

Washington County Emergency Medical Services



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Washington County EMS
Adult - Cardiac

AC01	12 – Lead
AC02	Acute Coronary Syndrome / Chest Pain
AC03	Asystole PEA
AC04	Bradycardia
AC05	Congestive Heart Failure (CHF)
AC06	General Care for Sudden Cardiac Arrest
AC07	PSVT
AC08	Shock
AC09	V-Fib / Pulseless V-Tach
AC10	V-Tach w/ Pulse
AC11	Ventricular Ectopy PVC's
AC12	Induced Hypothermia
AC13	A Fib / A Flutter RVR

Washington County EMS
Adult - Medical

AM01	Alcohol Emergency
AM02	Allergic Reaction / Anaphylaxis
AM03	Asthma
AM04	COPD
AM05	CVA/Stroke
AM06	Dehydration
AM07	Diabetic Emergency
AM08	Heat Related Emergencies
AM09	Hypertension (HTN)
AM10	Nausea / Vomiting / Motion Sickness
AM11	Pain Management
AM12	Psychiatric Emergency
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AM14	Toxicological Emergencies / Poisoning / Overdose
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Washington County EMS
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AT01	Basic Trauma List Support (BTLS)
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AT04	Drowning / Near Drowning
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Washington County EMS
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Form 10	Diphenhydramine
Form 11	Dopamine
Form 12	Epinephrine
Form 13	Etomidate
Form 14	Fentanyl Citrate
Form 15	Furosemide
Form 16	Ipratropium Bromide
Form 17	Ketamine Hydrochloride
Form 18	Labetalol
Form 19	Lidocaine
Form 20	Magnesium Sulfate
Form 21	Midazolam Hydrochloride
Form 22	Morphine Sulfate
Form 23	Naloxone
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Form 26	Ondansetron
Form 27	Oral Glucose
Form 28	Oxygen
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Form 31	Sodium Bicarbonate
Form 32	Succinylcholine Chloride
Form 33	Thiamine
Form 34	TNKase
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Washington County EMS
General Protocols

GP01	Air Medical Rescue
GP02	Blood Draw
GP03	Blind Nasal Tracheal Intubation
GP04	Bypass Protocol
GP05	Chest Decompression
GP06	Supraglottic Airway Device(s)
GP07	Dead on Scene / Do Not Resuscitate
GP08	ETCO2
GP09	External Jugular Access
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GP11	Glucometer
GP12	I.O. and EZ I.O.
GP14	Adult Medication List
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GP17	Patient Status
GP18	Resource Allocation
GP19	Rapid Sequence Intubation
GP20	Transport Ventilator
GP21	CPAP
GP22	RAD 57 Pulse CO-Oximeter
GP23	Taser Removal / Treatment
GP24	ET Inducer Device (Bougie)
GP25	ResQPod (Impedence Threshold Device)
GP26	Treat and Release
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GP28	Cricothyrotomy
GP29	Spinal Motion Restriction
GP30	Full Body Vacuum Splint
GP31	FAST Exam
GP32	ISTAT
GP33	ResQPUMP System
GP34	Blood Product Administration
GP35	COVID-19

Washington County EMS
Standard Operating Procedures – SOP's

SOP 1	Aeromedical Policies
SOP 2	Accidents
SOP 3	Ambulance Run Report
SOP 4	Back-up United and Third Person
SOP 5	Camera Phones
SOP 6	Chain of Command
SOP 7	Confidentiality / Release of Patient Information
SOP 8	Complaints with Hospital Personnel
SOP 9	Consent to Treatment and Transport
SOP 10	Crew Quarters Care and Up-Keep
SOP 11	Crime Scene
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SOP 13	Dispatching and Communication Issues
SOP 14	Driver / Attendant Responsibilities
SOP 15	Eating Out
SOP 16	Education Pay
SOP 17	Emergency Transfer Policy
SOP 18	Employment
SOP 19	Employee Immunizations
SOP 20	EMS Chaplain
SOP 21	EMS Teddy Bears
SOP 22	EMS Explorers
SOP 23	Equipment Left at Hospitals
SOP 24	Fire Responses
SOP 25	Forced Entry
SOP 26	Handling of Valuables
SOP 27	HAZMAT Scenes of Bio-Terrorism
SOP 28	Hospital Procedures
SOP 29	Incident Reports
SOP 30	Infection Control & Blood Borne Pathogens
SOP 31	Inventory Control Part A, B and C
SOP 32	Jail Responses
SOP 33	Media Relations
SOP 34	Medical Staff Delegation
SOP 35	Off-Duty Personnel
SOP 36	On Scene Roles

SOP 37	Patient's Family Members as Riders
SOP 38	Patient Restraint
SOP 39	Private or On Scene Physician
SOP 40	Protective Clothing
SOP 41	Radio License
SOP 42	Radio / Telephone Communications
SOP 43	Refusal of Treatment and Transport
SOP 44	Self Protection
SOP 45	Sexual Assault
SOP 46	Special Patients
SOP 47	Telephone Answering Policy
SOP 48	Third Out Riders Rules and Regulations
SOP 49	Third Out Riders in EMS Units
SOP 50	Third Out Riders Release
SOP 51	Transporting Violent Patients
SOP 52	Vehicle Breakdown
SOP 53	Vehicle Maintenance
SOP 54	Vehicle Operations
SOP 55	Washington County First Responders
SOP 56	Washington County EMS NEOP Uniform
SOP 57	Washington County EMS Computer Use
SOP 58	Washington County EMS "Safe Baby Moses Site"
SOP 59	Washington County EMS "Petty Cash"
SOP 60	BISD Medically Fragile Patient Policy
SOP 61	Authorization to Practice
SOP 62	Quality Process Improvement Plan
SOP 63	School Related Transportation Incidents
SOP 64	Response to Mass Patient Incidents
SOP 65	No Patient Found
SOP 66	In Car Video and Audio (ICVA) Policy
SOP 67	Fatigue Mitigation Plan

Washington County EMS
Special Patients

SP01	Immunization Program
SP02	Obstetrics Emergency
SP03	Pediatric ACLS
SP04	Pediatric Medication Dosages – Handtevy Guide
SP04.1	Newborn
SP04.2	4 Month Old
SP04.3	6 Month Old
SP04.4	1 Year Old
SP04.5	2 Year Old
SP04.6	3 Year Old
SP04.7	4 Year Old
SP04.8	5 Year Old
SP04.9	6 Year Old
SP04.10	7 Year Old
SP04.11	8 Year Old
SP04.12	9 Year Old
SP04.13	10 Year Old
SP04.14	11 Year Old
SP04.15	12 Year Old
SP04.16	13 Year Old
SP05	Rescue Paramedic Operations
SP06	Special Trauma Considerations in Pediatrics
SP07	Special Trauma Considerations in Pregnant Patients
SP08	Brenham ISD Medically Fragile Patients

Washington County EMS

Protocol / SOP / SCM Changes

<i>Policy / Protocol</i>	<i>Comments / Notes / Changes</i>	<i>Date</i>
GP 28	New Addition - Cricothyrotomy	5/10/2011
GP 16	Added Intranasal Administration	7/1/2011
AM 09	Removed Catapres, Added Labetalol	7/1/2011
AM 05	Changed Dosage of Labetalol	7/1/2011
TDH Checklist	Updated Dosage of Labetalol, added Nitro Drip and Thrombolytics	7/1/2011
AC 02	Added Nitro Drip and Thrombolytics	7/1/2011
AC 05	Added Nitro Drip	7/1/2011
AC 06	Added "Pit Crew", Rescue Airway Device and Lucas Device	7/1/2011
AM 11	Added Intranasal Route and Changed Dosing	7/1/2011
AM 13	Added Intranasal Route	7/1/2011
AM 14	Added Intranasal Route	7/1/2011
AT 02	Changed Dosing for Large Burns and Added Midazolam	7/1/2011
SOP 56	Changed to New Hire Policy	7/1/2011
GP 06	Changed to Supraglottic Airway Device and Added King Airway	7/1/2011
Protocols, SOP & SCM	Deleted all dates before 01/31/2011	8/1/2011
Table of Contents	Deleted all dates, added Clopidogrel, TNKase, O2, Rocuronium	8/1/2011
	and Nitro Drip to Formulary	
Multiple Page Protocol	Delete header except for 1st page of Protocol	8/1/2011
GP 14	Add Clopidogrel, TNKase, Rocuronium & Nitro Drip	8/1/2011
	Remove Clonidine	
Formulary	Add Oxygen, Clopidogrel, Nitro Drip, TNKase and Rocuronium	8/1/2011
	Removed Clonidine	
GP 04	Added Facility Capability Sheet	8/1/2011
SP 01	Update Current Recommendations	8/1/2011
AC 03	Removed Atropine	8/1/2011
GP 02	Changed Red Blood Tubes to Yellow	8/1/2011
AM 05	Insert the New Brazos Valley RAC Criteria	8/1/2011
AM 06	Added Promethazine	8/1/2011
AM 10	Added Promethazine	8/1/2011
AM 11	Added Promethazine	8/1/2011
AC 02	Added Promethazine	8/1/2011

