look for smoldering shoes, belts, etc.
4. Prepare for cardiac dysrhythmias

Inhalation

1. Assure safety of EMS personnel
2. Determine substance patient exposed to and length of exposure
3. Support airway
4. Supplemental O2 or assisted ventilations as needed
    a) Paramedics – consider early intubation if there is a possibility of airway compromise due to swelling
5. Consider rapid transport

Chemical

1. Personal protection is a priority
2. Protect against airborne dust or toxic fumes for EMS personnel and patient
3. Consider requesting fire department and/or HAZMAT team as needed
4. Identify type of agent, exact chemical name, length of contact and areas of patient affected
5. Use DOT Emergency Response Guide, CHEMTREC and/or Poison Control for treatment guide
    a) CHEMTEC: 1-800-424-9300
    b) Poison Control (National): 1-800-222-1222
6. For dry chemicals, brush chemical off, then flush with larges amounts of water

Williams County Standing Order

Cardiac Arrest (Adult)

Basic

1. **Check for responsiveness and signs of breathing (5 – 10 seconds)**
2. **Assess for a pulse (assess for 5 - 10 seconds)**
3. If no pulse give chest compressions
   a. Rate at least 100 per minute
   b. Adult chest compressed at least 2 inches
4. After first set of compressions open the airway
   a. Clear airway
   b. Insert OPA
5. Provide positive-pressure ventilations via BVM
   a. Rate is 30 Compressions to 2 Breaths (without advanced airway)
   b. Attach high flow oxygen to BVM
   c. Avoid hyperventilation
6. Attach Defibrillator
   a. Analyze and follow prompts
   b. If rhythm check reveals shockable rhythm give 1 shock
7. Resume high quality CPR immediately after shock or if no shock advised
   a. Do not assess for a pulse immediately after defibrillation, resume CPR
8. Consider Combitube (height appropriate) placement if ventilation is unsuccessful with OPA & BVM
   a. 37 fr(4 – 5.5ft) 41 fr(>5ft)
   b. Confirm placement by listening for lung sounds and visualizing chest rise with ventilation
   c. Once advanced airway in place give 1 breath every 6-8 seconds (8-10 breaths per min)
   d. Combitube is contraindicated in patients < 16 years of age
9. If no ALS support is on scene, transport the patient when:
   a. 3 cycles of CPR with the AED advising "no shock advised"
   b. 6 shocks have been delivered with 2 minutes of CPR between shocks
   c. If patient regains pulses, transport as soon as possible
   d. Scene time should not exceed 20 minutes prior to transport

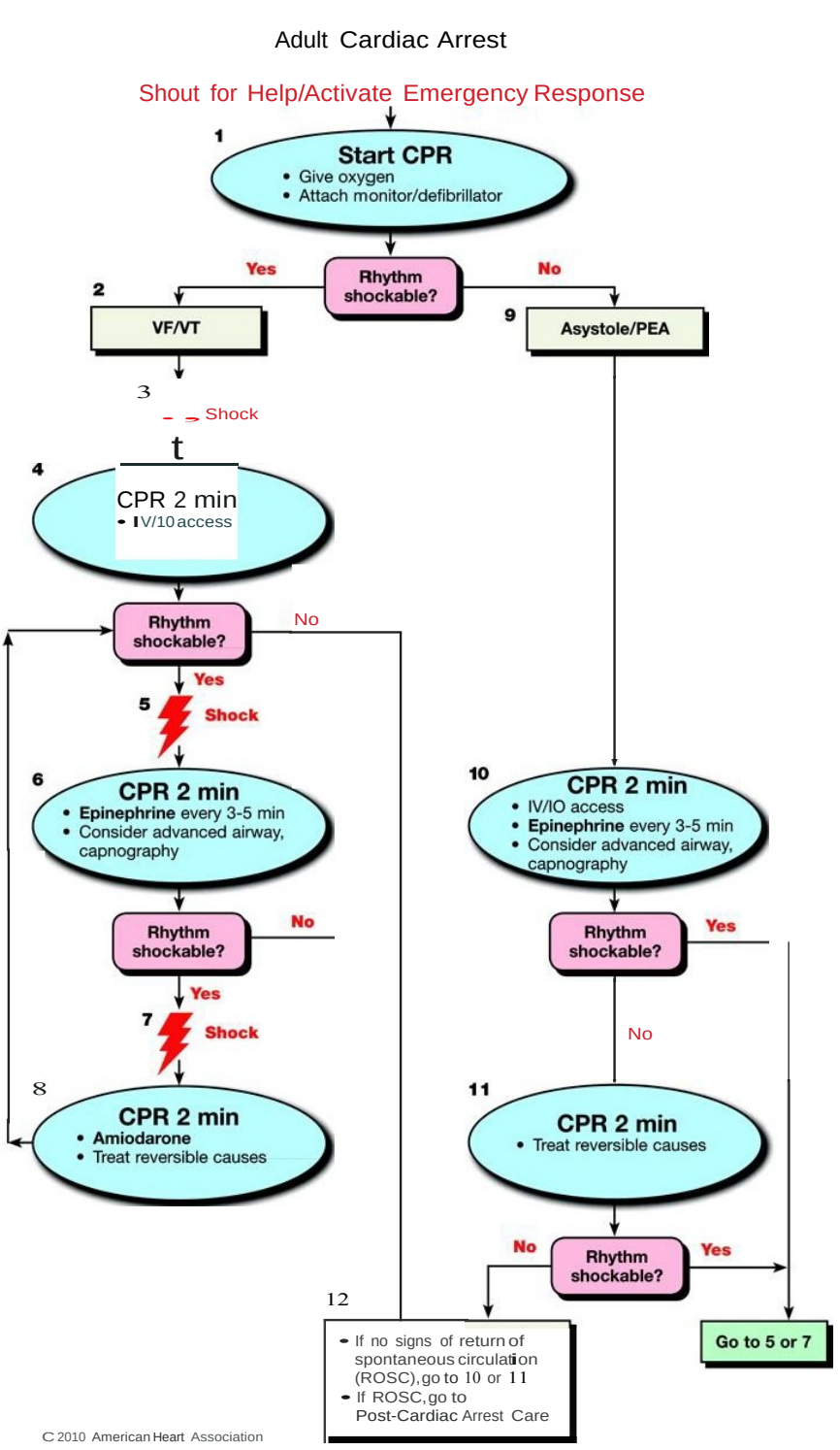
Advanced

1. Place cardiac monitor
2. IV/IO placement
3. Glucose check

Paramedic

1. Consider advanced airway with continuous waveform capnography
2. Epinephrine:
   a. 1mg of 1:10,000 IV/IO followed by 20ml normal saline flush Q 3-5min during resuscitation
3. For VF/VT consider Amiodarone:
   a. 300mg IV/IO followed by a 20ml normal saline flush
   b. 2nd dose of 150mg can be given in 3-5min
4. Consider Sodium Bicarbonate
   a. 50mEq IV/IO
5. Treat reversible causes:
   - Hypovolemia - Tension pneumothorax
   - Hypoxia - Tamponade, cardiac
   - Hydrogen ion(acidosis) - Toxins
   - Hypo-/hyperkalemia - Thrombosis, pulmonary
   - Hypothermia - Thrombosis, coronary
6. Scene time should not exceed 20 minutes prior to transport

Williams County Standing Order



CPR Quality
- Push hard (inches [5 cm] D and fast (<100/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- If no advanced airway, 30:2 compression-ventilation ratio
- Quantitative waveform capnography
  - If $PETco_2$ <10 mm Hg, attempt to improve CPR quality
- Intra-arterial pressure
  - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality

Return of Spontaneous Circulation (ROSC)
- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically «40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Shock Energy
- Biphasic: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- Monophasic: 360 J

Drug Therapy
- Epinephrine IV/IO Dose: 1 mg every 3-5 minutes
- Vasopressin IV/IO Dose: 40 units can replace first or second dose of epinephrine
- Amiodarone IV/IO Dose: First dose: 300 mg bolus. Second dose: 150 mg.

Advanced Airway
- Supraglottic advanced airway or endotracheal intubation
- Waveform capnography to confirm and monitor ET tube placement
- 8-10 breaths per minute with continuous chest compressions

Reversible Causes
- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

Williams County Standing Order

Cardiac Arrest (Pediatric)

Basic

1. Check responsiveness and signs of breathing (5-10 seconds)
2. Assess for a pulse (assess for 5-10 seconds)
3. If no pulse, or pulse is < 60 bpm with signs of poor perfusion, give chest compressions
    a. Push hard (greater than or equal to 1/3 of anterior-posterior diameter of chest)
    b. Push fast (at least 100 compressions per min)
    c. Rate for 2 person CPR is 15 Compressions to 2 Breaths
    d. Rate for 1 person CPR is 30 Compressions to 2 Breaths
4. After first set of compressions open the airway
    a. Clear airway
    b. Insert OPA
5. Provide positive-pressure ventilations via BVM
    a. Attach high flow oxygen to BVM
    b. Avoid excessive ventilation
6. Place Defibrillator pads (Age Appropriate)
    a. Analyze and follow prompts
    b. If rhythm check reveals shockable rhythm give 1 shock
7. Resume high quality CPR immediately after shock or if no shock advised
8. Consider Combitube (height appropriate) placement if ventilation is unsuccessful with OPA & BVM
    a. 37 fr(4 – 5.5ft) 41 fr(>5ft)
    b. Confirm placement by listening for lung sounds and visualizing chest rise with ventilation
    c. Once advanced airway in place give 1 breath every 6-8 seconds (8-10 breaths per min)
    d. Combitube is contraindicated in patients < 16 years of age
9. If no ALS support is on scene, transport the patient when:
    a. 3 cycles of CPR with the AED advising "no shock advised"
    b. 6 shocks have been delivered with 2 minutes of CPR between shocks
    c. If patient regains pulses, transport as soon as possible
    d. Scene time should not exceed 20 minutes prior to transport

Advanced

1. Place cardiac monitor
    a. If rhythm check reveals shockable rhythm give 1 shock
        First shock 2J/kg
        Second shock 4J/kg
        Subsequent shocks ≥4J/kg max 10J/kg or adult dose
2. IV/IO placement
3. Glucose check

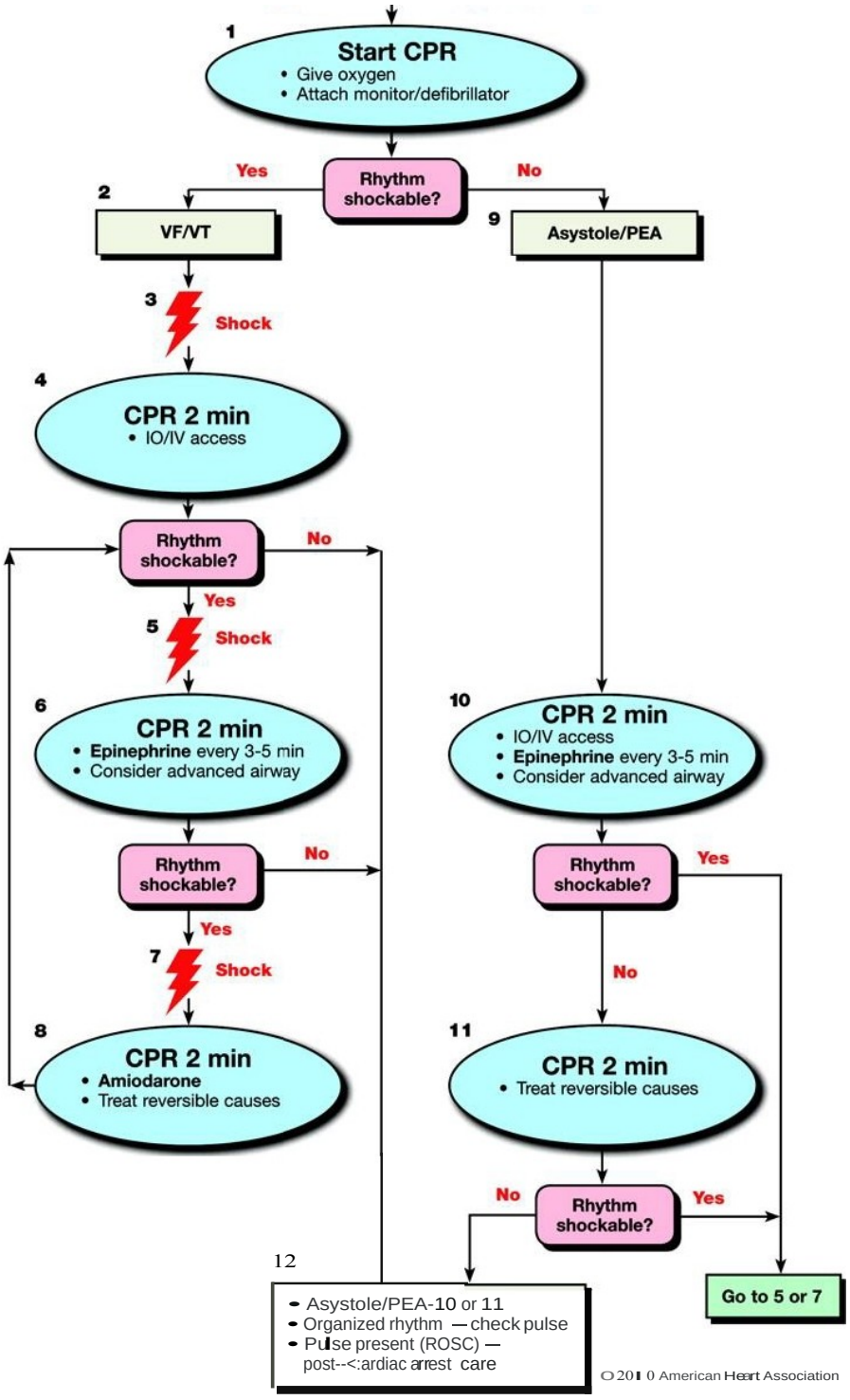
Paramedic

1. Consider advanced airway with continuous waveform capnography
2. Epinephrine:
    a. 0.01mg/kg (0.1 ml/kg) IV/IO of 1:10,000 Q 3-5 min
3. For VF/VT consider Amiodarone:
    a. 5mg/kg IV/IO Q 3-5 min x 3 doses
4. Treat reversible causes:
    a. Hypovolemia, Hypoxia, Hydrogen ion (acidosis), Hypo/Hyperkalemia, Hypothermia
    b. Tension pneumothorax, Tamponade cardiac, Toxins, Thrombosis (cardiac or pulmonary)
5. Scene time should not exceed 20 minutes prior to transport

Williams County Standing Order

Pediatric Cardiac Arrest

Shout for Help/Activate Emergency Response



Doses/Details

CPR Quality
- Push hard (1/3 of anterior-posterior diameter of chest) and fast (at least 100/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- If no advanced airway, 15:2 compression-ventilation ratio. If advanced airway, 8-10 breaths per minute with continuous chest compressions

Shock Energy for Defibrillation

First shock 2 J/kg, second shock 4 J/kg, subsequent shocks ≥ 4 J/kg, maximum 10 J/kg or adult dose.