GP 14	Added Promethazine	8/1/2011
SP 04	Added Promethazine	8/1/2011
SP 05	Updated K-9 Protocols	8/1/2011
Formulary	Added Promethazine	8/1/2011
Form 15	Deleted Protocols, Indications and Dosages where Lidocaine was	9/5/2012
AC 11	Removed Lidocaine	9/5/2012
SP 04	Removed Lidocaine	9/5/2012
GP 14	Removed Lidocaine	9/5/2012
AT 09	Added Tourniquet	9/5/2012
AC 09	Removed Lidocaine	9/5/2012
AC 06	Removed Lidocaine	9/5/2012
SP 03	Removed Lidocaine	9/5/2012
Form 10	Added Multi-dose Vial	9/5/2012
SP 05	Changed name of K-9 Dog and added weight based medications	9/5/2012
Form 12	Changed dose of Fentanyl for pain	9/5/2012
AT 13	Changed speed of MVC from >65 to >40 MPH	9/5/2012
GP 02	Removed 2 grey top blood tubes	9/5/2012
SOP 1	Updated	9/5/2012
SCM 4	Updated NEOP Process	9/5/2012
SOP 61	Removed pain management from the list that a P1 cannot perform	9/5/2012
SCM 18	Added Professional Stipend Incentive Policy	9/5/2012
SOP 62	Revised current process	10/12/2012
SOP 63	Added School Related Transportation Incident	11/12/2012
SOP 64	Added Response to Multiple Patient Incidents	7/1/2013
GP 04	Updated Facilities Capabilities to include S&W-College Station	8/25/2013
AM 15	Added Shock Protocol	11/1/2013
AM 03	Addition of Mag Sulfate	11/1/2013
GP 04	Updated	11/1/2013
Formulary	Added Packed Red Blood Cells	11/1/2013
Form 18	Updated	11/1/2013
GP 16	Updated	11/1/2013
SOP 38	Updated	11/1/2013
AM 05	Updated	11/1/2013
SCM 6	Updated	11/1/2013
SCM 19	Addition to manual - Training and Conference Pay	3/1/2014
SCM 20	Addition to manual - Video Recording for Clinical improvement	3/1/2014

SOP 65	Added No Patient Found Policy	3/1/2014
Form 28	Update for Rocuronium	6/18/2014
SOP 40	Addition of Body Armor Section	9/25/2014
SOP 04	Addition of Handtevy Pediatric Medication Guide	10/1/2014
SOP 04.1-16	Addition of Handtevy Medication Dosing per Age	10/1/2014
SOP 66	Addition of In Car Video and Audio (ICVA) Policy	2/24/2015
Form 7	Correction on Clopidogrel admin. Should be PO not IVP	2/24/2015
AC 06	Addition of Code 1 / 3 transports w/ Non-ROSC / ROSC Pts	8/13/2015
SOP 29	Addition of SOP 29 Spinal Motion Restriction	10/12/2015
SOP 30	Addition of SOP 30 Full Body Vacuum Splint	10/12/2015
AT 13	Changes to AT 13 Trauma Protocol / C-Spine Clearance	10/12/2015
SOP 10	Changes to SOP 10 Crew Quarters Care and Up-Keep	10/12/2015
SP 05	Removed medications from Protocol	12/29/2015
Formulary	Delete Diazepam	4/12/2016
Formulary	Addition of Ketamine Hydrochloride	4/12/2016
Formulary	Re-number meds for addition Ketamine & deletion of Diazepam	4/12/2016
AM 13	Delete Diazepam	4/12/2016
AT 03	Delete Diazepam	4/12/2016
AT 09	Delete Diazepam	4/12/2016
GP 19	Delete Diazepam	4/12/2016
AC 04	Addition of Ketamine Hydrochloride	4/12/2016
AC 07	Addition of Ketamine Hydrochloride	4/12/2016
AC 10	Addition of Ketamine Hydrochloride	4/12/2016
AM 11	Addition of Ketamine Hydrochloride	4/12/2016
GP 16	Addition of Ketamine Hydrochloride	4/12/2016
GP 19	Addition of Ketamine Hydrochloride	4/12/2016
SOP 30	Updates to Protocol	4/12/2016
SOP 43	Update Refusal or Treatment and Transport	5/24/2016
GP 32	ISTAT Protocol	8/25/2016
AC 02	Update Appendix E	12/20/2016
AM05	Update Stroke documents from the BVRAC	12/20/2016
GP 04	Update Destination Facility Diagram and Update Appendix B	12/20/2016
GP 18	Update for SRT Position	12/20/2016
SOP 13	Update Dispatching and Communications Issues and Add Standard SAR Dispatch Guidelines	12/20/2016
SOP 17	Update Hospital name information	12/20/2016
SOP 20	Update Chaplain information	12/20/2016
SOP 32	Update Washington County Jail phone contacts	12/20/2016

SOP 41	Update Radio License	12/20/2016
SOP 61	Update Authorization to Practice (P3)	12/20/2016
SP 05	Update Special Operations – deleting K9 Policy as it is in the Special Operations Manual	12/20/2016
Formulary 15 Ketamine	Added Must have a P3 present for administration of Ketamine. Also added use caution with asthma patients as there may be a hypersensitivity upon administration.	12/20/2016
AC 04	Added Must have a P3 present for administration of Ketamine.	12/20/2016
AC 07	Added Must have a P3 present for administration of Ketamine.	12/20/2016
AC 10	Added Must have a P3 present for administration of Ketamine.	12/20/2016
AM 11	Added Must have a P3 present for administration of Ketamine.	12/20/2016
GP 16	Added Must have a P3 present for administration of Ketamine.	12/20/2016
GP 19	Added Must have a P3 present for administration of Ketamine.	12/20/2016
GP 20	Addition of Impact EMV+ Ventilator	02/20/2017
Form 13 Fentanyl	Addition to GP 20	02/20/2017
Form 15 Ketamine	Changes in Doses and addition of GP 20	02/20/2017
Form 19 Midazolam	Addition of GP 20	02/20/2017
AC 04	Change Dosage of Ketamine	02/20/2017
AC 07	Change Dosage of Ketamine	02/20/2017
AC 10	Change Dosage of Ketamine	02/20/2017
AM 11	Change Ketamine administration to after Morphine administration	02/20/2017
GP 19	Changed description of medications prior to Paralyzation to advise if Etomidate is contraindicated	02/20/2017
AC 07	Change to modified vagal maneuver	02/27/2017
AM 15	Changes to Sepsis Protocol for Sepsis Alert Activation	02/27/2017
GP 05	Addition of choice of location for chest decompression	02/27/2017
SOP 61	Changes to Authorization to Practice	03/08/2017
AC 12	Removed P3 Information	03/08/2017
GP 02	Change in Procedure #3.	05/08/2017
AC 09	Addition of Dual Defibrillation	11/01/2017
AM 16	Addition of Mental Health Guidelines	02/21/2018
AC 03	Asystole / PEA adding the Rescue CPR System	03/28/2018
AC 06	General Care for Sudden Cardiac Arrest adding the Rescue CPR System	03/28/2018
AC 09	V-Fib / Pulseless V-Tach adding the Rescue CPR System	03/28/2018

GP 33	Addition of ResQPUMP System	03/28/2018
AC 13	Addition of A Fib / A Flutter RVR	10/01/2018
Form 8	Addition of Diltiazem and realigning other established Formularies in Alphabetical Order	10/01/2018
Form 34	Addition of Tranexamic Acid	10/01/2018
GP 34	Addition of Blood Product Administration for TXA	10/01/2018
GP 34	Addendum for blood product unavailability	10/31/2018
AM 03	Addition of DuoNeb into the Asthma Protocol	12/04/2018
AM 04	Addition of DuoNeb into the CHF Protocol	12/04/2018
Form 16	Addition of DuoNeb for Form 16, all others Formularies after are renumbered to accommodate the addition	12/04/2018
Introduction	Correction to the Introduction, adding College Station to the 4 th Paragraph.	03/06/2019
GP04	Correction to the GP04, adding College Station to the 1 st Paragraph	03/06/2019
Form 8	Added D10%, 250ml Solution	11/07/2019
AM 01	Added D10%, 250ml Solution	11/07/2019
AM 07	Added D10%, 250ml Solution	11/07/2019
GP 35	Addition of COVID-19 Protocol	03/25/2020
SOP 32	Change Dr. Yoffe back to the protocol for Jail Responses	04/08/2020
Introduction	Added "Rescue Clinician" paragraph to Standard of Care	04/14/2020
SP 05	Renamed from "Special Operations" to "Rescue Paramedic Operations"	04/14/2020
SP 05	Updated description and added more considerations for austere environment	04/14/2020
Formulary	Re-number meds for addition of Ipratropium Bromide	04/14/2020
SOP 67	Added Fatigue Mitigation Plan	09/03/2020
AC 02	Updated BVRAC STEMI Appendix	11/21/2020
AM 05	Updated BVRAC Stroke Appendix	11/21/2020

Washington County EMS
Appendix

Accident Form

Incident Form

“Baby Moses” Safe Baby Site Program Form

Employee Warning Form

Washington County EMS	Standard of Care Statement
Clinical Practice - Standing Protocols	Introduction

This policy manual is an overview and summary of Washington County EMS policies and procedures that are currently in effect. As policies and procedures for the Department are revised, changes should be communicated to employees through standard communication channels.