Drug Therapy
- Epinephrine 10/IV Dose: 0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes.
  If no 10/IV access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration).
- Amiodarone 10/IV Dose: 5 mg/kg bolus during cardiac arrest. May repeat up to 2 times for refractory VF/pulseless VT.

Advanced Airway
- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place give 1 breath every 6-8 seconds (8-10 breaths per minute)

Return of Spontaneous Circulation (ROSC)
- Pulse and blood pressure
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes
- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypoglycemia
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

Williams County Standing Order

Cardiac Arrest (Traumatic)

Basic

1. Maintain c-spine precautions
2. Apply AED pads treat as indicated
3. Begin CPR, including appropriate airway management (consider a supraglottic airway or blind insertion device placement)
4. Control external hemorrhage
5. Consider rapid transport to receiving facility as soon as pt is packaged and inside the ambulance
6. Do not begin resuscitation on patients with signs of obvious mortality. This may include:
    a. Decapitation
    b. Obvious Rigor mortis
    c. Dependent Lividity
    d. Extensive total body burns with absence of vital signs
    e. Severe blunt/penetrating trauma with apparent injuries incompatible with life
7. If there is any question about patient viability begin resuscitation efforts

Advanced

1. Establish IV/IO access with normal saline hung to maintain systolic B/P 90-100mm/hg
2. Continuous cardiac monitoring
3. Consider rapid transport to receiving facility as soon as pt is packaged and inside the ambulance

Paramedic

1. Airway management to include intubation
2. Consider cricothyrotomy if unable to manage airway with less invasive means
3. Follow ACLS guidelines for cardiac rhythm management
4. Consider external jugular IV
5. Consider bilateral needle decompression in suspected thoracic injury
6. Consider air ambulance transport from scene if spontaneous circulation returns
7. Consider rapid transport to receiving facility as soon as pt is packaged and inside the ambulance
   Do Not remain on scene with a critical pt who is packaged and ready for transport for a helicopter to arrive. Divert the helicopter to the nearest hospital and begin transport.

Williams County Standing Order

Chest_Discomfort/ACS

Basic

1. Supplemental oxygen with pulse oximetry to maintain O2 saturation > 95%
2. Suggest pt chew & swallow 324/325mg ASA if pt hasn't taken ASA within 4 hours of onset of chest pain/pressure (check for allergies)
3. If patient shows signs of shock, elevate lower extremities, cover with blankets

Advanced

1. Place on cardiac monitor and obtain a 3 or 4 lead printout of EKG
2. Establish IV
    a. If normotensive, give normal saline at maintenance rate
    b. If hypotensive, give normal saline in 250ml boluses and reassess, watch for signs of over hydration.
3. Consider Nitroglycerin (Patient or EMS Nitro may be used)
    a. 1 sublingual tablet Q 3-5 min. PRN, max 3 tablets total
    b. Ensure Right pt, Right Drug, Right Route, Right Time, Right Expiration Date.
    c. Any Nitroglycerin administration contraindicated with B/P <100 mm/hg systolic
    d. IV access required if B/P < 140 mm/hg systolic prior to nitro administration
    e. Nitro contraindicated if pt has taken Viagra/Levitra in the past 24hrs or Cialis in last 48hrs.

Paramedic

1. Perform 12 Lead EKG:
    a. Consider rapid transport to appropriate facility for pt with acute STEMI. (Usually Bryan Hospital)
    b. The receiving hospital ER should be contacted to determine availability of cath lab prior to considering air ambulance transport to an out-of-county facility for pt with acute STEMI
    c. Transmit 12 lead to receiving hospital (if available).
2. Consider Fentanyl for pain not relieved with Nitroglycerin
    a. 25-100mcg IV/IO/IM Q 10 min, max cumulative dose 300mcg
3. Consider Morphine for pain not relieved with Nitroglycerin
    a. 2-5mg IV/IO/IM Q 10 min PRN

Williams County Standing Order

Child Birth/Field Delivery

Basic

1. Determine
   a) Gravida (number of pregnancies)
   b) Para (number of live births)
   c) Expected due date
   d) Time between contractions (determine from start of one to start of next)
   e) Amniotic membrane intact or ruptured
2. Consider on scene delivery if signs of imminent delivery are present
   a) Contractions < 2 minutes apart
   b) Bulging perineum
   c) Crowning
   d) Patient expresses urge to push
3. Oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
4. Assemble delivery supplies from OB kit
5. Have patient lie on back with legs elevated or with assisted elevation of upper legs (per pt comfort)
6. Drape surface patient is lying on, patient's abdomen and perineum
7. As head crowns, control it with gentle pressure to avoid explosive delivery resulting in vaginal and perineal tearing
8. Palpate babies neck region prior to delivery to check for nuchal cord, gently slip over baby's head if around neck
9. Tear amniotic membrane if intact
10. Suction infants mouth first, then nose with bulb syringe. Note: suctioning with a bulb syringe should be reserved for babies who have obvious obstruction to spontaneous breathing or who require positive-pressure ventilation.
11. As shoulders emerge, guide infant's head and neck downward to deliver the anterior shoulder. Support and slightly lift head and neck to deliver posterior shoulder
12. Support baby for rest of delivery which should happen passively, keep baby at level of vagina to prevent over or under transfusion of blood through cord
13. Once cord stops pulsating, place clamps 5 and 10 centimeters apart and gently cut between
14. Dry and stimulate infant, wrap in towel
15. Assess APGAR score at 1 and 5 minutes
    a) Infants with APGAR scores between 7-10 require only routine care
    b) Infants scoring between 4-6 are moderately depressed and require oxygen and stimulation
    c) If infant's respirations are below 30 per minute and tactile stimulation does not increase rate to normal range, assist ventilations using infant BVM
    d) If heart rate is below 80 and does not respond to ventilations, initiate chest compressions
16. If placenta delivers, it should be gathered and transported with mother. Do not delay transport for delivery of placenta
17. Control postpartum hemorrhage with uterine massage
18. Control bleeding of perineum tears with direct pressure
19. Field delivery of breech presentation should be attempted only if unavoidable (c-section often required)
    a) Position mother with buttocks on edge of firm bed, legs in flexed position (may require assistance)
    b) Support infants legs as they deliver (do not pull)
    c) Allow entire body to be delivered with contractions while supporting body
    d) As head passes pubis, apply gentle upward traction until mouth appears over perineum
    e) If head does not deliver and baby begin to breathe spontaneously, place gloved hand in vaginal with fingers forming a "v" around infant's nose, allowing unrestricted respiration. It may be necessary to transport in this position
    f) If shoulders do not deliver, gently rotate one shoulder anteriorly and raise infant's body to deliver. Reverse movement to deliver second shoulder. As neck appears, place finger over baby's maxilla to flex head for delivery and avoid entrapment in cervix.

20) The following situations require immediate transport despite the threat of delivery:
a) Prolonged rupture of membranes (> 24 hours)
b) Abnormal presentation (see above for breech delivery if absolutely unavoidable)
c) Prolapsed cord
d) Fetal distress as indicated by fatal Bradycardia or meconium staining

Advanced

1. Initiate IV if time permits

Paramedic

If advanced resuscitation of mother or infant is needed, follow ACLS protocols

APGAR Scoring System

SIGN	0	1	2
Appearance (Skin color)	Blue, pale	Body pink, Extremities blue	Completely pink
Pulse Rate (Heart rate)	Absent	Less than 100/minute	Greater than 100/minute
Grimace (Irritability)	No response	Grimace	Cough, sneeze, cry
Activity (Muscle tone)	Limp	Some flexion	Active motion
Respirations (Breathing effort)	Absent	Slow, irregular	Good, crying

Williams County Standing Order

Congestive Heart Failure

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%.
2. Monitor ABCs.
3. Maintain pt in position of comfort.

Advanced

1. Saline lock or IV of normal saline (be very careful with fluid administration to avoid worsening of pulmonary edema)
2. Place cardiac monitor and record 4 lead rhythm strip

Paramedic

1. 12 Lead EKG
2. Consider CPAP:
    a. Start at 10cm/H2O and titrate the pressure to patient comfort and clinical improvement
    b. Maximum 15cm/H2O
3. Consider Nitroglycerin:
    a. 1 sublingual tablet (0.4mg) Q 5min PRN max 3 doses
4. Consider Morphine:
    a. 2-5mg IV/IO/IM
5. Consider medication assisted intubation if unable to maintain patent airway

Williams County Standing Order

Dehydration/Hypovolemia/Shock

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%.
2. Consider elevating lower extremities
3. Keep patient warm (blankets, heaters in ambulance, etc)
4. Support ABCs

Advanced

1. Large-bore IV of normal saline
2. Consider second large-bore IV of normal saline
3. Adult:
    a. 250-500 fluid bolus, repeat as necessary
    b. Titrate to maintain systolic B/P 90-100mmHG

    Peds:
    a. 20mL/kg fluid bolus, repeat as necessary
4. Place cardiac monitor.

Paramedic

1. If unable to maintain blood pressure with fluid challenge, consider Dopamine 2 – 20 mcg/kg/min

Williams County Standing Order

HEAT EMERGENCIES

Basic

1. Remove patient from hot environment and place in shade or air conditioned ambulance
2. Oxygen with pulse oximetry to maintain oxygen saturation greater than 95%.
3. Monitor vitals, including body temperature
4. Moist towels may be placed on forehead and cramping muscles
5. If patient is dizzy or has an altered mental status, place supine
6. For increased core temp, consider active cooling
    a. Remove some clothing and fan patient
    b. Cover pt with sheets soaked in tepid water if available
    c. Consider placing ice packs at neck, arm pits, groin, wrist and behind knees.
    d. Avoid causing shivering from too rapid cooling
7. Seizure precautions (padding around pt on cot) should be considered in severe cases

Advanced

1. Establish one or two large-bore IVs
    a. Adult – Consider fluid bolus up to 1000mL, re-assess and repeat as necessary
    b. Watch for signs of over-hydration, esp in geriatric pts
    c. Peds – consider bolus at 10-20mL/kg, re-assess and repeat as necessary
2. Place cardiac monitor

Paramedic

1. Consider pharmacological treatment for underlining signs and symptoms.

Williams County Standing Order

Hypertensive Emergency

Basic

1. Place patient in position of comfort unless potential exists for airway compromise
2. Support ABC's
3. Monitor vitals, including pulse oximetry
4. Rapid, quiet transport

Advanced

1. Initiate IV at keep vein open rate or saline lock
2. Cardiac monitor

Paramedic

1. If systolic BP > 220mm/HG or diastolic BP > 130mm/HG and patient is symptomatic (mild/moderate headache, nausea/vomiting, visual disturbances, dizziness, bounding pulse, ringing in the ears) consider Nitroglycerin administration:
   a. Adult: 1 sublingual tablet Q 3-5 min PRN, max 3 tablets total
   b. Peds: Not recommended for pediatric
2. Nitroglycerin should be administered with the goal of dropping the systolic B/P under 160 and/or the diastolic B/P under 115. When this drop is achieved further nitroglycerin should be withheld.
3. If the caregiver believes that a pt is hypertensive due to a possible hemorrhagic stroke then nitroglycerin should not be administered. Signs and symptoms may include severe headache, unilateral weakness, paralysis, seizures, stupor, coma
4. If Cincinnati Stroke Assessment is positive do not administer nitroglycerin

Williams County Standing Order

HYPOGLYCEMIA

Basic

11. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
12. If patient shows signs of shock, elevate lower extremities
13. Monitor vitals
14. Determine blood glucose level, if glucose < 80 and symptomatic give 1 tube oral glucose PRN
5. **Do not** administer oral glucose to a patient who has altered mental status, or is unresponsive
6. Keep pt warm

Advanced

1. Establish IV/IO
2. With IV access:

Adult:

a. Blood sugar greater than 60mg/dL and symptomatic:
-administer 12.5G of D50% IV/IO bolus, reassess
b. Blood sugar less than 60mg/dL and symptomatic:
-administer 25G of D50% IV/IO bolus, reassess

Pediatric:

a. Blood glucose <80mg/dL and symptomatic:
0-1 year old: 2-4ml/kg 12.5% dextrose IV/IO
1-4 year old: 2-4ml/kg 25% dextrose IV/IO
Children 4 and older: 2-4ml/kg 50% dextrose IV/IO (Not to exceed adult dose)

Note: Remove ½ of D-50 solution and replace with Normal Saline to achieve D25%. 4ml=1gm
Remove ½ of D-25 solution and replace with Normal Saline to achieve D12.5%

3. If symptomatic without IV/IO access:
   a. Glucagon IM
      Adult: 1mg IM injection
      Peds: 0.03mg/kg IM/SQ injection Q 15 min PRN up to 3 doses, max total dose 1mg
4. If IV/IO access is established after administering glucagon, and the patient is still symptomatic:
   a. administer 12.5G D50% IV/IO
5. Cardiac monitor
6. Patients refusing transport:
   a. Must be alert and oriented
   b. Must be in the company of another individual or have another individual en route to their location
   c. Repeat blood glucose must be within acceptable range
   d. All attempts should be made to convince patient to be transported

Paramedic

1. Follow Basic and Advanced Procedures

Williams County Standing Order

Hypothermia

Basic

1. Determine level of consciousness
2. Support ABC's
3. Remove wet garments
4. Passive external rewarming may be used for mild to moderate hypothermia (core temperature > 86 degrees F). Use warm blankets and heat packs at the base of neck, axilla and groin. Insulate between heat pack and skin to prevent burning.
5. Maintain patient in horizontal position, avoid rough handling.
6. Monitor core temperature
7. Cover frostbitten skin with loose sterile dressing, then elevate and immobilize affected area
8. If bradycardic or in cardiac arrest, place AED pads
   a) Follow AED prompts, limit to one shock for severe hypothermia (< 86 degrees F)
9. Rapid transport

Advanced

1. Initiate IV using warm IV fluids
2. Place cardiac monitor

Paramedic

1. Follow ACLS protocol for cardiac arrest
   a) Limit to one shock for VF/VT for severe hypothermia (< 86 degrees F)
   b) Repeat defibrillation for VF/VT as core temperature rises
   c) Withhold IV medications < 86 degrees F
2. Consider advanced airway placement

Stages of Hypothermia: core body temperature and Symptoms

99 - 96 degree F	37.0 – 35.5 degree C	Shivering
95 - 91 degree F	35.5 – 32.7 degree C	Intense shivering, difficulty speaking
90 - 86 degree F	32.0 – 30.0 degree C	Shivering decreases and is replaced by strong muscular rigidity. Muscle coordination is affected and erratic or jerky movements are produced. Thinking is less clear, general comprehension is dulled, possible total amnesia. Patient generally is able to maintain the appearance of psychological contact with surroundings.
85 – 81 degree F	29.4 – 27.2 degree C	Patient becomes irrational, loses contact with environment, and drifts into stuporous state. Muscular rigidity continues. Pulse and respirations are slow and cardiac dysrhythmias may develop.
80 – 78 degree F	26.6 – 20.5 degree C	Patient loses consciousness and does not respond to spoken words. Most reflexes cease to function. Heartbeat slows further before cardiac arrest occurs.