It is difficult to cover all situations that may arise and challenge operations personnel in their efforts to provide timely, compassionate and quality patient care to residents and visitors of Washington County. Therefore, the policies and procedures contained in this manual constitute guidelines only. Any significant clinical issues should be considered on a case-by-case basis and should take into consideration any and all extenuating circumstances surrounding the event.

In the interest of patient care should any deviation of SOC be performed, employees shall complete a QI Form and forward it to the on duty EMS Lieutenant for review with the Captain, Director, and Medical Director. **The Medical Directors for Washington County EMS have the final authority for all clinical and patient care issues.**

Washington County EMS has two local Medical Directors. Dr. Robert Stark and Dr. William Loesch both serve as our Medical Directors. For on-line medical direction, EMS will utilize the Emergency Department Physician at Scott and White Hospital in College Station.

The public expects a certain level of knowledge and skill from Washington County EMS personnel. Clinical competence and high standards are vital components in providing quality pre-hospital emergency medical care to the citizens and visitors who rely on our service. The general treatment protocols are in this section of the manual. They represent the level of patient care that is to be provided whenever there is a request for service. The specific orders for each patient are found in the Standard of Care (SOC). The general guidelines discuss treatment and patient philosophies. Washington County EMS embraces as fundamental components of its standard of care the following concepts:

- **The emergent patient benefits from early medical interventions**, especially the early and aggressive application of airway establishment and maintenance, early administration of oxygen, early protection of the cervical spine and early initiation of definitive therapies.
- **The patient defines the emergency.** As EMS personnel, you are often called upon to assist with social or psychological problems therefore you should respond as professionally and thoroughly to these as you do for medical or trauma patients. When possible and appropriate, pre-hospital personnel should follow the desires and wishes of patients and their families. Washington County EMS personnel should be expected to conduct themselves in a professional manner and **treat all patients with dignity and respect**. Our patients' medical information should be treated in a confidential manner.
- **Your role as EMS personnel is to truly act as the eyes, ears, and hands of the physician.** To successfully do so requires that we educate ourselves beyond first aid procedures and dedicate ourselves to becoming an integral part of the total healthcare system, public safety, and public health arena. EMS personnel are expected to use their knowledge, training, judgment and expertise in pre-hospital care when caring for patients under these standing orders.

Washington County EMS personnel's first priority in the field should be safety for themselves, patients, and the public. This includes the use of appropriate personal protective equipment. Patients with the most severe, or life threatening, injuries, or illness should be treated first,

except in the event of a multiple patient scene/mass casualty incident where the field resources are overwhelmed. Every patient contact begins with the ABC's and/or CPR as appropriate. Once adequate life support is established EMS personnel should perform the primary and secondary survey to determine and then treat illness or injury.

These Protocols are ALL INCLUSIVE and Each Protocol clearly identifies what can be done by EMT-B, EMT-I, & Paramedic levels. For Further Clarification, see Authorization to Practice Protocol on the next page and SOP 61.

Standard of Care is dynamic, changing and improving on a regular basis. It is not possible to produce a written document: that addresses every clinical situation or that is perpetually up to date. It is therefore necessary for Washington County EMS personnel to continuously update their own knowledge and, at times, to rely upon clinical judgment not discussed in written policy. Compassion for the patient tempered by intellectual honesty should direct Washington County EMS personnel when applying these protocols to patient care. For these SOC's a pediatric is defined as less than 13 years old (i.e. physician orders are not required for a 13 year old patient).

The Medical Direction of Washington County EMS recognizes the importance of quality pediatric care. For that reason, Paramedics and employees have adopted the nationally recognized pediatric emergency standards known as the Handtevy (tm) EMS "system". This is a customized pediatric resuscitation and drug dosing system. Part of the goal is to significantly reduce medication errors in the pediatric population and improving efficiency of care. The Handtevy method has been approved by subject matter experts, pediatric intensivist, pharmacist and our local medical directors. For this reason it is the standard for pediatric care for our patients. Should a pediatric patient need a medication that is not listed in the WCEMS/Handtevy medication guide or listed in the protocol, a physician consultation should be performed. Keep in mind the Handtevy system is designed for "resuscitation of pediatric patients" not episodic events such as pediatrics requiring rapid sequence intubation. These non-resuscitative events have their own standing protocols and dosages. We also acknowledge that there are no absolutes.

These are **diagnostic-based** protocols; meaning that the paramedic should arrive at a working differential of what the main problem is with the patient and then select the protocol which best matches that primary differential. Should a patient fall under a given protocol based upon the paramedic's differential, but not fit the criteria and history requirements to activate the standing orders, EMS personnel shall initiate the most appropriate treatment for the most emergent clinical problem within their respective scope of practice. **Personnel should consult with Medical Control for additional support/consultation.**

Each patient may be treated with one protocol (for one differential) or with multiple protocols simultaneously (if the paramedic finds more than one concurrent illness or injury). Should a paramedic who is treating a patient with more than one simultaneous protocol be faced with choosing among medications or therapies within those protocols that conflict with one another, the following guidelines are to be used to determine which therapy shall prevail:

1. **Treat the problem that is more life threatening first.** Evaluate the problem against the "ABC's" and intervene in the one(s) that affect the airway first, then the one(s) that affect breathing and last the one(s) that affect circulation. For example, if you have a

patient who is suffering from cardiac ischemia and pulmonary edema, treat the pulmonary edema (“B”) first then the cardiac ischemia (“C”).

2. If the above test does not resolve conflict, **treat the problem that is more underlying first**. For example, if assessment of the patient history indicates that hypertensive crises caused pulmonary edema, then treat the hypertension first.

When a patient changes from one algorithm to another algorithm, do not administer more than the maximum total dose of a medication.

EKG Monitoring may be initiated and vascular access may be obtained in any patient of the discretion of the Paramedic. Oxygen may be administered to any patient at any time, but should be administered to maintain a saturation by pulse oximeter of 95% or greater.

If a clinical improvement is noted after initial interventions, further standing orders may be withheld based upon the paramedic’s clinical judgment. Some situations may necessitate the concurrent use of more than one SOC.

Always treat the problem which poses the greatest risk to life or loss of limb. If undeterminable, treat the most underlying problem first.

Initiation of patient transport is always encouraged at the earliest possible time in the flow of patient care. A delay in transport may occur in rare circumstances; however, the delay should be well justified and only occur when a treatment considered a “critical intervention” cannot/should not be performed during transport.

Treat to the point of significant relief or appropriate clinical improvement.

Rescue Clinician

When in an austere environment, certain credentialed persons (ex. Crew Chiefs, Special Response Technicians, and Special Operations Division Clinicians) will be authorized to operate under SP05. The SP05 protocol outlines alternate patient care methods that the Rescue Clinician may consider when in the rescue environment. The main goal is to bring medicine to the patient within 5 minutes of arriving on scene. The Rescue Clinician will not have the same equipment and resources available to them in this environment as normal. With this in mind, the provider must rely on his/her assessment and clinical knowledge to best provide patient care.

Adult Cardiac Protocols



Washington County EMS	12 Lead
Clinical Practice - Standing Protocols	AC 01
Adult Cardiac	

Introduction: This serves as a guideline of when to perform a 12-LEAD ECG for Washington County EMS Protocols. A 12-LEAD should be performed on the following patients when care of the patient will not be compromised by taking the 1-3 minute(s) to perform the procedure. The pre-hospital 12-LEAD is now a recommendation by the American Heart Association as a standard of care. All certification levels who have completed the 12-LEAD training in NEOP may perform a 12-LEAD ECG in the presence or direction of the Paramedic. Pre-hospital 12-LEAD ECG's benefit the patient by alerting receiving physicians to potential fibrinolytic candidates, appropriate patient/hospital triaging, and decreases time to in-hospital or out of hospital fibrinolytic therapy.

- Patients presenting with chest pain or discomfort who are >30 years old with AMI risk factors (history of HTN, smoking, diabetes, family history, hypercholesterolemia, cocaine use, etc...)
- Consider atypical presentation in diabetes and elderly patients.
- Any patients calling 911 with an acute non traumatic chest pain.
- Any patient who the paramedic thinks is suffering an acute cardiac event in the absence of chest pain (i.e. SOB, with unknown etiology, numbness or tingling to jaw or arm).
- Any patient for whom a physician requests a pre-hospital 12-LEAD ECG be acquired whether or not a cardiac patient.