Williams County Standing Order

NAUSEA/VOMITING

Basic

1. Assure patent airways, suction as needed
2. Oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. If patient is on long spine board, be prepared to roll patient onto side

Advanced

1. Establish IV of normal saline
2. For severe or extended period of vomiting consider IV fluid bolus
    a. Adult: Administer fluid bolus up to 1000ml, Re-assess and repeat as necessary
    b. Watch for signs of over-hydration, especially in geriatric pts,
    c. Peds: 10-20mL/kg, Re-assess and repeat as necessary
3. Consider placement of cardiac monitor

Paramedic

1. Zofran (Ondansetron):
    a. Adult Dose: 4mg IV/IO/IM, may repeat once in 10 minutes or,
    One 8mg Oral Disintegrating Tablet (ODT)

    b. Peds Dose: 0.1mg/kg IV/IO/IM for children < 40 kg, max 1 dose.
    4mg for children > 40 kg, max 1 dose

    ODT Zofran is contraindicated in pediatric patients < 40kg

Williams County Standing Order

Pain Management

Basic

1. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
2. Support ABCs
3. Splint fractures in position found
4. Consider traction splint for isolated mid-shaft femur fracture
5. Consider placement of ice pack over injured area
6. If spinal immobilization is not needed, place patient in position of comfort

Advanced

1. Pain management should be provided prior to moving or manipulating patient if practical
2. Initiate IV/IO
3. Consider Fentanyl:
    a) Adult Dose: 25-100mcg IV/IM/IO Q 10 min, max cumulative dose 300mcg
    b) Peds Dose: 1-2mcg/kg IV/IM/IO Q 30 min
4. Consider Morphine:
    a) Adult Dose: 2-5mg IV/IO/IM Q 10 min PRN
    b) Peds Dose: 0.1-0.2mg/kg IV/IO/IM, MAX single dose 5mg Q 10 min PRN
5. Consider Toradol:
    a) Adult Dose: 30mg IV/IO/IM, max 1 dose
    15mg if patient is >65 yrs
6. Pain medication is generally contraindicated in pregnancy. In extreme situations, contact medical control for approval

Paramedic

1. Consider Zofran for nausea:
    a) Adult Dose: 4mg IV/IO/IM, may repeat once in 10 minutes or,
    One 8 mg Oral Disintegrating Tablet (ODT)
    b) Peds Dose: 0.1mg/kg IV/IO/IM for children < 40 kg, max 1 dose
    4mg for children > 40kg, max 1 dose
    ODT Zofran is contraindicated in pediatric patients < 40 kg
2. Consider Versed for sedation:
    a) Adult Dose: 2.5-5mg slow IV/IO/IM Q 5 min PRN
    b) Peds Dose: 0.1mg/kg slow IV/IO/IM, Q 5 min PRN, max single dose 2.5mg

****** Pediatric doses are for age 2 – 12 years of age ******

Williams County Standing Order

Poisoned Patient

Basic

1. Assure the scene is safe before entering.
2. If the poisoning is due to a potentially suicidal patient, request police to the scene
3. Reduce intake of toxin if possible. This can be accomplished by removing patient from environment (using appropriately training personnel if needed), removal of contaminated clothing, brushing off dry chemicals, irrigating contaminated skin, removing stinger in cases of insect stings, etc.
4. Assure patent airway, suction as needed
5. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
6. Obtain a thorough history, including
   a) What poison was involved
   b) How much was ingested
   c) How it was taken
   d) When it was taken
   e) Why it was taken
7. Consider contacting Poison Control
   a) National Poison Control: 1-800-222-1222
8. If possible to transport safely, take a sample of the substance to hospital (outside compartment if indicated)

Advanced

1. Initiate IV/IO
2. Check Blood Glucose
3. Place cardiac monitor
4. Consider Narcan for narcotic overdose:
   a. Adult: 0.5-2mg IV/IO/IM Q 2-3 min PRN max 10mg
   b. Ped (less than 5yrs old): 0.1mg/kg IV/IO/IM

Paramedic

1. Perform 12 Lead
2. Consider intubation if unable to manage airway with less invasive means
3. Treat cardiac arrhythmias per ACLS protocol
4. Consider Romazicon for known benzodiazepine overdose:
   a. Adult: 0.2mg IV/IO over 30 sec PRN, max total dose 1mg
   b. Use with caution in seizure prone pts or chronic benzodiazepine users

Williams County Standing Order

SEIZURES

Basic

1. Protect patient from injury if seizing or there is the potential to seize
2. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. Monitor vitals
4. If pt is febrile, remove/loosen clothing to allow for passive cooling
5. Check blood glucose
6. Do not physically restrain patient while actively seizing except to protect pt from harm

Advanced

1. Establish IV/IO access
2. Adult (Ativan preferred):
    a. Ativan: 1-2mg slow IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Versed: 2.5-5mg slow IV/IO/IM, Q 5 min PRN
3. Peds (Ativan preferred):
    a. Ativan: 0.5-1mg slow IV/IO/IM q 5 min PRN, max total dose 4mg
    b. Versed: 0.1mg/kg IV/IO/IM q 5 min PRN, max single dose 2.5mg
4. Place cardiac monitor

Paramedic

1. Neonate:
    a. Ativan: 0.05mg/kg IV/IO over 2-5 minutes
2. Eclampsia:
    a. Magnesium Sulfate: 1-2g slow IV/IO Q 5 min, max 4g

Williams County Standing Order

Sexual Assault Patients

1. Follow appropriate medical treatment and, if age 16 or older, ask the patient for consent to notify law enforcement. Under age 16, report it to law enforcement.
2. Undress/remove clothing only as medically necessary.
3. All clothes removed during assessment must be transported to the hospital with the patient.
4. If the patient is unable to hold their urine until they arrive at the hospital, collect the urine and bring it with you to the hospital. Be sure the patient is instructed not to wipe after voiding.
5. Whenever possible have an EMT of the same sex as the pt provide assessment and care, especially if a physical exam must be completed to examine and treat injuries.

Williams County Standing Order

Special Considerations

General Guidelines

1. When circumstances and situations arise which are not covered by a Standing Order, medical judgment, discretion, and training are to be utilized. Deviation from the Standing Order is not recommended but is allowed when unable to contact Medical Control and pt is in immediate danger of loss of life and/or limb.
2. Safety is the first priority on every call.
3. Only one critical patient per squad. Only two total patients who require treatment and/or transport per squad. Call for a second squad if three or more pts. Call for a third squad with five or more pts.
4. In all cases involving death, when resuscitation is not being attempted, the Williams County Coroner must be notified. The body may not be moved unless:
    a. Permission is given to move the body by the coroner.
    b. Permission is given to move the body by law enforcement.
    c. The body must be moved in order to gain access to other viable patients.

Water Related Emergencies

1. Any individual who will be in, on, above, within arms reach of a body of water should have a life jacket on. This includes lakes, rivers, ponds, streams, and pools over 2 foot deep.
2. Any individual not actively involved in the rescue/recovery phase of a water emergency will remain a safe distance away from that water.
3. Rescue operations will be coordinated with Williams County Sheriff's Department and the local Fire Departments. Williams County EMS Employees will provide medical support for those involved in the rescue/recovery operation and the patient.
4. An EMS supervisor must be contacted as soon as practical to advise of water emergency.

Hazardous Materials Emergencies

1. Any scene with spilled, leaking, venting, burning or off-gassing of an unknown substance is considered unsafe. These substances must be identified and neutralized, if required, prior to EMS approach.
2. Williams County EMS Employees will perform a scene size up on all runs. Upon identification of an unknown substance they will stage and remain outside the hot zone until scene is deemed safe by fire command. Employees will attempt to stay uphill and upwind.
3. Hazmat Operations will be coordinated through Williams County Communications. Communications will assign appropriate Fire and Hazmat Teams. Williams County EMS will provide medical support for those involved in the Hazmat Operation.
4. Williams County EMS will not place a known contaminated patient into an ambulance until that pt has been decontaminated.
5. Williams County EMS Employees will not treat a patient in a known "Hot Zone."
6. An EMS supervisor must be contacted as soon as practical to advise of hazardous materials emergency.

Williams County Standing Order

Stroke/TIA

Basic

1. Determine LOC, including Glasgow Coma Score
2. Support ABC's
3. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
4. Monitor vitals
5. Check blood sugar, treat per Standing Order
6. Protect any weak or paralyzed extremities
7. If able, determine last time seen with normal neuros prior to episode
8. Consider rapid transport, preferred transport to CHWC Bryan
9. Consider air transport for acute stroke with onset less than 30 minutes and extended transport distance/time

Advanced

1. Establish IV access, consider 2nd IV enroute, as time permits
2. Place cardiac monitor

Paramedic

1. Perform 12 Lead EKG
2. Consider intubation if unable to manage airway with less invasive means

Williams County Standing Order

Cincinnati Stroke Test

Interpretation: if any of these 3 signs is abnormal, the probability of a stroke is 72%

Arm Drift

The patient closes *eyes and extends both arms straight out, with palms up for 10 seconds*

- Normal – both arms move the same or both arms do not move at all (other findings, such as pronator drift, may be helpful)
- Abnormal – one arm does not move or one arm drifts downward

Facial Droop

The patient shows *teeth or smile*

- Normal – both sides of the face move equally
- Abnormal - one side of the face does not move as well as the other side

Abnormal Speech

The patient repeats 'you can't teach an old dog new tricks''

- Normal – patient uses correct words with no slurring
- Abnormal - patient slurs words, uses the wrong words, or is unable to speak

Cincinnati Pre-hospital Stroke Scale

1. FACIAL DROOP: *Have patient show teeth or smile.*

Normal: both sides of the face move equally

Abnormal: one side of face does not move as well as the other side

2. ARM DRIFT: *Patient closes eyes & holds both arms out for 10 sec.*

Normal: both arms move the same or both arms do not move at all

Abnormal: one arm does not move or drifts down compared to the other

3. ABNORMAL SPEECH. *Have the patient say 'you can't teach an old dog new tricks.'*

Normal: patient uses correct words with no slurring Abnormal: patient slurs words, uses the wrong words, or is unable to speak

INTERPRETATION: If any **1** of these 3 signs is abnormal the probability of a stroke is 72%.

Rev Sept 2013

Williams County Standing Order

Tachycardia with Pulse (Adult Narrow Complex)

Basic

1. Assess manual pulse for at least 30-60 seconds, assess for strength and regularity
2. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. Support ABCs

Advanced

1. Cardiac Monitor
2. IV/IO placement

Paramedic

1. 12 Lead EKG
2. Treat accompanying symptoms as indicated by current ACLS algorithm. If unstable go immediately to synchronized cardioversion. If delays in synchronization occurs and pt is critical go immediately to unsynchronized shocks.
3. Attempt vagal maneuvers
4. If symptomatic but stable consider Adenosine/Adenocard
    a. Adult Dose:
        6mg rapid IV/IO followed by normal saline bolus of 20ml.
        A second dose of 12mg can be given in 1-2 minutes if needed.
5. Synchronized Cardioversion:
    a. Premedicate whenever possible:
        Versed: 2.5-5mg slow IV/IO/IM, Q 5 min PRN
        Ativan: 1-2mg IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Adult: Start at 50J then increase stepwise to 100J, 150J, 200J

Williams County Standing Order

Tachycardia With Pulse Rate > 150 (Adult Wide-Complex)

Basic

1. Assess manual pulse for at least 30-60 seconds, assess for strength and regularity
2. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. Support ABCs

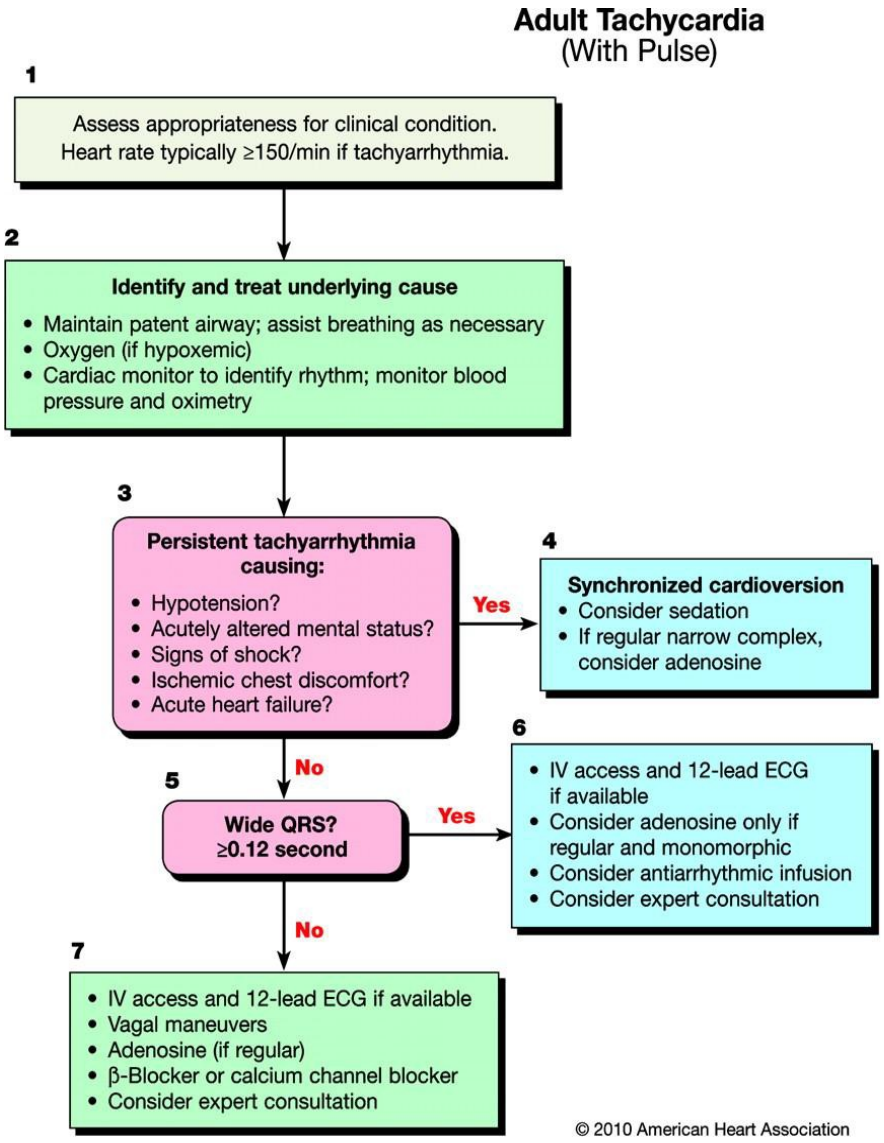
Advanced

1. Cardiac Monitor
2. IV/IO placement

Paramedic

1. 12 Lead EKG
2. Treat accompanying symptoms as indicated by current ACLS algorithm. If unstable go immediately to synchronized cardioversion. If delays in synchronization occurs and clinical condition is critical, go immediately to unsynchronized shocks.
3. Attempt vagal maneuvers
4. If rhythm is a stable, undifferentiated regular, monomorphic wide-complex tachycardia Adenosine may be considered:
    a. Adult dose:
        6mg rapid IV/IO followed by normal saline bolus of 20ml
        A second dose of 12mg can be given in 1-2 minutes if needed.
5. Consider Amiodarone:
    a. Adult dose: Rapid Infusion: 150mg IV/IO over 10 min (15mg/min). Mix 150mg Amiodarone with 100ml Normal Saline(rate is 600ml/hr). May repeat rapid infusion 150mg Q 10 min PRN.
6. Synchronized Cardioversion:
    a. Premedicate whenever possible:
        Versed: 2.5-5mg slow IV/IO/IM, Q 5 min PRN
        Ativan: 1-2mg IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Adult: Start at 100J then increase stepwise to 150J, 200J
7. For Torsades De Pointes consider Magnesium Sulfate:
    a. 1-2g IV/IO (2-4mL of a 50% solution) diluted in 10 mL of Normal Saline IV/IO over 5-10 min.