EMT - Basic, EMT - Intermediate, Paramedic

1. Prepare patient for procedure (skin preparation, explanation of procedure to patient, exposing chest for precordial lead placement, etc.).
2. Turn on monitor and apply standard limb leads for lethal rhythm determination (refer to appropriate protocol if you discover a lethal rhythm present on ECG).
3. Apply precordial lead as follows:
 - **V1 – 4TH ICS to the right of the sternum**
 - **V2 – 4th ICS to the left of the sternum**
 - **V3 – between V2 and V4**
 - **V4 – 5th ICS mid-clavicular**
 - **V5 – 5th ICS antero-axillary line (*between V4 – V6*)**
 - **V6 – 5th ICS mid-axillary line**
4. Attempt to reduce most common technical problems (i.e. have patient sit still and rest extremities on stretcher or chair).
5. Press 12-LEAD button on ECG machine and allow the machine to interpret rhythm.

Right Sided 12 Lead:

- When a 12 Lead is obtained with ST and T Wave changes that are highly suggestive of inferior wall involvement, move the chest leads V3, V4, V5 and V6 to the exact location of the Right side of the patient's chest.
- When documenting on the ECG Strip, add "Right Side" to each lead that was moved.

Washington County EMS	Acute Coronary Syndrome / Chest Pain
Clinical Practice - Standing Protocols	AC 02
Adult Cardiac	

Introduction: Acute myocardial infarction (AMI) and unstable angina (UA) are part of a spectrum of clinical disease collectively identified as **acute coronary syndromes (ACS)**. The electrocardiograph (ECG) presentation of these syndromes encompasses ST-segment elevation myocardial infarction (**STEMI**), ST-segment depression, and non-diagnostic ST-segment and T-wave abnormalities. A non-ST-elevation myocardial infarction (NSTEMI) is diagnosed if cardiac markers are positive with ST-segment depression or with nonspecific or normal ECG's. Sudden cardiac death may occur with any of these conditions. ACS is the most common proximate cause of sudden cardiac death and should be treated progressively and efficiently by Paramedics which will promote better outcomes. The primary goals of therapy for ACS patients are to reduce the amount of myocardial necrosis, preserve left ventricular (LV) function and preventing heart failure. The paramedics should be knowledgeable in the possibility of the major adverse cardiac events (MACE) Paramedics should treat acute, life-threatening complications of ACS, such as VF, pulseless VT, bradycardia's, etc.....according to those protocols. Treatment goals include rescue PCI as a primary treatment modality when this treatment can be performed within 90 minutes of First Medical Contact by a high volume PCI facility and by skilled providers. Pre-hospital fibrinolysis is the alternative treatment and is the recommended treatment when the above PCI goal is not possible. The goal of pre-hospital fibrinolysis is first medical contact to drug in 30 minutes.

EMT – Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT-Intermediate (In addition to above)

1. Start IV NS or LR if NS is unavailable and draw blood. (Remember pain associated with IV access release catecholamines into the blood stream, which can increase HR & oxygen demand on the heart, so numerous attempts should be avoided. Most proficient attendant should perform skill when possible).
2. If chest pain appears to be cardiac, BP > 100 systolic, under the direction of the paramedic administer **Nitroglycerin 0.4mg tablet sublingual**.
3. Under the paramedic's direction administer **ASPIRIN (324 mg), give 2 tablets to swallow and 2 tablets to chew**.

Paramedic (In addition to above)

1. Obtain ECG. Upon initial assessment perform standard (limb leads) ECG to identify life threatening arrhythmias. If arrhythmia is found then go to appropriate protocol.
2. Complete patient assessment, this includes placing precordial electrodes for 12-LEAD acquisition. History should include PAIN – (**OPQRST**) **O**-onset, **P**-provocation, **Q**-quality, **R**-radiation, **S**-severity, **T**-time & duration.

3. Attach precordial leads (remember- if the precordial leads are attached and 12-LEAD acquired while the patient assessment is being performed, the on scene time is not adversely affected).
4. Acquire pre-hospital 12-LEAD before administering any medications (when possible) to obtain a TRUE baseline 12-LEAD. Administering the following medications: nitroglycerin, ASA, Morphine, and Lidocaine can normalize ST segments, which can hide a true AMI and delay definitive treatment. Remember not all AMI's are detectable on 12-LEAD ECG's, so all chest pain suspected to be of cardiac origin (ischemia) should be treated.
5. Administer **324mg of ASA – PO**
6. **Oxygen** by 15LPM – NRB if not done yet
7. **Establish IV** access and draw blood slowly.
8. **Administer 0.4mg of Nitroglycerin sublingual (if BP > 100 systolic) PRN until desired effect or until 3 doses in a 15-30 minute period.** When Acute Inferior Wall MI is suspected by paramedics with compromised clinical status (low blood pressure, low HR, etc...) then suspicion of Right Ventricular Involvement should be considered. Paramedics may opt to perform a right sided 12-LEAD ECG. Use coronary vasodilators judiciously and after IV access with these patients. Fluid bolus to promote preload should be considered when 12-LEAD suggest RVI (right ventricular involvement)

Optional Treatment: When Available (carried by supervisor)

NOTE: During increased transport times it may be indicated that a Nitroglycerin IV drip be used to decrease preload and afterload on the heart. Nitroglycerin is used for venous dilation a low doses and arterial dilation at higher doses. If RVI is indicated by a diagnostic 12-LEAD then nitroglycerin should be administered with caution or not at all. When administering a Nitroglycerin drip an IV pump must be present on the unit for a controlled infusion and correct titration. A separate line should be established as to not admix medication.

Nitroglycerin Drip Dosing:

- If no SL Nitro dose then a Loading dose of 12.5-25mcg bolus may be administered
 - Initial 5 mcg/minute, with increases of 5 mcg/minute every 3-5 minutes until a blood pressure response is obtained or until the infusion rate is 20 mcg/minute
 - If no effect is obtained with 20 mcg/minute, dosage may be increased by increments of 10 mcg/minute and if later necessary, by increments of 20 mcg/minute
 - dosage titrated to
 - control clinical symptoms
 - decrease mean arterial pressure
 - by 10% in normotensive patients
 - by 30% in hypertensive patients (never to systolic pressure < 90 mm Hg),
 - the infusion should be slowed or temporarily discontinued if MAP declines below 80 mm Hg or systolic BP <90 mm Hg
 - increase in heart rate by more than 10 beats/minute (but not exceeding 110 beats/minute)
 - decrease in pulmonary artery end-diastolic pressure by 10-30%
 - nitrate tolerance and risk of hypotension increases as dose approaches 200 mcg/minute
 - do not use within 24 hours of selective phosphodiesterase inhibitors (Sildenafil [Viagra], Vardenafil [Levitra], or 48 hours of Tadalafil [Cialis]) due to potential risk of fatality
1. Should the patient's blood pressure decrease to approximately (**but not under**) 100 systolic or max NITRO dose is achieved for 15-30min period, and the Patient has no relief of chest pain

with Nitroglycerin, Administer increment doses of **25-50 mcg up to (max of Fentanyl 1 mcg/kg IVP)**

2. Call medical control to give full report and transmit (fax any AMI's found or if there is any concern over the 12-LEAD ECG) to receiving ER via fax modem when possible.
3. If a STEMI is suspected by 12-LEAD then complete thrombolytic checklist and establish a **2nd IV (0.9% Saline)** for thrombolytic use.
4. If no contraindications and patient meets below checklist then consult with receiving PCI facility physician (SJRHC or CSMC ED physician) and administer single bolus weight based **TNKase (1cc/10kg max of 50mg)** and transport directly to (PCI capable facility),.
5. For patients receiving Thrombolytics, administer **Clopidogrel 300mg**. Only patients less than 75 years old should be administered **Clopidogrel**.
6. Administer **4mg IV/IM of Zofran** as needed for nausea and vomiting.
7. **Or** may also consider 6.25 mg-25 mg of Promethazine IV for complaints of nausea or vomiting. **Promethazine should be diluted with 10cc NS and given Slow IV Push. Do not exceed 25 mg in a 60 minute period.**
8. For Acute STEMI confirmed with diagnostic 12-LEAD ECG routine use of **Labetalol 10mg** (slow IVP) is not recommended. However, in certain hypertensive and tachycardia patients subset it may be considered. Consider Physician consult. Paramedic should assure no contraindications for beta blockers exist:

- Active CHF
- Active Asthma
- HR <60
- Systolic BP <100
- Heart Blocks
- STEMI induced by cocaine use

Prehospital Fibrinolytic Checklist

Step
1

Has patient experienced chest discomfort for greater than 15 minutes and less than 12 hours?

YES

NO

Does ECG show STEMI or new or presumably new LBBB?