Williams County Standing Order



Doses/Details

Synchronized Cardioversion
Initial recommended doses:
- Narrow regular: 50-100 J
- Narrow irregular: 120-200 J biphasic or 200 J monophasic
- Wide regular: 100 J
- Wide irregular: defibrillation dose (NOT synchronized)

Adenosine IV Dose:
First dose: 6 mg rapid IV push; follow with NS flush.
Second dose: 12 mg if required.

Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia

Procainamide IV Dose:
20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

Amiodarone IV Dose:
First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

Sotalol IV Dose:
100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

Williams County Standing Order

_Tachycardia With Pulse (Pediatric Narrow Complex)

Basic

1. Assess manual pulse for at least 30-60 seconds, assess for strength and regularity
2. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. Support ABCs

Advanced

1. Cardiac Monitor
2. IV/IO placement

Paramedic

1. 12 Lead EKG
2. Treat accompanying symptoms as indicated by current ACLS algorithm. If unstable go immediately to synchronized cardioversion. If delays in synchronization occurs and clinical condition is critical, go immediately to unsynchronized shocks.
3. Attempt vagal maneuvers
4. If probable sinus tachycardia (Infant rate <220/min. Child rate <180/min) search for and treat cause
5. If probable SVT (Infant rate ≥220/min. Child rate ≥180/min) consider Adenosine:
    a. 0.1mg/kg rapid IV/IO (6mg max) followed by normal saline bolus of 5ml or greater
    b. A second dose of 0.2mg/kg IV/IO (12mg max) can be given in 1-2 minutes if needed
6. Synchronized Cardioversion:
    a. Premedicate whenever possible:
        Versed: 0.1mg/kg slow IV/IO/IM, Q 5 min PRN, max single dose 2.5 mg
        Ativan: 0.5-1mg IV/IO/IM Q 5 min PRN, max total dose 4mg
    b. Begin at 0.5-1J/kg
    c. If cardioversion not effective increase to 2J/kg

Williams County Standing Order

_____ Tachycardia With Pulse (Pediatric Wide-Complex)

Basic

1. Assess manual pulse for at least 30-60 seconds, assess for strength and regularity
2. Supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%
3. Support ABCs

Advanced

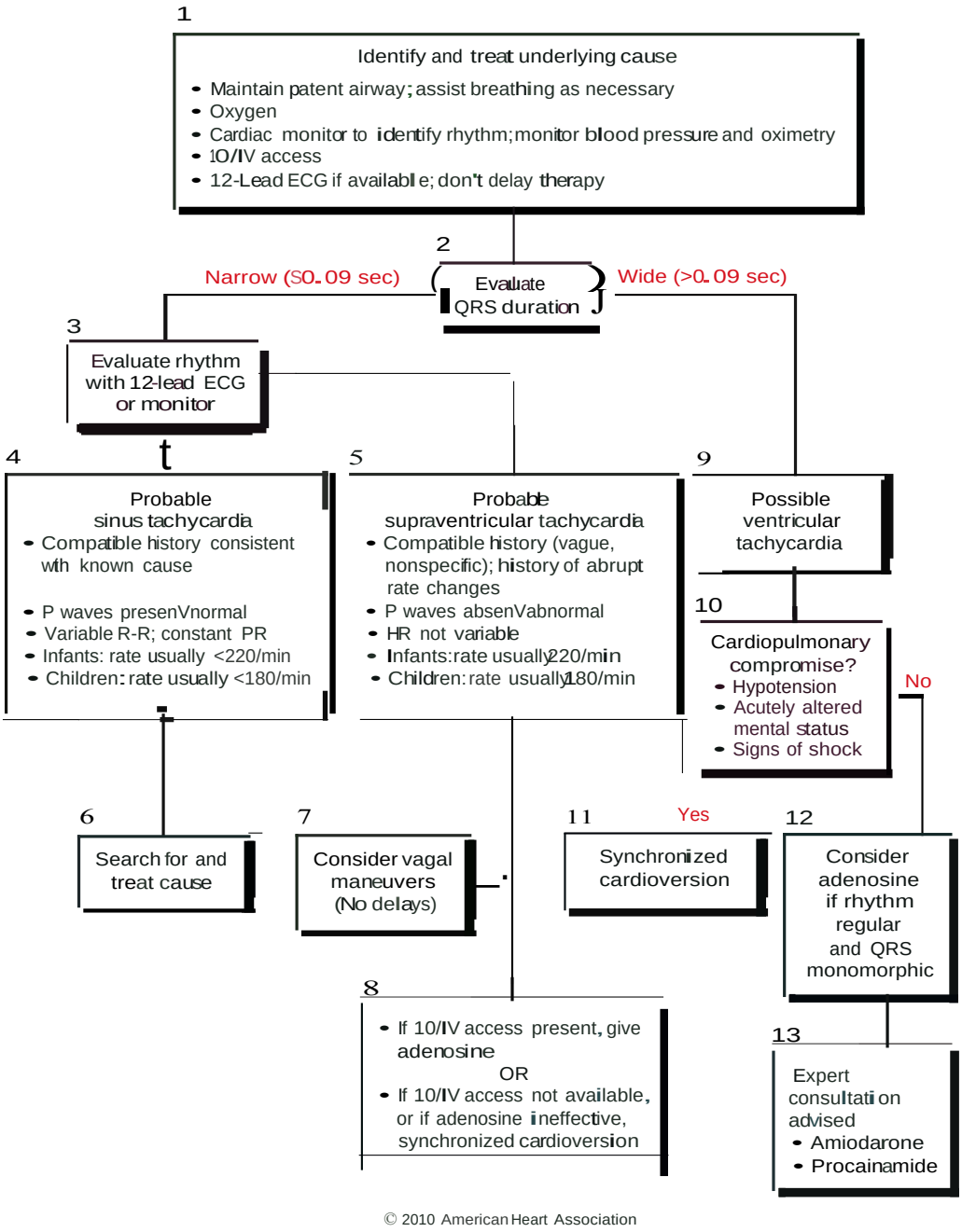
1. Cardiac Monitor
2. IV/IO placement

Paramedic

1. 12 Lead EKG
2. Treat accompanying symptoms as indicated by current ACLS algorithm. If unstable go immediately to synchronized cardioversion. If delays in synchronization occurs and clinical condition is critical, go immediately to unsynchronized shocks.
3. Attempt vagal maneuvers
4. If rhythm is a stable, undifferentiated regular, monomorphic wide-complex tachycardia Adenosine may be considered:
    a. 0.1mg/kg rapid IV/IO (6mg max) followed by normal saline bolus of 5ml or greater
    b. A second dose of 0.2mg/kg IV/IO (12mg max) can be given in 1-2 minutes if needed
5. Consider Amiodarone:
    a. 5mg/kg IV/IO over 20-60 min (max single dose 300mg). May repeat to max of 15mg/kg per day.
6. Synchronized Cardioversion:
    a. Premedicate whenever possible:
        Versed: 0.1mg/kg slow IV/IO/IM Q 5 min PRN, max single dose 2.5mg
        Ativan: 0.5-1mg IV/IO/IM Q 5 min PRN, max total dose 4mg
    b. Begin at 0.5-1J/kg
    c. If cardioversion not effective increase to 2J/kg

Williams County Standing Order

Pediatric Tachycardia
With a Pulse and Poor Perfusion



Doses/Details

Synchronized Cardioversion:
Begin with 0.5-1 J/kg; if not effective, increase to 2 J/kg.
Sedate if needed, but don't delay cardioversion.

Adenosine IO/IV Dose:
First dose: 0.1 mg/kg rapid bolus (maximum: 6 mg).
Second dose: 0.2 mg/kg rapid bolus (maximum second dose 12 mg).

Amiodarone IO/IV Dose:
5 mg/kg over 20-60 minutes
or
Procainamide IO/IV Dose:
15 mg/kg over 30-60 minutes

Do not routinely administer amiodarone and procainamide together.

Williams County Standing Order

Trauma

Basic

1. Evaluate scene safety before entering
2. Maintain c-spine immobilization and evaluate level of consciousness
3. Evaluate need for spinal immobilization
4. Support ABC's including suction and appropriate oxygen therapy as indicated
5. Do not delay transport for anything other than spinal immobilization or airway management
6. Consider need for air transport, relay information to responding paramedic unit
7. Splint fractures in position found
    a. Consider realignment of fracture if no pulses present distal to injury
8. Consider traction splint for isolated mid-shaft femur fracture
9. Place occlusive dressing taped on 3 sides on any open chest wounds
10. Stabilize any penetrating objects with bulky dressing
    a. Only remove objects that are in the cheek or interfere with airway management
11. Care for any amputated parts
    a. Control major bleeding
    b. Wrap amputated parts in sterile, moist dressing
    c. Place wrapped parts in waterproof bag
    d. Place bag in container of cool water with ice or cold packs (do not freeze)
    e. Do not delay transport of critical patient in order to locate amputated parts
    f. Consider air transport for possibly reattachment
12. Cover any exposed abdominal organs with warm, moist sterile dressing
13. Consider elevating lower extremities if signs of shock present
14. Place pregnant patients on left side if pregnancy >20 weeks.
    a. If fully immobilized, elevate right side of board
15. Consider aggressive cardiopulmonary resuscitative efforts in cases of maternal cardiac arrest
    a. Contact medical control to advise of need for emergent obstetrical consultation
    b. Ohio scope of practice does not allow surgical delivery in the pre-hospital setting
16. Care for eye injuries
    a. Cover both eyes even if only one is injured
    b. Do not remove foreign bodies from the eye. Stabilize protrusion in place
    c. Transport pt upright
    d. For chemical burns irrigate with copious amounts of water or normal saline for a minimum of 15 minutes. Start irrigation as soon as possible
    e. Contact lenses should be removed if necessary for patient care/comfort

Advanced

1. Initiate large bore IV of normal saline
    a. Titrate to maintain blood pressure of at least 90-100 systolic
2. Place cardiac monitor
3. Consider second IV

Paramedic

1. If unable to manage airway with BLS means consider intubation or cricothyrotomy
2. Consider needle pleural decompression for suspected pneumothorax
3. Consider pain management
4. Consider sedation for anxious and/or combative patients

Williams County Standing Order

MEDICATIONS

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Williams County Standing Order

lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
1	0.5	61	27.5	121	55	181	82	241	109.5
2	1	62	28	122	55.5	182	82.5	242	110
3	1.5	63	28.5	123	56	183	83	243	110
4	2	64	29	124	56.5	184	83.5	244	110.5
5	2.5	65	29.5	125	56.5	185	84	245	111
6	2.5	66	30	126	57	186	84.5	246	111.5
7	3	67	30.5	127	57.5	187	85	247	112
8	3.5	68	31	128	58	188	85	248	112.5
9	4	69	31.5	129	58.5	189	85.5	249	113
10	4.5	70	32	130	59	190	86	250	113.5
11	5	71	32	131	59.5	191	86.5	251	114
12	5.5	72	32.5	132	60	192	87	252	114.5
13	6	73	33	133	60.5	193	87.5	253	115
14	6.5	74	33.5	134	61	194	88	254	115
15	7	75	34	135	61.5	195	88.5	255	115.5
16	7.5	76	34.5	136	61.5	196	89	256	116
17	7.5	77	35	137	62	197	89.5	257	116.5
18	8	78	35.5	138	62.5	198	90	258	117
19	8.5	79	36	139	63	199	90.5	259	117.5
20	9	80	36.5	140	63.5	200	90.5	260	118
21	9.5	81	36.5	141	64	201	91	261	118.5
22	10	82	37	142	64.5	202	91.5	262	119
23	10.5	83	37.5	143	65	203	92	263	119.5
24	11	84	38	144	65.5	204	92.5	264	120
25	11.5	85	38.5	145	66	205	93	265	120
26	12	86	39	146	66	206	93.5	266	120.5
27	12.5	87	39.5	147	66.5	207	94	267	121
28	12.5	88	40	148	67	208	94.5	268	121.5
29	13	89	40.5	149	67.5	209	95	269	122
30	13.5	90	41	150	68	210	95.5	270	122.5
31	14	91	41.5	151	68.5	211	95.5	271	123
32	14.5	92	41.5	152	69	212	96	272	123.5
33	15	93	42	153	69.5	213	96.5	273	124
34	15.5	94	42.5	154	70	214	97	274	124.5
35	16	95	43	155	70.5	215	97.5	275	125
36	16.5	96	43.5	156	71	216	98	276	125
37	17	97	44	157	71	217	98.5	277	125.5
38	17	98	44.5	158	71.5	218	99	278	126
39	17.5	99	45	159	72	219	99.5	279	126.5
40	18	100	45.5	160	72.5	220	100	280	127
41	18.5	101	46	161	73	221	100.5	281	127.5
42	19	102	46.5	162	73.5	222	100.5	282	128
43	19.5	103	46.5	163	74	223	101	283	128.5
44	20	104	47	164	74.5	224	101.5	284	129
45	20.5	105	47.5	165	75	225	102	285	129.5
46	21	106	48	166	75.5	226	102.5	286	130
47	21.5	107	48.5	167	76	227	103	287	130
48	22	108	49	168	76	228	103.5	288	130.5
49	22	109	49.5	169	76.5	229	104	289	131
50	22.5	110	50	170	77	230	104.5	290	131.5
51	23	111	50.5	171	77.5	231	105	291	132
52	23.5	112	51	172	78	232	105.5	292	132.5
53	24	113	51.5	173	78.5	233	105.5	293	133
54	24.5	114	51.5	174	79	234	106	294	133.5
55	25	115	52	175	79.5	235	106.5	295	134
56	25.5	116	52.5	176	80	236	107	296	134.5
57	26	117	53	177	80.5	237	107.5	297	134.5
58	26.5	118	53.5	178	80.5	238	108	298	135
59	27	119	54	179	81	239	108.5	299	135.5
60	27	120	54.5	180	81.5	240	109	300	136

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Williams County Standing Order

Adenosine/Adenocard

Indications

1. First drug for most forms of stable narrow-complex PSVT. Effective in terminating those due to reentry involving AV
   node or sinus node.
2. May consider for unstable narrow-complex reentry tachycardia while preparations made for cardioversion.
3. Stable, undifferentiated regular, monomorphic wide-complex tachycardia when the rhythm is regular.
4. Underlying, stable narrow–complex SVT as a diagnostic maneuver.

Contraindications

1. Hypersensitivity to drug.
2. Poison/drug-induced tachycardia
3. 2nd or 3rd degree block.
4. Atrial Fibrillation/Atrial Flutter
5. Irregular wide-complex tachycardias

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Transient side effects include flushing, chest pain, or tightness, SOB with brief periods of asystole or bradycardia,
   ventricular ectopy.
2. Transient periods of sinus bradycardia and ventricular ectopy are common after termination of SVT.
3. Safe and effective in pregnancy.
4. May cause bronchoconstriction. Use caution with pts with asthma, emphysema, or bronchitis.
5. Monitor pts on digoxin, verapamil closely. Drug interaction may cause V-fib.

Administration Technique

1. Elevate the patient's lower extremities before administration of drug if possible.
2. Record cardiac rhythm during administration.
3. Draw up Adenosine in an appropriate ml syringe.
4. Explain to pt that they may become lightheaded or have a feeling of imminent doom for a brief period after medication
   administration.
5. Attach medication syringe to the IV injection port closest to pt. Pinch off IV tubing above injection port.
6. Push Adenosine as quickly as possible (1-3 seconds).
7. While maintaining pressure on Adenosine plunger, release pinched off tubing, then flush with 20-30 ml of saline as
   rapidly as possible by squeezing the IV fluid bag.
8. Adults Dose: 6mg rapid IV/IO followed by normal saline bolus of 20ml. Then elevate extremity.
   a. Second dose of 12mg rapid IV/IO followed by fluid bolus of 20ml can be given in 1-2 minutes if needed.
9. Peds Dose: 0.1mg/kg rapid IV/IO (6mg max) followed by normal saline bolus of 10ml or greater.
   a. Second dose of 0.2mg/kg (12mg max) can be given, followed by fluid bolus of 10ml in 1-2 minutes if needed.

Williams County Standing Order

Albuterol(Proventil)

Indications

1. Dyspnea associated with:
    a. Bronchial asthma
    b. Reversible bronchospasm associated with chronic bronchitis and emphysema
    c. Allergic Reaction
    d. Unknown cause with wheezing present

Contraindications

1. Known hypersensitivity

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Cardiac arrhythmias
2. Hypertensive response
3. Exacerbation of coronary arterial disease

Administration Technique

1. Adult:
    a. 2.5mg/3ml Q 5-10 minutes up to 3 doses PRN.
2. Peds:
    a. Same as adult dose.
3. May be used continuously for status asthmaticus.

Williams County Standing Order

Amidate/Etomidate

Indications

1. Induction agent for medication assisted intubation

Contraindications

1. Known hypersensitivity
2. Labor/delivery
3. Pediatric less than 10 years of age
4. Septic Shock

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Marked hypotension and severe cardiovascular disease.
2. Apnea, laryngospasm, severe asthma.
3. Myoclonic skeletal muscle movement, pain on injection.
4. Very short half life.

Administration Technique

1. Induction agent:
    a. Adult Dose: 20-40mg slow IV/IO (over 30-60 seconds)
    b. Peds Dose: >10 yrs same as adult dose, <10 yrs. not indicated.

Williams County Standing Order

Amiodarone/Cordarone

Indications

1. Recurrent ventricular fibrillation
2. Recurrent hemodynamically unstable ventricular tachycardia/wide complex tachycardia

Contraindications

1. Allergy to drug
2. Severe sinus node dysfunction
3. Severe bradycardia
4. 2nd or 3rd degree AV block
5. Hemodynamically significant bradycardia
6. Pulmonary congestion
7. Cardiogenic shock
8. Severe Hypotension
9. Breast feeding pts

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. May produce hypotension
2. May prolong QT interval; (do not administer with other drugs that prolong QT interval (e.g. procainamide).
3. Terminal elimination is extremely long (half life last up to 110 days).
4. Use with caution if hepatic failure is present.
5. Fentanyl may cause hypotension, bradycardia, and decreased cardiac output.
6. Multiple complex drug interactions.

Administration Technique

1. Cardiac Arrest VF/VT Unresponsive to CPR, Shock, and Vasopressors:
    a. Adult Dose: 300mg IV/IO diluted with 20ml of Normal Saline. 2nd dose of 150mg can be given in 3 to 5 minutes.
    b. Peds Dose: 5mg/kg IV/IO diluted with 20ml of Normal Saline. May repeat dose up to total dose of 15mg/kg per 24 hrs. Max single dose 300mg.
2. Recurrent Life Threatening Ventricular/Wide Complex Arrhythmias:
    a. Adult Dose: Rapid Infusion: 150mg IV/IO over 10 min. (15mg/min.). Mix 150mg Amiodarone with 100ml Normal Saline (rate is 600ml/hr). May repeat rapid infusion 150mg every 10 min. as needed.
    b. Peds: Loading dose: 5mg/kg IV/IO over 20 to 60 minutes (max single dose 150mg).

Williams County Standing Order

Aspirin

Indications

1. Administer to all pts with an Acute Coronary Syndrome, particularly reperfusion candidates.
2. Any person with symptoms ("pressure," "heavy weight," "squeezing," crushing") suggestive of ischemic pain.

Contraindications

1. Pts with aspirin allergy.
2. Pts with active ulcer disease.
3. Pts with bleeding disorders, such as hemophilia.
4. Pts with known hypersensitivity to aspirin.
5. Pts under 19 years old.

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Pts with GI lesions, impaired renal function, severe hepatic impairment.
2. Pts with asthma (may cause airway spasms).

Administration Technique

1. Administer 4 low dose(81mg) aspirin tablets PO
    a. Chewing is preferred method.
    b. Goal is to give within minutes of arrival/onset.

Williams County Standing Order

Ativan/Lorazepam

Indications

1. To induce sedation for cardioversion
2. First line drug in management of seizures
3. Relief of anxiety/agitation

Contraindications

1. Hypersensitivity to benzodiazepines
2. Coma (unless seizing)
3. Severe hypotension

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Primary depressive disorders or psychosis
2. Coma and shock
3. Acute alcohol intoxication
4. Pulmonary, renal or hepatic impairment
5. Organic brain syndrome
6. Myasthenia gravis
7. Suicidal tendency
8. GI disorders
9. Elderly and debilitated patients
10. Limited pulmonary reserve
11. Pregnancy and nursing mothers
12. Pts with acute narrow-angle glaucoma

Administration Technique

1. Sedation for Cardioversion:
    a. Adult Dose: 1 to 2mg IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Peds Dose: 0.5-1mg IV/IO/IM Q 5 min PRN max dose 4mg
2. Status Epilepticus
    a. Adult Dose: 1 to 2mg slow IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Peds Dose: 0.5-1mg slow IV/IO/IM Q 5 min PRN, max 4mg
    c. Neonate Dose: 0.05mg/kg IV/IO over 2-5 minutes.
3. Relief of anxiety/behavioral:
    a. Adult Dose: 1-2mg IV/IO/IM Q 5 min PRN, max total dose 8mg
    b. Peds Dose: 0.5-1mg IV/IO/IM Q 5 min PRN, max 4mg

Williams County Standing Order

Atropine

Indications

1. First drug for symptomatic sinus bradycardia. Although bradycardia is defined as a pulse of less than 60, clinical
   presentation is very important. Many patients are physiologically normal below this rate and a few may be symptomatic
   above it. Does the patient have signs of Cardiogenic Shock (altered consciousness, poor capillary refill, and signs of poor
   tissue perfusion)? Generally you should carefully consider avoiding Atropine use in a pulse above about 50 bpm.
2. May be beneficial in presence of AV nodal block. Will not be effective for infranodal (mobitz type II) block.
3. Organophosphate (e.g. nerve agent) poisoning: extremely large doses may be needed.

Contraindications

1. Hypersensitivity
2. Unstable cardiovascular status in acute hemorrhage
3. Tachycardia
4. Asystole/PEA

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Will not be effective for infranodal type II AV block and new 3rd degree block with wide QRS complexes. (In these pts
   may cause paradoxical slowing. Be prepared to pace or give catecholamines.)
2. Doses of atropine less than 0.5mg may result in paradoxical slowing of heart rate
3. Pts with Down Syndrome will be more sensitive to atropine
4. Acute angle-closure glaucoma
5. Obstructive disease of GI tract
6. Myocardial ischemia
7. Asthma
8. Myasthenia gravis
9. Avoid in hypothermic bradycardia

Administration Technique

1. Bradycardia:
   a. Adult Dose: 0.5mg IV/IO every 3-5 min. as needed
      Not to exceed total dose of 0.04mg/kg (total 3mg).
   b. Peds Dose: 0.02mg/kg IV/IO every 5 min as needed
      Min dose 0.1mg
      Not to exceed total dose for child: 1mg
2. Organophosphate Poisoning:
   a. Adult Dose: Extremely large doses (2-5mg or higher) may be needed. Repeat as needed.
   b. Peds Dose: Standard dosing may be exceeded in organophosphate poisoning.

Williams County Standing Order

Atrovent/Ipratropium Bromide

Indications

1. Dyspnea associated with:
    a. Asthma
    b. Treatment of bronchospasm associated with chronic obstructive pulmonary disease
    c. Chronic bronchitis and emphysema

Contraindications

1. Hypersensitivity to Ipratropium bromide or to Atropine and its derivatives
2. Hypersensitivity to Nuts or Soy products and derivatives
3. Pediatrics <12 years of age

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Pts with narrow angle glaucoma
2. Prostatic hypertrophy or bladder neck obstruction
3. Should only be used in pregnancy if clearly needed
4. Nursing mothers
5. May cause blurred vision or eye pain with improper mask seal

Administration Technique

1. Adult Dose:
    a. 500mcg/2.5mL added to 1st dose of 2.5mg/3mL Proventil/Albuterol
2. Pediatric Dose:
    a. > 12 years of age same as adult
    b. < 12 years of age: 250mcg (1/2 ampule)
3. Only use on initial dose of Albuterol. Not repeated.

Williams County Standing Order

Benadryl/Diphenhydramine

Indications

1. Acute allergic reaction or anaphylaxis

Contraindications

1. Hypersensitivity
2. Newborn or premature infants
3. Nursing mothers

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Renal disease
2. Cardiac disease
3. Hypertension
4. Seizure disorder
5. Hyperthyroidism
6. Pregnancy
7. COPD or acute asthma
8. CNS Depressants: Increases sedation
9. Lower respiratory disease
10. Acute angle-closure glaucoma

Administration Technique

2. Adult Dose: 25-50mg IV/IO/IM
    a. Don't exceed 25mg/min IV/IO Push
3. Peds Dose:
    a. 2-6 years 6.25mg IV/IO/IM
    b. 6-12 years 12.5-25mg IV/IO/IM
    c. >12 years use adult doses

Williams County Standing Order

Dextrose (50%)

Indications

1. Documented hypoglycemia

Contraindications

1. Hyperglycemia

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Suspected increased ICP
2. Sclerosis of small peripheral veins, infiltration may result in tissue necrosis
3. Blood Glucose reading should be obtained before and after drug administration
4. Pts with allergy to corn or corn products

Administration Technique

Adult:

a. Blood sugar greater than 60mg/dL and symptomatic:
-administer 12.5G of D50% IV/IO bolus, reassess
b. Blood sugar less than 60mg/dL and symptomatic:
-administer 25G of D50% IV/IO bolus, reassess

Pediatric:

a. Blood glucose <80mg/dL and symptomatic:
0-1 year old: 2-4ml/kg 12.5% dextrose IV/IO
1-4 year old: 2-4ml/kg 25% dextrose IV/IO
Children 4 and older: 2-4ml/kg 50% dextrose IV/IO (Not to exceed adult dose)

Note: Remove ½ of D-50 solution and replace with Normal Saline to achieve D25%. 4ml=1gm
Remove ½ of D-25 solution and replace with Normal Saline to achieve D12.5%

Williams County Standing Order

Dopamine/Intropin

Indications

1. Second line drug for symptomatic bradycardia (after atropine and pacing).
2. Use for severe hypotension with signs and symptoms of shock after correcting volume depletion.

Contraindications

1. Correct hypovolemia with volume replacement before initiating dopamine.
2. Do not mix with sodium bicarbonate.
3. Pts with uncorrected tachyarryhthmias
4. Ventricular Fibrillation

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Use with caution in cardiogenic shock with accompanying CHF.
2. May cause tachyarrhythmias, excessive vasoconstriction.
3. Cold injuries
4. Pregnancy or breast feeding mothers

Administration Technique

1. Infusion rate is 2 to 20mcg/kg/min.
    a. Low Dose: 2-5mcg/kg/min. Increases renal and mesenteric perfusion.
    b. Moderate Dose: 5-10mcg/kg/min. Increases heart rate, contractility, cardiac output.
    c. High Dose: 10-20mcg/kg/min. Increases blood pressure, peripheral vasoconstriction.
2. Titrate slowly to pt response to maintain systolic B/P of 90-100mmHG.
3. Use the "Dopamine" calculation chart to assure accurate drip rates based on patient's weight and dosing requirements.