YES

NO



Step
2

Are there contraindications to fibrinolysis?

If **ANY** one of the following is checked **YES**, fibrinolysis MAY be contraindicated.

- | | | |
|--|---------------------------|--------------------------|
| Systolic BP >180 to 200 mm Hg or diastolic BP >100 to 110 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| Right vs left arm systolic BP difference >15 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| History of structural central nervous system disease | <input type="radio"/> YES | <input type="radio"/> NO |
| Significant closed head/facial trauma within the previous 3 weeks | <input type="radio"/> YES | <input type="radio"/> NO |
| Stroke >3 hours or <3 months | <input type="radio"/> YES | <input type="radio"/> NO |
| Recent (within 2-4 weeks) major trauma, surgery (including laser eye surgery), GI/GU bleed | <input type="radio"/> YES | <input type="radio"/> NO |
| Any history of intracranial hemorrhage | <input type="radio"/> YES | <input type="radio"/> NO |
| Bleeding, clotting problem, or blood thinners | <input type="radio"/> YES | <input type="radio"/> NO |
| Pregnant female | <input type="radio"/> YES | <input type="radio"/> NO |
| Serious systemic disease (eg, advanced cancer, severe liver or kidney disease) | <input type="radio"/> YES | <input type="radio"/> NO |

Step
3

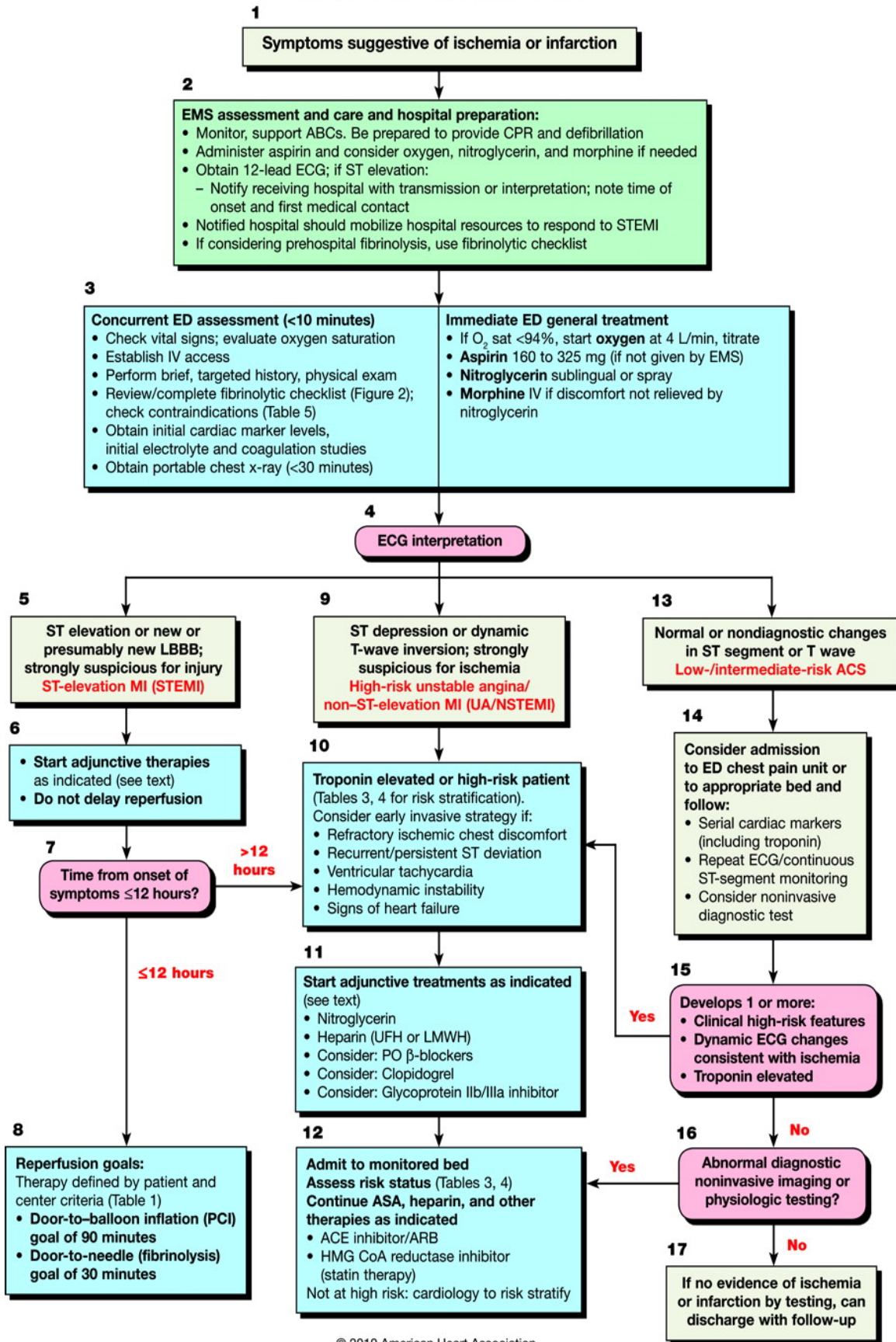
Is patient at high risk?

If **ANY** one of the following is checked **YES**, consider transfer to PCI facility.

- | | | |
|---|----------------------------|--------------------------|
| Heart rate ≥ 100 /min AND systolic BP <100 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| Pulmonary edema (rales) | <input type="radio"/> YES | <input type="radio"/> NO |
| Signs of shock (cool, clammy) | <input type="radio"/> YES | <input type="radio"/> NO |
| Contraindications to fibrinolytic therapy | <input type="radio"/> YES† | <input type="radio"/> NO |
| Required CPR | <input type="radio"/> YES | <input type="radio"/> NO |

†Consider transport to primary PCI facility as destination hospital.

Acute Coronary Syndromes





APPENDIX E – STEMI Alert Activation Criteria

- NO** **YES** **INDICATIONS:**
- ☐ ☐ 1. 1mm ST-elevation in 2 or more leads or New LBBB
(leads: _____)

Yes to #1 AND at least one of the below symptoms = STEMI Alert Activation

- ☐ ☐ 2. Chest discomfort: pressure, squeezing, fullness or pain
- ☐ ☐ 3. Pain or discomfort in one or both arms, back neck, jaw or stomach
- ☐ ☐ 4. Shortness of breath with or without chest discomfort
- ☐ ☐ 5. Cold sweat, nausea or lightheadedness
- ☐ ☐ 6. Consider abdominal pain in women or diabetics

Fibrinolytic Absolute Exclusion Criteria

- Previous hemorrhagic stroke
- Other stroke within one year
- Known allergy or prior exposure

Relative Contraindications

- Known active bleeding sites or disorders (including ulcerative colitis, diverticulitis, esophageal varices, coagulation disorders)
- Surgery < 10 days, including invasive biopsies or non-compressible arterial punctures
- Pregnancy or postpartum state
- Prolonged CPR (>5mins in the non-trauma patient)
- Significant trauma <4 weeks
- CPR or major surgery <3 weeks
- Previously uncontrolled HTN (DBP > 110 mmHg on several measurements) or currently elevated (SBP > 180 mmHg, or DBP >110 mmHg at presentation)

- NO** **YES**
- ☐ ☐ 1. Heart rate \geq 100 bpm AND systolic BP < 100 mm Hg
- ☐ ☐ 2. Heart rate \leq 50 bpm or complete heart block
- ☐ ☐ 3. Pulmonary edema (rales)
- ☐ ☐ 4. Signs of shock (cool, clammy)
- ☐ ☐ 5. Contraindications to fibrinolytic therapy

Patient Eligible for Fibrinolytic Treatment

Yes

Baylor Scott & White Medical Center
Brenham (non-PCI)
Baylor Scott & White Medical Center
College Station (PCI)
CHI St. Joseph Burleson (non-PCI)
CHI St. Joseph College Station ER (PCI)
CHI St. Joseph Grimes (non-PCI)
CHI St. Joseph Madison (non-PCI)
CHI St. Joseph Regional Health Center (PCI)
College Station Medical Center (PCI)

Patient Ineligible for Fibrinolytic Treatment

Yes

Baylor Scott & White Medical Center
College Station (PCI)
CHI St. Joseph College Station ER (PCI)
CHI St. Joseph Regional Health Center (PCI)
CHI St. Joseph Health College Station CHI St.
Texas Health College Station CHI St. Texas

Washington County EMS	Asystole / PEA
Clinical Practice - Standing Protocols	AC 03
Adult Cardiac	

The survival rate of cardiac arrest with asystole is dismal. The focus of the resuscitation is high quality CPR and to identify reversible causes or complicating factors for both Asystole and PEA. CONSIDER POSSIBLE CAUSES: Hypoxia, Hyperkalemia, Hypokalemia, Hypoglycemia, Hypothermia, Toxins, Tamponade, Tension Pneumothorax, Thrombosis, Trauma, etc...

EMT - Basic

1. Assess the patient for unresponsiveness.
2. If unresponsive, check for respirations.
3. If no respirations, give two breaths; add supplement oxygen 100%, ASAP, with oximeter before & during O2.
4. Check pulse. If no pulse, begin chest compressions. Quality CPR should be performed according to newest AHA standards.

EMT - Intermediate (In addition to above)

1. Intubate/start IV NS TKO or LR if NS is unavailable.
2. Confirm Intubation according to protocol.

Paramedic (In addition to above)

1. Obtain ECG. Assure proper monitoring of SpO2 and EtCO2. EtCO2 has been useful in documenting early indications of return of spontaneous circulation in patients experiencing PEA.
2. **ALWAYS CHECK AND CONFIRM ASYSTOLE IN TWO DIFFERENT LEADS.**
3. Paramedics should Intubate/start IV as soon as practical. Paramedics and Supervisors are instrumental in the CQI process during a SCA event. They must assure quality CPR is being performed and compressions are interrupted as little as possible (see page 4).
4. **EPINEPHRINE 1:10,000 1mg IV/IO for initial dose. Repeat q 3-5 minutes. If there is no IV or IO access readily available then administer 2 mg down the ETT (attempt to dilute), repeat q 3-5 min.**
5. Consider Transcutaneous Pacing for patient experiencing PEA with rates below 60.
6. **CONSIDER SODIUM BICARBONATE 1mEq/kg initially and 0.5 mEq/kg q 10 min may be indicated or is permissible under "special resuscitation situations" such as TCA overdose, preexisting metabolic acidosis, or hyperkalemia (ie a dialysis pt. who has missed dialysis). May be contraindicated with lactic acidosis – the common acidosis of cardiac arrest. Use sodium bicarbonate with extreme caution in normal SCA. It can create extracellular alkalosis that will shift the Oxyhemoglobin saturation curve and inhibits oxygen release.**

•CPR – focus needs to be to verify ECG & Perform High Quality Standard CPR (S-CPR) until resources are available to properly use the Rescue CPR System (AC/DC CPR). Our goal is to perform Rescue CPR System for 10 minutes before switching over to the Lucas, but once the Elegard is on scene, it should be placed under the patient. If you have not had at least 10 minutes of Rescue CPR System, you will continue with the ResQPump until you have performed 10 minutes and then apply to Lucas.

- Elegard Timeline:

- Continuously:

- Perform Chest Compressions
 - Minimize interruptions to no longer than 10 seconds
 - Elegard application as soon as it arrives on scene.

- After 2 minutes with “closed” system (intubation, ResQPOD and ResQPump):

- Patient is eligible to raise head on Elegard

- After total time of 10 minutes of ResQPump, APPLY Lucas (if applicable) prior to moving patient

- Keep head in the raised position as long as SBP remains >90 or MAP >65.

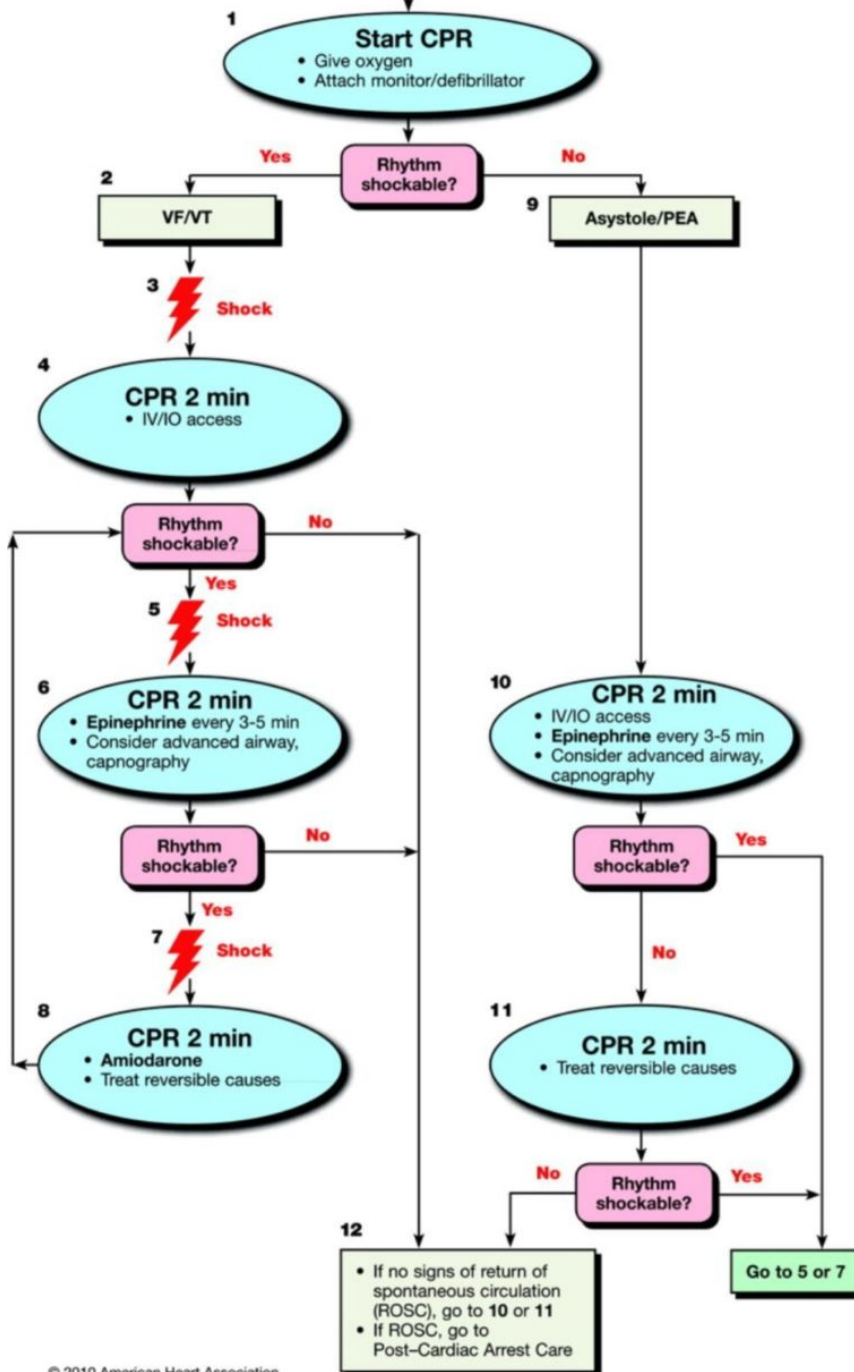
- If SBP <90 or MAP <65, lower head using the gray “DOWN” button.

- Upon arrival to facility, if ROSC is sustained, transfer to receiving cot, removing EleGARD and elevate head of head to approximately 30 degrees as long as SBP > 90/ MAP >65.

If patient becomes pulseless/apneic and ITD is left off longer than 10 seconds. You need to lower the head to the “down” position and perform 2 minutes of CPR with the ITD before raising the head again.

Adult Cardiac Arrest

Shout for Help/Activate Emergency Response



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CPR Quality

- Push hard (≥ 2 inches [5 cm]) 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

Washington County EMS	Bradycardia
Clinical Practice - Standing Protocols	AC 04
Adult Cardiac	

Introduction: The treatment of Bradycardia, like the treatment of tachycardia, challenges us to remember to “treat the patient, not the monitor.” Autonomic influences, hypothermia, drugs and intrinsic cardiac conducting system disease may lead to Bradycardia. In particular, acute MI can affect cardiac conducting system and produce brady-arrhythmias ranging from sinus Bradycardia to high degree AV block. While ACLS defines Bradycardia as a heart rate less than 60/minute, the hearts of many people, particularly trained athletes will beat at much slower rate. Clinicians must be aware of the concepts of absolute bradycardia (heart rate less than 60 beats/min.) and relative bradycardia (defined as rhythms that are faster than 60 beats/minute, but are still inappropriately slow for the clinical situation at hand.