WILLIAMS COUNTY EMEGENCY MEDICAL SERVICE

DOPAMINE DRIP - FLOW RATE CHART

DOPAMINE CONCENTRATION = 1600 MCG/ML SOLUTION = 400MG IN 250 ML D5W OR NORMAL SALINE

DROPS PER MINUTE BASED ON MICRODRIP TUBING (60GTTS/ML)

PATIENT WEIGHT (KG)	5 MCG / KG / MIN	10 MCG / KG / MIN	15 MCG / KG / MIN	20 MCG / KG / MIN
40	8	15	23	30
45	8	17	25	34
50	9	19	28	38
55	10	21	31	41
60	11	23	34	45
65	12	24	37	49
70	13	26	39	53
75	14	28	42	56
80	15	30	45	60
85	16	32	48	64
90	17	34	51	68
95	18	36	53	71
100	19	38	56	75
105	20	39	59	79
110	21	41	62	83
120	22	46	68	90
130	24	48	74	98
140	26	52	78	106
150	28	56	84	112
160	30	60	90	120
170	32	64	96	128
180	34	68	102	136
190	36	72	106	142
200	38	76	112	150

Williams County Standing Order

Epinephrine 1:1,000

Indications

1. Anaphylaxis, severe allergic reaction
2. Asthma & bronchospasm associated with severe difficulty breathing.

Contraindications

1. None in true anaphylaxis or severe respiratory distress

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Raising blood pressure and increasing heart rate may cause myocardial ischemia, angina, and increased myocardial oxygen demand.
2. Use cautiously in elderly pts and in pts with hyperthyroidism, CV disease, hypertension, diabetes.
3. Pregnancy
4. Hypertension
5. Pts with angle-closure glaucoma
6. Shock other than anaphylactic shock.
7. Arrhythmias

Administration Technique

1. Anaphylaxis/Severe difficulty breathing/Severe Bronchospasm:
   a. Adult Dose:
      0.3-0.5mg IM/SQ Q 3-5min, 2 doses max
   b. Peds Dose:
      0.01mg/kg IM/SQ Q 3-5 min, 0.5mg max single dose, 2 doses max

Williams County Standing Order

Epinephrine 1:10,000

Indications

1. Cardiac arrest rhythms including: V-Fib, pulseless VT, asystole, PEA
2. Severe Anaphylaxis/asthma/bronchospasm

Contraindications

1. There are no absolute contraindications.

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. High doses do not improve survival or neurologic outcome and may contribute to post resuscitation myocardial dysfunction.

Administration Technique

1. Adult Cardiac Arrest:
   a. 1mg of 1:10,000 IV/IO Q 3-5 minutes during resuscitation.
      Follow each dose with 20 ml flush then elevate arm for 10-20 seconds after dose.
2. Ped Cardiac Arrest:
   a. 0.01mg/kg (0.1 ml/kg) IV/IO of 1:10,000 Q 3-5 min
3. Anaphylaxis/asthma/bronchospasm
   a. 0.3 – 0.5mg slow IV/IO epinephrine 1:10,000 may be administered after the second dose of epinephrine 1:1000 fails to show any clinical improvement in the adult patient

Williams County Standing Order

Fentanyl Citrate

Indications

1. To control severe pain in patients over 2 yrs of age
2. Adjunct to medication assisted intubation

Contraindications

1. Patients less than 2 yrs of age
2. Shock
3. Hypotension (systolic B/P <100), except for medication facilitated intubation

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Head injuries
2. Increased intracranial pressure
3. Elderly
4. Debilitated, poor-risk patients
5. COPD, other respiratory problems; any dose of Fentanyl may cause severe respiratory depression/arrest in a chronic COPD pt
6. Liver and Kidney dysfunction
7. Bradydysrhythmias
8. Patients who have received MAO inhibitors within 14 days
9. Myasthenia gravis
10. Pregnancy

Administration Technique

1. Trauma Pain Management:
    a. Adult Dose:
        25-100mcg IV/IM/IO Q 10 min, max cumulative dose 300mcg
    b. Ped Dose (over 2 yrs. age):
        1-2mcg/kg IV/IM/IO Q 30 min
2. Cardiac Pain Management:
    a. Adult Dose:
        25-100mcg IV/IM/IO Q 10 min, max cumulative dose 300mcg
3. Medication Assisted Intubation:
    a. Adult Dose:
        25-100mcg IV/IO Q 10 min, max cumulative dose 300mcg
    b. Consider 25-50mcg dose during medication facilitated intubation with BP < 100 systolic
4. May reverse with Narcan

Williams County Standing Order

Flumazenil/Romazicon

Indications

1. Reverse respiratory depression and sedative effects from known pure benzodiazepine overdose.
2. Consider for Paramedic induced benzodiazepine overdose: Lorazepam (Ativan), Midazolam (Versed).

Contraindications

1. Hypersensitivity to Flumazenil
2. Hypersensitivity to Benzodiazepines
3. Do not use in suspected tricyclic overdose.
4. Do not use in seizure prone pts or chronic benzodiazepine user
5. Unknown drug overdose or mixed drug overdose.

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Effects may not outlast effect of benzodiazepines.
2. Monitor for recurrent respiratory depression.

Administration Technique

1. Benzodiazepine sedation reversal:
    a. 0.2mg IV/IO over 30 sec PRN, max total dose 1mg

Williams County Standing Order

Glucagon

Indications

1. Hypoglycemia with blood sugar <60 and symptomatic, or when 50% Dextrose administration is not possible

Contraindications

1. Hypersensitivity
2. Pts with known pheochromocytoma

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. History of cardiovascular or renal disease
2. May enhance anticoagulants effects
3. Must have sufficient stores of glycogen in liver to be effective
4. Obtain blood glucose level before and after administration

Administration Technique

1. Adult Dose:
    a. 1mg IM injection
2. Peds Dose:
    a. 0.03mg/kg IM/SQ injection Q 15 minutes PRN up to 3 doses, max total dose 1 mg

Williams County Standing Order

Glucose - Oral

Indications

1. To treat hypoglycemia before unconsciousness

Contraindications

1. Unresponsiveness
2. Pt unable to swallow
3. Pediatrics < 2 years of age

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Opened or punctured tube
2. **Do not** administer oral glucose to a patient who has altered mental status, or is unresponsive

Administration Technique

1. Squeeze one tube into pt mouth PRN

Williams County Standing Order

Lidocaine/Xylocaine

Indications

1. Reduction of pain in medication administration via EZ-IO in conscious pts

Contraindications

1. Hypersensitivity to Lidocaine

Administration Technique

1. EZ-IO in conscious pts:
    a. Adult Dose: 20-40mg slow IO
    b. Peds Dose: 0.5mg/kg slow IO

Williams County Standing Order

Magnesium Sulfate

Indications

1. Cardiac arrest only if torsades de pointes is present.
2. Eclampsia

Contraindications

1. Heart block
2. Renal disease
3. Hypermagnesemia
4. Shock

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Occasional fall in blood pressure with rapid administration.
2. Use with caution if renal failure is present.

Administration Technique

1. Adult Cardiac Arrest (Torsades de Pointes):
   a. 1-2g IV/IO (2-4mL of a 50% solution) diluted in 10 mL of Normal Saline IV/IO over 5 to 10 minutes.
2. Pediatric Cardiac Arrest (Torsades de Pointes):
   a. Refer to Pediatric Cardiac Arrest Standing Order
   b. 25-50mg/kg IV/IO, max 2 g, over 10-20 min
3. Eclampsia:
   a. 1-2g slow IV/IO Q 5min, max 4g

Williams County Standing Order

Morphine Sulfate

Indications

1. Pain Control
2. Chest pain in ACS unresponsive to nitrates
3. Acute cardiogenic pulmonary edema (if blood pressure is adequate)

Contraindications

1. Hypersensitivity to drug
2. Hypotension (systolic B/P <100)

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Administer slowly and titrate to effect
2. May cause respiratory depression
3. Causes hypotension in volume depleted pts
4. Use with caution in inferior or right ventricular infarction
5. Elderly or debilitated pts
6. Head Injuries/Increased ICP
7. Seizures
8. Acute abdominal conditions
9. Pts with GI obstruction

Administration Technique

1. Adult Dose:
    a. 2-5 mg IV/IO/IM Q 10 min PRN
2. Ped Dose:
    a. 0.1-0.2 mg/kg IV/IO/IM MAX single dose 5mg Q 10 min PRN
3. May reverse with Narcan

Williams County Standing Order

Narcan/Naloxone Hydrochloride

Indications

1. Unconsciousness/coma of unknown origin
2. Narcotic overdose

Contraindications

1. Sensitivity to drug

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Half life shorter than narcotics, repeat dosing may be needed
2. Rare anaphylactic reactions have been reported
3. Seizure/vomiting may occur, especially if pushed rapidly
4. Will cause opiate withdrawal in patients who have regular opiate use
5. Use cautiously in meperidine induced seizures

Administration Technique

1. Adult dose:
    a. 0.5-2mg slow IV/IO/IM Q 2-3 min PRN
2. Peds dose:
    a. Less than 5 years old: 0.1mg/kg IV/IO/IM
    b. Older than 5 years: Same as adult
3. Use higher doses for complete narcotic reversal.
4. For chronic opioid use by pts. use smaller dose and titrate slowly.

Williams County Standing Order

Nitroglycerin

Indications

1. Angina pectoris associated with ACS
2. Treatment of acute pulmonary edema/CHF
3. Treatment of severe hypertension

Contraindications

1. Hypersensitive to drug
2. Hypotension (SBP <100mmHg or more than 30mmHg below baseline)
3. Severe bradycardia (<50bpm)
4. RV infarction
5. Use of phosphodiesterase inhibitors for erectile dysfunction (e.g. Viagra (sildenafil) and Levitra (vardenafil) within 24 hours; Cialis (tadalafil) within 48 hours)
6. Head injury including CVA
7. Pts less than 12 years of age

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Pts should sit or lie down when receiving this medication
2. Monitor pt B/P closely. An IV should be considered prior to Nitroglycerin administration. Pts with systolic B/P <140 must have a saline lock in place or an IV initiated with Normal Saline running at TKO prior to first Nitroglycerin administration.

Administration Technique

1. 1 sublingual tablet Q 3-5 min PRN, max 3 tablets total

Williams County Standing Order

Oxygen

Indications

1. Any suspected cardiopulmonary emergency
2. Complaints of SOB and suspected ischemic pain
3. ACS
4. For pts with suspected stroke and hypoxemia or unknown oxyhemoglobin saturation
5. Trauma – especially multi-systems injury involvement

Contraindications

1. There are no absolute contraindications.

Precautions

1. Observe closely when using with pulmonary pts known to be dependent on hypoxic respiratory drive (very rare)
2. Pulse oximetry may be inaccurate in low cardiac output states, with vasoconstriction, or with carbon monoxide exposure
3. If oxygen saturation is > 95%, routine oxygen administration is not necessary unless the patient shows signs and symptoms of respiratory distress
4. Use the lowest concentration of oxygen necessary to maintain oxygen saturation > 95%

Administration Technique

1. Administer supplemental oxygen with pulse oximetry to maintain oxygen saturation greater than 95%:
    a. Nasal Cannula: 2-6L/min
    b. Venturi mask: 4-12L/min
    c. Partial rebreather mask: 6-15L/min
    d. Non rebreather mask with reservoir: 10-15L/min
    e. Bag valve mask with high flow oxygen attached: 15L/min
    f. Pocket mask with oxygen inlet: up to 15L/min

Williams County Standing Order

Sodium Bicarbonate

Indications

1. Prolonged resuscitation with effective ventilation
    a. Not useful or effective in hypercarbic acidosis (e.g. cardiac arrest and CPR without intubation).

Contraindications

1. Metabolic and respiratory alkalosis
2. Hypercarbic acidoses (e.g. cardiac arrest and CPR without intubation)
3. Hypocalcemia
4. Hypokalemia

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Adequate ventilation and CPR, not bicarbonate, are the major "buffer agents" in cardiac arrest.
2. Not recommended for routine use in cardiac arrest pts.
3. In patients with chloride loss from vomiting and GI suction
4. Do not mix with any other resuscitative medications

Administration Technique

1. Adult Dose:
    a. 50mEq IV/IO
2. Pediatric doses:
    a. Refer to Pediatric cardiac arrest standing order
    b. 1mEq/kg IV bolus

Williams County Standing Order

Solu-Medrol(Methylprednisolone)

Indications

1. Anaphylaxis
2. Asthma
3. Exacerbation of COPD

Contraindications

1. Pts hypersensitive to drug.

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Pts with chronic conditions such as renal disease, hypertension, diabetes mellitus, hypothyroidism, GI bleeding disorders & diverticulitis, decreased autoimmune system, seizures, heart failure, tuberculosis, emotional instability & psychotic tendencies have an increased risk of medical complications after receiving any steroid medication over a long time period. Use of Solu-Medrol for acute respiratory emergencies is appropriate.