EMT – Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Intubate if necessary
2. Start IV of NS, or LR if NS is unavailable at TKO unless hypotensive or signs of shock are present

TREAT ONLY WHEN ONE OR MORE OF THE FOLLOWING SIGNS OR SYMPTOMS EXIST:

- a. Systolic BP less than 90 mmHg.
- b. Acute neurological symptoms exist with a BP of 140/90 or less (ie. Unconsciousness, any alternation in LOC, disorientation, fainting, seizures, confusion, dizziness).
- c. PVCs
- d. Severe shortness of breath and/or CHF.
- e. Consider during chest pain.
- f. Consider PVCs in the setting of an acute MI. ***Remember No Lidocaine***
- g. Other symptoms of shock

Paramedic (In addition to above)

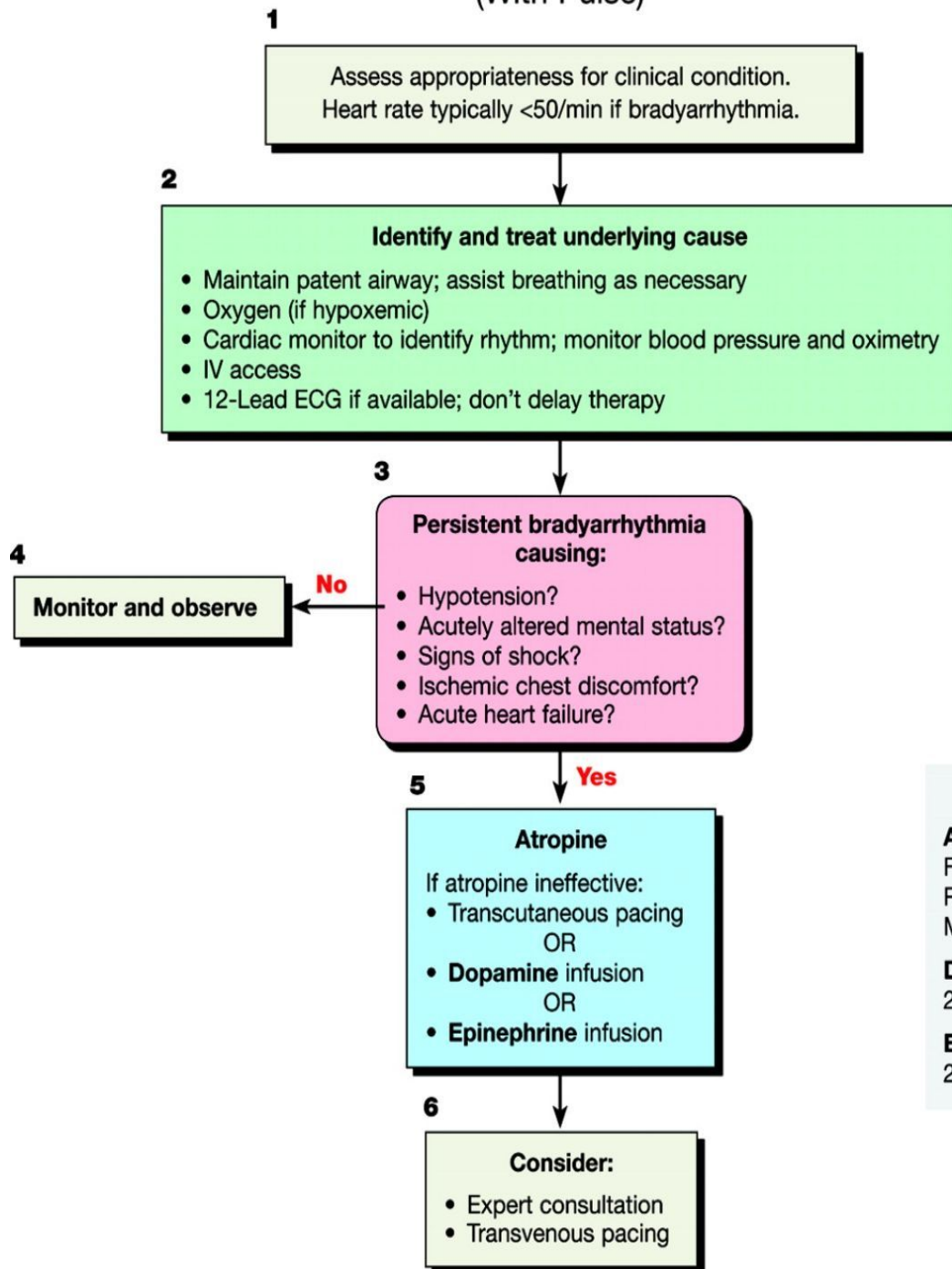
1. Monitor ECG rhythm and obtain 12 lead if time allows (per patient condition)
2. For symptomatic high degree AV block (second or third degree AV blocks) Apply TRANSCUTANEOUS PACING (TCP) without delay **Note:** If patient presents as **conscious** and symptomatic Paramedic may provide atropine prior to pacing. If patient presents as **unconscious**, lethargic, or severely symptomatic, pacing should be provided without any delay.
3. Start IV of NS at TKO or LR if NS is unavailable unless hypotensive or signs of shock are present
4. In the appropriate clinical situations the Paramedic may choose to sedate patient prior to pacing with **Midazolam 2mg IV/IM Q 5 minutes until max of 10 mg. –OR- Ketamine**

0.25mg/kg SIVP (Must have a P3 present for administration of Ketamine) Note: With successful pacing an increase in patient mental status and hemodynamic status sedation may also then be indicated

5. **ATROPINE 0.5 –1.0 mg IV**
 - a. If rate >60 bpm, observe patient closely.
6. **If the rate is still <60 bpm repeat ATROPINE 1 mg IV Q 3 –5 min. w/ max dose 3.0 mg.**
7. **If the heart rate is still less than <60 or >60 bpm and hypotension exists start a Dopamine drip, run at 2-10 mcg/kg/min. Another option the paramedic may choose is perform an Epinephrine drip at 2-10 mcg/min. Epinephrine drip: Mix 1 mg into 250 ml of D5W, drip 2 – 10 mcg/min (2 mcg/min = 30 micro drips/min).**

NOTE: Do not delay TCP if unable to obtain IV access, the conscious patient may require sedation with versed 1-5mg prior to pacing. See AHA algorithm below for further guidance.

Adult Bradycardia (With Pulse)



Washington County EMS	Congestive Heart Failure (CHF)
Clinical Practice - Standing Protocols	AC 05
Adult Cardiac	

Introduction: Congestive Heart Failure (CHF) is a symptom, not a diagnosis. The underlying cause of CHF is usually organic heart disease resulting in left ventricular failure (LVF) or hypertension, but may also be volume (renal failure) or toxin related. As with most medical emergencies, in the conscious and awake patient with CHF, reassurance will greatly aid treatment. Aggressive adequate pre-hospital treatment may greatly decrease morbidity and mortality with these patients. As the patient becomes more agitated respiratory distress is worsened. Care goals include high flow oxygen, ventilatory assistance with positive pressure ventilation if needed, B/P reduction, reduction of pulmonary edema and cardiac monitoring.

SIGNS & SYMPTOMS:

History of heart failure or pulmonary edema. Wheezing, rales/rhonchi, cyanosis, nocturnal orthopnea, pedal & lower extremity edema, confusion, Abd. Distention (ascites), distended neck veins, frothy pink sputum, use of accessory muscles on respiration, and difficulty speaking.

EMT - Basic

1. ABC
2. Give 100% oxygen with proper positioning, ventilatory assistance if indicated, apply oximeter before and during O2.
3. Assessment/Vital Signs.
4. Under the direction of the Paramedic/CPAP 5-10 cm H2O. Do not delay O2 by NRB while setting up CPAP unit.

EMT - Intermediate (In addition above)

1. Start IV **D5W** TKO.
2. Under the direction of the paramedic give NITRO Tablet SL if systolic BP is over 100 mmHg.
3. Record any urine output (does not need a foley).

Paramedic (In addition to above)

1. Start IV D5W TKO (if not yet done).
2. Perform **Diagnostic 12-LEAD ECG** ASAP
3. In patients who may be experiencing overlapping respiratory diseases (COPD and CHF) and 12 lead reveals no AMI it's allowable to administer **Albuterol 2.5mg Nebulizer, may repeat as needed.** In some CHF patients due to anxiety, shortness of breath, etc... it is difficult to get a clear diagnostic 12-LEAD. In these cases it is permissible to administer Albuterol with no 12-LEAD if indicated with signs and symptoms.

Note: When the Patient is unable to assist with hand held nebulizer, utilize the NRB with attachments of the hand held nebulizer. Remove the bag from the NRB and attach the nebulizer medication chamber, the tubing and connect to O2 port.

4. **Administer 0.4 mg NITRO Tablet SL if systolic BP is over 100 mmHg.** If during transport patient is experiencing little or no relief of pulmonary edema you may re-administer Nitro 0.4mg with or without symptoms of chest pain, **but exceeding 3 doses in a 15-30 min period.** Systolic BP must be over 100 mmHg to continue Nitro administration.
5. **LASIX 40 mg IVP Slow** if systolic blood pressure is over 100 mmHg.
6. Record any urine output (does not need a foley).

Optional Treatment: When Available

NOTE: During increased transport times it may be indicated that a Nitroglycerin IV drip be used to decrease Pulmonary Capillary Wedge Pressure (PCWP) and combat increased preload and afterload in heart failure. Pt will need two patent lines established, one for medication administration and the other for a Nitroglycerin infusion, as nitro should not be admixed with other drugs. An IV pump must be available on the unit for a controlled infusion. If using this option D₅W is not needed since Nitroglycerin will most likely be diluted in D₅W.