Administration Technique

1. Drug must be reconstituted prior to administration
2. Adult dose:
    a. 125mg IV/IO/IM over 30 to 60 seconds
3. Ped dose:
    a. 1-2mg/kg IV/IO/IM max 125mg over 30 to 60 seconds

Williams County Standing Order

Toradol (Ketorolac)

Indications

1. To relieve mild to moderate pain

Contraindications

1. Pts with asthma
2. Hypersensitivity to Toradol, aspirin, or other NSAIDs
3. Pts with active peptic ulcer disease
4. Pts with recent GI bleeding or perforation
5. Pts with advanced renal impairment
6. Pts at risk for bleeding
7. Pts under 18 years of age

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Patients with a history of peptic ulcers
2. Impaired renal or hepatic function
3. Elderly
4. Use caution if pt is currently receiving aspirin or NSAIDs

Administration Technique

1. Adult Dose:
    a. 30mg IV/IO/IM, max 1 dose
    b. 15 mg if patient is > 65 yrs

Williams County Standing Order

Versed(Midazolam)

Indications

1. Seizures
2. Induce sedation and amnesia prior to cardioversion and other painful procedures
3. Extreme combative behavior
4. Medication assisted intubation

Contraindications

1. Hypersensitivity to benzodiazepines
2. Pregnancy during active labor
3. Hypotension (systolic B/P < 100), except for medication facilitated intubation

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. COPD
2. Chronic renal failure
3. Congestive heart failure
4. Elderly
5. Pregnancy
6. Acute narrow-angle glaucoma
7. Acute alcohol intoxication

Administration Technique

1. Seizures/Sedation prior to painful procedures/cardio-version/pacing:
    a. Adult Dose:
        2.5-5mg slow IV/IO/IM Q 5 min PRN
    b. Pediatric Dose:
        0.1mg/kg IV/IO/IM Q 5 min PRN, max single dose 2.5 mg
2. Combative/ behavioral:
    a. Adult Dose:
        2.5-10mg slow IV/IO/IM Q 5 min PRN (titrate to desired effect)
    b. Pediatric Dose:
        0.1mg/kg IV/IO/IM Q 5 min PRN, max single dose 2.5 mg
3. Medication Assisted Intubation:
    a. Adult Dose:
        2.5-10mg slow IV/IO Q 5 min PRN (titrate to desired effect)
        Consider 2.5-5mg dose during medication facilitated intubation with BP< 100 systolic

Williams County Standing Order

Zofran(Ondansetron)

Indications

1. Prevention of nausea/vomiting

Contraindications

1. Hypersensitivity

Precautions: Carefully consider desired benefits versus potential risks before administering this medication

1. Pregnancy
2. Lactation
3. Children
4. Elderly
5. Hepatic impairment
6. Hypotensive cardiac patients

Administration Technique

1. Adult Dose:
   a. 4mg IV/IO/IM, may repeat once in 10 minutes or,
   b. One 8 mg Oral Disintegrating Tablet (ODT)
2. Peds Dose:
   a. 0.1mg/kg IV/IO/IM for children < 40 kg, max 1 dose
      4mg for child > 40 kg, max 1 dose

      ODT Zofran is contraindicated in pediatric patients < 40 kg

SPECIAL PROCEDURES

Williams County Standing Order

12 Lead EKG

Basic

15. Assist Paramedic. (EMT & AEMT can not obtain a 12 lead rhythm strip unless a paramedic is present and directing the cardiac monitoring procedure)

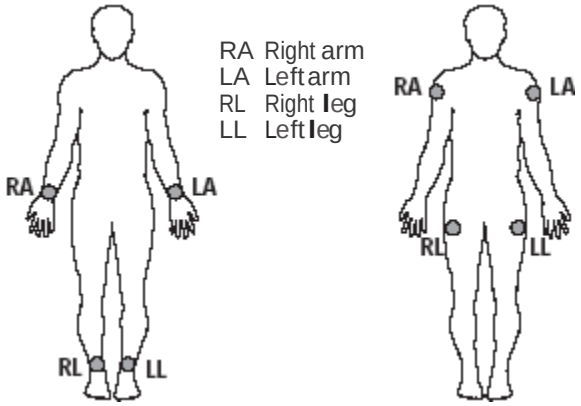
Advanced

6. Assist Paramedic. (EMT & AEMT can not obtain a 12 lead rhythm strip unless a paramedic is present and directing the cardiac monitoring procedure)

Paramedic

1. For chest pain go to Chest Discomfort/ACS
2. Indications for 12 Lead EKG:
    a. Chest pain/discomfort/pressure/tightness/burning/sensations (also neck, jaw, upper extremity or back pain signs/ symptoms of ACS)
    b. Anginal equivilants
        1. Dyspnea
        2. Weakness
        3. Pre-Syncope
        4. Syncope
        5. Palpitations
        6. Diaphoresis
    c. Arrhythmia on cardiac monitor
    d. Stroke/CVA
    e. Post-Resuscitation
    f. Pre/Post Cardioversion
    g. Blunt chest trauma
    h. Drug overdose/Poisoning
3. Attach and run 12 Lead EKG - **See proper lead placement reference below**
4. If EKG findings are diagnostic of ACS/AMI
    a. Do not delay transport more than 3-5 minutes to obtain 12 ld, transport Lights/Sirens.
    b. Bryan Hospital is the preferred transport destination for STEMI pts in Williams County
    c. Consider air ambulance transport to appropriate facility for STEMI pts with extended transport distance **only** when immediate transport to Bryan Hospital or a closer appropriate hospital is not possible. **Do not stay on scene** waiting for an air ambulance; divert them to meet you at your destination hospital.
    d. Contact receiving hospital as soon as practical for report of findings.
    e. Repeat 12 Lead EKG if change in patients pain or condition.

Williams County Standing Order



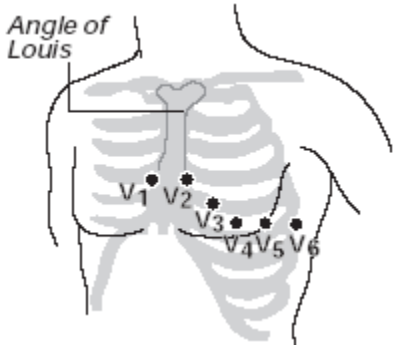
Although the electrodes may be placed anywhere along the limbs, standard locations tor limb lead electrodes are:

Right arm electrode near the wrist on the inside of the patient's right arm;

Left arm electrode near the left wrist;

Left leg electrode on the inner aspect of the lett leg near the ankle;

Right leg electrode near the right ankle.



Precordiallead electrode placement

Lead	Location
VI	Founh intercostalspace to the right of the sternum.
V2	Founh intercostal space to the left of the sternum.
V3	Directly between leads V2 and V4.
V4	Fifth intercostal space at midclavicular line.
VS	Level with V4 at left anterior axillary line.
V6	Level with VS at left midaxillaryline (directly under the midpoint of the armp).

Williams County Standing Order

Blood Glucose Check - _Glucometer

First Responders can not perform Blood Glucose Checks

Indications

1. Pts including but not limited to: altered mental status, syncope, cardiac arrest, diabetic pts, cardiac pts, falls, seizures

Administration Technique

1. Use universal precautions/BSI.
2. Prepare the lancet device according to manufacturer's instructions.
3. Remove a new test strip from the vial. Tightly replace the vial cap immediately.
4. Gently insert the test strip into the meter.
5. Check that the code number displayed matches the code number on the vial of test strips that you are using.
6. Once the strip is correctly inserted, a blood drop symbol flashes on the display.
7. Cleanse lateral side of fingertip with alcohol wipe, allow alcohol to dry completely.
8. Pierce prepped site with lancet. Dispose of lancet in an approved Sharps container.
9. Holding glucometer, place test strip next to blood drop, blood will be automatically drawn into strip.
10. If you don't have enough blood on the initial drop a second drop of blood may be applied to the test strip within 15 seconds of the first drop. If more than 15 seconds have passed, the test result may be erroneous and you should discard the test strip and repeat the test.
11. When the sample is applied to the strip, a countdown displays until the measurement is completed.
12. The blood glucose result is displayed. The result is automatically recorded in the meter's memory.
13. Hold pressure on puncture site until bleeding stops, place bandage if needed.
14. Document the blood glucose result in the patient chart.
15. Remove the test strip from the meter and discard
16. When the test strip is removed, the strip symbol flashes indicating the meter is ready to accept another strip. If you are done testing; turn meter off.
17. After obtain the reading, treat as needed under hypo/hyperglycemia standing order.

Note: This method is preferred over a venous blood sample from an IV start.

Williams County Standing Order

Cardioversion (Synchronized)

Indications

1. All tachycardias (rate>150bpm) with serious signs and symptoms related to the tachycardia.
    a. Unstable signs include altered mental status, ongoing chest pain, hypotension, shock.
2. Consider brief trial of medications based on specific arrhythmias.

Contraindications

1. Poison/drug-induced tachycardia.
2. In critical conditions go to immediate unsynchronized shocks.
3. Volume depletion induced tachycardia should be treated with IV fluid boluses

Precautions

1. Urgent cardioversion is generally not needed if heart rate is < 150bpm.
2. Prepare to defibrillate immediately if cardioversion causes VF.
3. Synchronized cardioversion cannot be performed unless the pt is connected to monitor leads: lead select should be on lead II

Administration Technique

1. Place cardiac monitor. Perform 12 lead EKG if time allows.
2. Establish IV and premedicate whenever possible.
    a. Versed 2.5-5mg slow IV/IO/IM Q 5 min PRN
    b. Ativan 1-2mg IV/IO/IM Q 5 min PRN, max total dose 8 mg
3. Have equipment and personnel available for cardiac arrest (oxygen, suction, intubation).
4. Follow device-specific directives to prepare for synchronized cardioversion:
    a. Select Sync On/Off.
    b. Look for sync markers on the R wave.
    c. Adjust energy to appropriate setting:
        -Narrow Regular: 50-100J
        -Narrow Irregular: 120-200J
        -Wide Regular: 100J
        -Wide Irregular: Defibrillation Dose Not Synchronized
        If initial dose fails, increase in stepwise fashion by 50J increments
5. Press Charge.
6. Clear the patient.
7. Press Shock.
8. Reevaluate patient and rhythm.
9. Sync will have to be engaged prior to each cardioversion

Williams County Standing Order

Combitube

Indications

1. Inability to maintain an airway by less invasive measures.
2. Inability to intubate pt who is unable to protect airway.

Contraindications

1. Gag reflex
2. Ingestion of caustic substance
3. A history of esophageal disease
4. < 16 years old

Precautions

1. Exercise extreme caution with pts with facial trauma to prevent cuffs on tube from tearing.
2. Known history of alcoholism

Administration Technique

1. Place patient supine, maintain c-spine precautions if spinal injury suspected.
2. Use basic airway adjuncts to open airway and preoxygenate patient as equipment is prepared.
3. Place head in neutral position.
4. Select appropriate sized combitube:
    a. Combitube (41 fr blue package) is used on pts 5 foot or taller.
    b. Combitube SA (37 fr green package) is used on pts 4-5.5 foot tall.
5. Insert combitube midline through oropharynx using a tongue-jaw-lift maneuver. Advance until the black rings on the tube are between the patient's teeth.
6. Inflate the pharyngeal cuff (blue) with 100mL of air and the distal cuff with 10-15mL of air.
7. Ventilate through the proximal (blue) port with a bag-valve mask connected to 100% oxygen while auscultating over the chest and stomach. If you hear bilateral breaths sounds over chest and no sounds over the stomach, secure the tube and continue ventilations.
8. If you hear gastric sounds and no breath sounds over chest, change ports and ventilate through clear connector.
9. Confirm proper placement with chest rise, bilateral breath sounds, absent sounds over epigastrium and continuous waveform capnography.
10. Secure tube (if not already secured) and continue ventilations with 100% oxygen.
11. Frequently reassess airway and adequacy of ventilation.

Williams County Standing Order

CPAP

*****Advanced/Paramedic Skill Only*****

Indications

1. Shortness of breath for reasons other than pneumothorax AND:
2. Evidence of severe respiratory distress (accessory muscles, tachypnea)
3. Awake with open airway
4. Systolic blood pressure above 100 mmHg
5. Signs and symptoms consistent with asthma, COPD, pulmonary edema or pneumonia

Contraindications

1. Pneumothorax
2. Unresponsive
3. Respiratory arrest
4. Uncontrolled vomiting
5. < 12 years old

Administration Technique

1. Connect the flow generator to a 50 PSI source (either a "D" tank or wall unit on ambulance)
2. Install a filter on the air entrance port
3. Assemble CPAP circuit and mask
    a. Connect tubing to the flow generator outlet
    b. Connect mask to tubing
    c. Insert the CPAP Peep valve into the mask, start with:
        -10 cm H2O for CHF/Pneumonia
        -5 cm H2O for Asthma/COPD
        -Titrate from 5-15 cm H2O based on pt response
    d. If breathing treatment is required connect blue "t" adaptor between mask and PEEP valve.
4. Turn O2 on and apply mask to pt face.
5. Apply straps to mask.

Williams County Standing Order

Defibrillation Single Shock Sequence

Indications

1. First intervention for VF or pulseless VT

Contraindications

1. Do not shock asystole/ PEA

Precautions

1. Do not delay defibrillation for VF/VT if witnessed arrest and defibrillator is available.
2. Always "clear" the pt. before discharging a defibrillation shock
3. If unwitnessed cardiac arrest provide 5 cycles of CPR prior to defibrillation.
4. Treat VF/VT in hypothermic cardiac arrest with an initial defibrillation shock. Repeat shocks for VF/VT only after core temperature rises above 30 degree Celsius. (86.0 F)
5. If pt. in VF/VT has an automatic implantable cardioverter defibrillator (AICD), perform external defibrillation per BLS section.
6. If pt. has implanted device (e.g. pacer, AICD), place paddles and pads least 1 in. (2.5cm) from the device. If AICD is delivering shocks, wait 30 to 60 sec. for completion of cycle.
7. When using AED pads, do not use child pads or child attenuator system for adult defibrillation.
8. Use adult pads and dose when child is 8 yrs. of age and older, over 25kg (55 pounds), or over 50 in. in length.
9. Use of adult pads for children/infants is permitted in the anterior/posterior position if pediatric pads are unavailable

Administration Technique

1. Manual Biphasic Defibrillator:
   a. 120J for first shock (Zoll Monitors); 150J for first shock (Philips Monitors)
   b. Use maximum energy setting for all subsequent shocks (device appropriate)
2. Following Single Shock:
   a. Resume CPR, beginning with chest compressions, for 5 cycles or about 2 min., then reanalyze rhythm, deliver shock as indicated, resume CPR immediately after each shock
3. Follow Cardiac Arrest Standing Order
   a. Refer to appropriate adult/pediatric Standing Order

Williams County Standing Order

EZ – IO

*****Advanced/Paramedic Skill Only*****

Indications

1. Intravenous fluids or medications are needed and a peripheral IV cannot be established

2. May be considered after 2 peripheral IV attempts in the following situations:
    a. Cardiac arrest (medical or traumatic)
    b. Profound hypovolemia with alteration of mental status
    c. Patient in extremis with immediate need for delivery of mediations and/or fluids
    d. An Altered mental status (GCS of 8 or less)
    e. Respiratory compromise (SAO2 80% after appropriate oxygen therapy, respiratory rate < 10 or > 40 min)
    f. Hemodynamic instability (Systolic BP of < 90).

Contraindications

1. Fracture of the bone selected for IO infusion (consider alternate site)
2. Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternate site)
3. Previous significant orthopedic procedures (IO within 24 hours, prosthesis-consider alternate tibia)
4. Infection at the site selected for insertion (consider alternate site)

Precautions

1. The EZ-IO AD & EZ-IO PD are not intended for prophylactic use.

Considerations

1. Flow rate
    a. Due to the anatomy of the IO space you will note flow rates to be slower than those achieved with IV catheters.
2. Ensure the administration of an appropriate rapid syringe bolus (flush) prior to infusion NO FLUSH NO FLOW
    a. Rapid syringe bolus (flush) the EZ-IO AD with 10 ml of normal saline
    b. Rapid syringe bolus (flush) the EZ-IO PD with 5 ml of normal saline
    c. Repeat syringe bolus (flush) as needed
    d. To improve continuous infusion flow rates always use a syringe, pressure bag or infusion pump
3. Pain
    a. Insertion of the EZ-IO & EZ-IO PD in conscious patients has been noted to cause mild to moderate discomfort (usually no more painful than a large bore IV). However, IO Infusion for conscious patients has been noted to cause severe discomfort.
    b. Prior to IO syringe bolus (flush) or continuous infusion in alert patients, SLOWLY administer Lidocaine 2% (Preservative Free) through the EZ-IO hub.
        EZ-IO AD Slowly administer 20-40 mg Lidocaine 2% (Preservative Free)
        EZ-IO PD Slowly administer 0.5mg/kg Lidocaine 2% (Preservative Free)

Procedure

1. If the patient is conscious, advise of emergent need for this procedure and obtain informed consent
2. Wear approved Body Substance Isolation Equipment (BSI)
3. Determine EZ-IO AD or EZ-IO PD Indications

Williams County Standing Order

4. Rule out Contraindications
5. Locate appropriate insertion site
6. Prepare insertion site using aseptic technique
7. Prepare the EZ-IO driver and appropriate needle set
8. Stabilize site and insert appropriate needle set
9. Remove EZ-IO driver from needle set while stabilizing catheter hub
10. Remove stylet from catheter, place stylet in shuttle or approved sharps container
11. Connect primed EZ Connector and confirm placement with normal saline bolus if unresponsive
12. Slowly administer appropriate dose of Lidocaine 2% IO to conscious patients prior to fluid bolus
13. Utilize pressure (pressure bag or infusion pump) for continuous infusions where applicable
14. Begin infusion
15. Dress site, secure tubing
16. Monitor EZ-IO site and patient condition.

Williams County Standing Order

Intubation

*****Intubation is a paramedic skill only*****

1. Place patient supine
    a. Maintain c-spine precautions if spinal injury suspected
    b. Loosening the collar is appropriate if necessary to facilitate intubation
2. Use basic airway adjuncts to open airway and preoxygenate patient as equipment is prepared.
3. Keep suction nearby to use as needed.
4. Position patient's head and neck in "sniffing position" if no spinal injury is suspected.
5. Remove any dentures or partial dental plates if necessary to facilitate intubation
6. Insert laryngoscope into right side of mouth, sweep tongue to left.
7. Directly visualizing the vocal cords pass the ETT tube through the glottic opening until distal cuff passes the vocal cords, and then advances it another 1-2 cm.
8. Inflate distal cuff with 5-10mL of air and remove syringe.
9. Holding tube in place, ventilate patient with bag-valve mask attached to 100% O_2
10. Confirm proper placement by looking for chest rise, no sounds over the epigastrium, equal bilateral lung sounds, and continuous waveform capnography.
11. Secure ETT with appropriate size commercial device while maintaining ventilatory support.
12. Repeat step 10 periodically to confirm proper tube placement.
13. Consider limiting intubation attempts to two per medic if multiple paramedics are on scene
14. If unable to pass tube after multiple attempts consider alternative airway device

Whenever the distal cuff on the ET tube is inserted beyond the patient's teeth, this counts as an intubation attempt for patient care reporting

Williams County Standing Order

Intubation (Medication Assisted)

*****Medication Assisted Intubation is a paramedic skill only*****

*****It is recommended that at least 2 paramedics be involved in patient care when performing a medication assisted intubation*****

Pretreatment

1. Assemble necessary equipment, including suction
2. IV access is required for medication assisted intubation, two large-bore IV's preferred
3. Place pt on cardiac monitor
4. Preoxygenate with bag-valve mask, oropharyngeal/nasalpharyngeal airway and 100% oxygen

Medication Administration

1. Etomidate: 20-40mg IV/IO
2. Versed: 2.5-10mg IV/IO Q 5 min PRN (titrate to desired effect)
    a. Consider 2.5-5mg dose with BP< 100 systolic
3. Fentanyl: 25-100mcg IV/IO Q 10 min PRN, max cumulative dose 300 mcg
    a. Consider 25-50mcg dose with BP< 100 systolic

Intubation

1. Insert endotracheal tube at the onset of apnea and jaw relaxation
2. If unable to pass tube within 30 seconds, stop and ventilate patient with BVM and 100% oxygen to maintain O2 saturation > 90%
3. Consider limiting intubation attempts to two per medic if multiple paramedics are on scene
4. If unable to pass tube after multiple attempts consider alternative airway device
5. Confirm proper placement of tube by observing chest rise, bilateral lung sounds, no sounds over epigastrium and continuous waveform capnography monitoring
6. Secure tube with commercial device

Post-intubation

1. Continued sedation:
    a. Versed 2.5-10mg IV/IO Q 5-10 min PRN (titrate to desired effect)
    b. Fentanyl 25-100mcg IV/IO Q 5-10 min PRN, max cumulative dose 300 mcg
2. Vitals reassessed Q 5-10 min
3. Monitor capnography closely to maintain CO2 level 35-45

Whenever the distal cuff on the ET tube is inserted beyond the patient's teeth, this counts as an intubation attempt for patient care reporting

Williams County Standing Order

IV/External Jugular IV Access

IV initiation is an Advanced and Paramedic skill only

1. Determine the need for IV or saline lock initiation
2. Establishing IV access should never delay transport in the critically ill pt and should be obtained on the scene only if immediately necessary.
3. Assemble supplies and explain procedure to patient.
4. Select venipuncture site and place constricting band proximal to site.
5. Cleanse the site with betadine or alcohol.
6. Insert catheter till blood return is noted.
7. Lower and advance the entire catheter and needle unit slightly to ensure the catheter tip is within the vessel.
8. Place pad of index finger behind the push-tab and push the catheter off the needle into the vessel while occluding vein proximal IV.
9. Discard the needle into a puncture-resistant, leak-proof sharps container.
10. Remove constricting band.
11. Attach IV extension tubing with Saline flush or Normal Saline bag.
12. Flush the IV.
13. Check for signs of infiltration.
14. Apply a transparent dressing, allowing maximum use of extension tubing.
15. Secure with tape.
16. Monitor IV site for infiltration.

External Jugular IV Access is a Paramedic skill only

1. External jugular IV access should be attempted only after repeat failed attempts at other peripheral IV sites.
2. Assemble supplies.
3. Position patient supine or with lower extremities elevated.
4. If there is no possibility of c-spine injury, turn the patient's head to the side opposite of access.
5. Cleanse site with alcohol wipes or betadine.
6. Place a finger on the external jugular just above the clavicle to occlude venous return.
7. Insert catheter midway between the jaw and clavicle angling towards the torso at a 10-30 degree angle watching for flash.
8. Continue to occlude jugular vein until saline-filled lock or flushed IV tubing is attached.
9. Flush IV to assure patency.
10. Adjust fluid rate if indicated.
11. Monitor IV site for infiltration.

Williams County Standing Order

Spinal Immobilization

All patients that have a positive mechanism of injury must have immediate spinal stabilization taken until the potential for spinal injuries can be ruled out through the spinal exam performed by the transporting unit.

Basic

1. Maintain manual c-spine until need for spinal immobilization can be determined.
2. After a traumatic injury occurs, full immobilization with c-collar, head blocks and long-spine is required if:
    a. Patient or mechanism of injury is high risk.* (see below).
    b. Patient is complaining of any neck or back pain
    c. New onset neurological deficits such as numbness, tingling, weakness found
    d. Drug or alcohol intoxication prevents or complicates assessment
    e. Any type of altered mental status including but not limited to dementia, Alzheimer's disease, head injuries, loss of consciousness, agitation, and amnesia.
    f. Multiple distracting injuries are present such as extremity fractures and/or lacerations
    g. Provider discretion.
3. Infants may be immobilized in car seat with towel rolls if no damage to car seat is present and pt care is not compromised. Patient should be removed for assessment if significant MOI is present.
4. Pediatric board should be used for all appropriately sized pediatric patients.
5. If patient is >20 weeks pregnant, elevate right side of long spine board to minimize pressure on inferior vena cava.
6. Assess pulse, motor and sensory function before and after immobilization.
7. Patient with conditions preventing immobilization on long spine board (such as kyphosis) should be immobilized by whatever means available and appropriate.
8. Spinal immobilization may be deferred if patient has no positive finding to above criteria and spinal examination is negative for injury. Spinal examination should include:
    a. Palpation of the entire spine
    b. Cervical rotation to the left and right by the pt
    c. Full flexion by the pt (chin to chest)
    d. If pain is present with any of the above assessments, c-collar should be placed and immobilization completed as patient allows
9. Thoroughly document situation in which patient has positive findings but refuses immobilization.

Advanced

1. Follow basic procedure.

Paramedic

1. Follow basic procedure.

*High risk mechanisms include: Fall > 1 meter/5 steps. High speed MVA and/or roll over MVA. Ejection from motor vehicle or motorcycle/bike. All axial load injury to the spine such as diving accidents. Any penetrating injury to the neck such as gunshot wounds.

Williams County Standing Order

Surgical Cricothyrotomy

*****Paramedic Skill Only*****

Indications

1. Inability to secure a patent airway with less invasive measures.

Contraindications

1. Ability to secure airway with less invasive measures.
2. Under 8 years of age.

Administration Technique

1. Arrange equipment necessary to complete task
2. Expose neck, hyperextend if no cervical spine injury suspected
3. Locate the cricothyroid membrane. (Palpate the trachea locating the thyroid cartilage (Adams's apple). Immediately inferior to that palpate a notch between the thyroid cartilage and cricoid cartilage. This is the cricoid membrane.
4. Cleanse the area with alcohol or betadine if time permits
5. Stabilize cartilages with one hand, use scalpel in other hand to make a 1-2cm vertical skin incision over the membrane
6. Make a 1cm horizontal incision through cricothyroid membrane
7. Insert magill forceps into incision and/or insert hemostats to spread opening to allow for insertion of endotracheal tube
8. Insert a cuffed 6.0 or 6.5 endotracheal tube directing the tube downward into the trachea
9. Inflate cuff and ventilate patient
10. Confirm placement with continuous waveform capnography, 5 point auscultation, and chest rise
11. Secure tube.
12. Observe patient for signs of subcutaneous emphysema, severe hemorrhage, and poor oxygenation

Williams County Standing Order

Taser Removal

Basic

1. The patient should be in control/custody of Law Enforcement
2. Consider use of soft restraints as needed.
3. Consider possibility of c-spine injury, stabilize as needed
4. Support ABC's
5. Conduct thorough head-to-toe assessment, treating injuries and/or medical conditions under appropriate standing order
6. Consider possibility that combative/violent behavior could be the result of an underlying medical condition or alcohol/drug
7. Consider whether taser probes are to be left in or removed
8. Taser probes may be removed unless lodged in head, neck, nipple area, breast tissue on female, groin, spinal column, joint or bone. If unsure if it appropriate to remove, transport patient with probe in place. Do not remove probe from violent or potentially violent patient.
9. If determination is made to remove taser probe, check with law enforcement personnel is probes will be needed for evidence.
10. If needed for evidence, remove probes with wires attached. If not needed, cut wires prior to removal.
11. If probes are left in place, stabilize with bulky dressing
12. Taser probe removal:
    a) Ensure taser cartridge has been removed from taser device
    b) Remove clothing/expose area where probe is lodged in skin
    c) Hold skin tight with thumb and forefinger on opposite sides of insertion site
    d) Grasp probe as close to skin as possible with gloved hand
    e) Remove probe by pulling out with steady, swift motion
    f) Inspect probe to see if intact, transport patient and notify hospital if it appears broken
    g) Dispose of probe in sharps container
13. If probe is removed while still attached to the wires:
    a) Remove cartridge from Taser device
    b) Remove probe and place into the disposal slot (pointed end in first) on the cartridge
    c) Secure in place with tape
    d) Turn cartridge over to law enforcement for evidence
14. Clean area with alcohol prep pad and bandage
15. Repeat procedure for additional probes if needed

Advanced

1. Consider the need for IV
2. Consider cardiac monitor

Paramedic

1. Consider sedation for combative patient
2. Treat underlying medical conditions under appropriate standing order

Williams County Standing Order

Thoracic Needle Decompression

*******Thoracic Needle Decompression is a paramedic skill only*******

Indications

1. Pt with life threatening tension pneumothorax with associated signs and symptoms due to increase in intrathorax pressure. Common signs and symptoms include restlessness and agitation, severe respiratory distress, increased airway resistance on ventilating pt, abdominal rigidity, tracheal deviation, subcutaneous emphysema, unequal breath sounds, hypotension, cyanosis, respiratory arrest.

Precautions

1. Leave all needle decompression catheters in place even if unsuccessful in relieving symptoms.
2. If needle becomes dislodged do not replace unless clinically required.

Paramedic

1. Prepare the following:
    a. 14 or 16 gauge needle catheter
    b. alcohol prep or betadine
2. Determine appropriate site
    a. 2nd or 3rd intercostals space, midclavicular line
    b. 4th or 5th intercostals space, midaxillary line
3. Position patient upright if potential for c-spine injury has been ruled out
4. Prep area with alcohol prep or betadine
5. Insert catheter into skin and direct needle just superior to rib in intercostals space
6. Puncture parietal pleura
7. Aspirate air as needed to confirm correct placement
8. Remove needle, leaving catheter in place
9. Consider placement of flutter valve (may be omitted if patient intubated)
10. Reassess breath sounds and patient condition (should improve almost immediately). If patient does not improve, consider second attempt at alternate site. Do not remove catheter even if not successful
11. Secure catheter with tape
12. If significant blood returns, consider removing the catheter and applying pressure to the site
13. Intubation is strongly recommended on any patient needle decompression is performed

Williams County Standing Order

Transcutaneous Pacing

*****Transcutaneous Pacing is a paramedic skill only*****

Indications

1. Hemodynamically unstable or symptomatic bradycardia (e.g. blood pressure changes, altered mental status, angina, pulmonary edema).
2. Bradycardia with symptomatic ventricular escape rhythms
3. Pacing readiness (pacer pads on pt) in setting of ACS, as follows:
    a. Type II second degree heart block
    b. Third degree heart block
    c. New bundle branch block
    d. Symptomatic sinus node dysfunction

Contraindications

1. Severe hypothermia
2. Prolonged bradyasystolic cardiac arrest

Precautions

1. Electrical stimulation causes muscular jerking that may mimic carotid pulse. Confirm valid pulses with femoral and/or peripheral pulses
2. Conscious pts may require analgesia for discomfort.

Administration Technique

1. Consider sedation prior to pacing (do not delay pacing):
    Adult (Ativan preferred):
        a. Ativan: 1-2mg slow IV/IO/IM Q 5 min PRN, max total dose 8mg
        b. Versed: 2.5-5mg slow IV/IO/IM, Q 5 min PRN
    Peds (Ativan preferred):
        a. Ativan: 0.5-1mg slow IV/IO/IM q 5 min PRN, max total dose 4mg
        b. Versed: 0.1mg/kg IV/IO/IM q 5 min PRN, max single dose 2.5mg
2. Place pacing electrodes on chest per package instructions
3. Turn the pacer on
4. Set demand rate to approximately 80bpm
5. Set current (mA) output as follows for bradycardia: increase (mA) from minimum setting until consistent capture is achieved (characterized by a widening QRS and a broad T wave after each pacer spike). Then add 5-10 mA for safety margin.