Nitroglycerin Drip Dosing:

- If no SL Nitro dose then a Loading dose of 12.5-25mcg bolus may be administered
- Initial 5 mcg/minute, with increases of 5 mcg/minute every 3-5 minutes until a blood pressure response is obtained or until the infusion rate is 20 mcg/minute
- If no effect is obtained with 20 mcg/minute, dosage may be increased by increments of 10 mcg/minute and if later necessary, by increments of 20 mcg/minute
- dosage titrated to
 - control clinical symptoms
 - decrease mean arterial pressure
 - by 10% in normotensive patients
 - by 30% in hypertensive patients (never to systolic pressure < 90 mm Hg),
 - the infusion should be slowed or temporarily discontinued if MAP declines below 80 mm Hg or systolic BP <90 mm Hg
 - increase in heart rate by more than 10 beats/minute (but not exceeding 110 beats/minute)
 - decrease in pulmonary artery end-diastolic pressure by 10-30%
- nitrate tolerance and risk of hypotension increases as dose approaches 200 mcg/minute
- do not use within 24 hours of selective phosphodiesterase inhibitors (sildenafil [Viagra], vardenafil [Levitra], or 48 hours of tadalafil [Cialis]) due to potential risk of fatality

Washington County EMS	General Care for Sudden Cardiac Arrest
Clinical Practice - Standing Protocols	AC 06
Adult Cardiac	

General Knowledge and Introduction: Paramedics working for WCEMS must realize that recent studies have shown that frequent or long interruptions in precordial chest compression for rhythm analysis, advanced airway management, rescue breathing, or moving the patient has been associated with post resuscitation myocardial dysfunction, reduced survival rates, and a decreased probability of conversion of VF to another rhythm.

A complete system approach to treating SCA patients will be utilized by WCEMS. WCEMS understands the focus of the treatment should be on building an integrated team approach of highly trained rescuers for optimal patient outcomes. For this reason, we have adopted the “pit crew” approach to SCA victims. Realizing that each team member must understand his/her role and the choreographed functional process that must take place for successful outcomes.

In the event a patient with a primary medical (non-traumatic arrest) cardiac arrest does NOT have a return of spontaneous circulation (ROSC) in the field resuscitation process, the primary choice of transport should be Code 1 to the closest appropriate facility. However this decision is ultimately at the discretion of the primary attending paramedic. When a patient obtains ROSC in the field, WCEMS will transport Code 3 to a higher level of care facility for Cardiology and Neurology services and equipment necessary for further evaluation and treatment such as Induced Hypothermia for medical patients.

The department realizes the focus on education and training that must be applied to this concept and a strong quality improvement process is required. When at all possible, supervisor paramedics (P3) should be on scene with sudden cardiac arrest patients. Paramedics and supervisors should assure that interruption of chest compressions are minimized during advanced airway procedures and defibrillation attempts (i.e. compressing right up to the point where the intubator is inserting the laryngoscope into oropharynx). No therapies provided other than defibrillation should compromise quality compressions. Once advanced airway is placed, it's no longer required to deliver “cycles” of CPR. Give continuous chest compressions without pauses for breaths. Respirations should be given at 8-10 respirations per minute.

1. If an arrhythmia is to be treated, do so in the following order:
FIRST: Treat the rate.
SECOND: Treat the rhythm.
THIRD: Treat the patient's blood pressure.
2. If a patient converts to another treatable rhythm after defibrillation, refer to the appropriate protocol.
3. If the arrest rhythm was VF or VT and no antiarrhythmic treatment was given, Amiodarone bolus followed by maintenance infusions should be initiated unless contraindicated, i.e., in patients with ventricular escape rhythm.
4. Protocols may overlap with one another.

EXAMPLES: A patient in CHF with Bradycardia. Your evaluation of the pt. In conjunction with the Physician direction will determine treatment order. If the paramedic is in doubt then call medical control.

5. There is no longer adequate evidence to support TCP or the routine administration of Atropine in PEA/Asystole during a full arrest scenario.
6. Some protocol and drug dosages range are taught as absolutes. However, clinician judgment based on the individual patient must also be used.
7. Defibrillation/cardioversion-The shocks are shown as joules or watts/seconds of delivered energy in these protocols. First shock efficacy for monophasic shocks is lower than first shock efficacy of biphasic shocks. Biphasic defibrillators should be charged to the manufacturer suggested joules depending setting. Our (Medtronic LP-12's) devices should be charged to 200j for first shocks and then increased (300-360). There is insufficient evidence to support pre-shock CPR for SCA victims when a defibrillator is on scene. However, CPR is the fastest treatment methodology to apply these patients and should be performed while the defibrillator is being applied/charged. Some studies have shown that a brief period of CPR chest compressions can deliver oxygen and energy substrates, increasing the likelihood of ROSC after initial defibrillation.
8. Drugs can be given IVP through D5W or Normal Saline IV or Lactate Ringers IV. If no IV or intraosseous line is available, some drugs can be given down the endotracheal tube: Epi, Lido, Atropine, & Narcan. Epinephrine, atropine and Lidocaine can be given via ET tube, but at 2-2.5 times the IV dose. Drugs administered down the ETT should be a third choice option after unsuccessful IV and IO attempts are made or if a prolonged attempt for these routes are obvious (difficult IV or IO access patient).
9. Combination administration of multiple antidysrhythmics should not be performed (i.e. if you administer Amiodarone to ventricular fibrillation then don't administer Lidocaine).
- 10. If return of spontaneous circulation (ROSC) is post Amiodarone administration or successful conversion of VT (w/pulse) using Amiodarone then administer infusion at 1mg/min. For recurrent or resistant arrhythmias you may re-administer 150mg of Amiodarone q-10minutes. Max dose of Amiodarone is 2.2g daily.**
11. The following medication(s) and procedures can be given or performed by an approved **System Approved EMT/EMT-I** at the paramedic's direction and supervision.

- ❖ Nitroglycerin
- ❖ Aspirin
- ❖ Oral glucose
- ❖ Albuterol
- ❖ **Rescue Airway Device (specifically Combitube / King LT Airway device)**

WCEMS still recommends advanced airway as the preferred airway control procedure. However, it does not and should not take priority over quality compressions during the treatment of SCA

patients. It will be a general practice that the procedure of intubation will be for ROSC patients or just prior to transportation of the SCA victim.

12. An EMT Basic with proper training is authorized to use an AED (utilized for the bike team and standby events) and the AED mode ONLY of the LP-12 for defibrillation purposes in the event of sudden cardiac arrest with no Advance Life Support on location.

13. Several alternatives to conventional (manual) CPR have been recently developed in efforts to enhance perfusion during resuscitation. However, when compared to conventional CPR, these techniques and devices demonstrated no improvements in patient outcomes. The devices do however allow for continuous compression when otherwise manual CPR would have to be halted for patient movement or defibrillation. These devices also require more training and education when utilized appropriately in order to not interrupt compressions during application.

- CPR – focus needs to be to verify **ECG & Perform High Quality Standard CPR (S-CPR)** until resources are available to properly use the **Rescue CPR System (AC/DC CPR)**. Our goal is to perform Rescue CPR System for 10 minutes before switching over to the Lucas, but once the Elegard is on scene, it should be placed under the patient. If you have not had at least 10 minutes of Rescue CPR System, you will continue with the ResQPump until you have performed 10 minutes and then apply to Lucas.

- Elegard Timeline:

- a. Continuously:

- Perform Chest Compressions
- Minimize interruptions to no longer than 10 seconds
- Elegard application as soon as it arrives on scene.

- b. After 2 minutes with “closed” system (intubation, ResQPOD and ResQPump):

- Patient is eligible to raise head on Elegard

- c. After total time of 10 minutes of ResQPump, APPLY Lucas (if applicable) prior to moving patient

- Keep head in the raised position as long as SBP remains >90 or MAP >65.
- If SBP <90 or MAP <65, lower head using the gray “DOWN” button.
- Upon arrival to facility, if ROSC is sustained, transfer to receiving cot, removing EleGARD and elevate head of bed to approximately 30 degrees as long as SBP > 90/ MAP >65.
- If patient becomes pulseless/apneic and ITD is left off longer than 10 seconds. You need to lower the head to the “down” position and perform 2 minutes of CPR with the ITD before raising the head again.

Washington County EMS	PSVT
Clinical Practice - Standing Protocols	AC 07
Adult Cardiac	

Introduction: Indications for treatment include sustained paroxysmal supraventricular tachycardia with a ventricular rate above 150/min, unstable patient with serious signs or symptoms (chest pain, dyspnea, decreased LOC, decreased B/P, shock, pulmonary congestion, CHF, AMI). If the rate is particularly rapid (> 180 beats/min), or the arrhythmia is sustained, congestive heart failure may occur.

EMT - Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain ECG.
2. Start IV NS TKO (if not yet done) or LR if NS is unavailable.

Stable Patient:

- a. Modified Vagal Maneuver:
 - No carotid sinus massage if patient has carotid bruits.
 - No ice H2O immersion vagal if patient has ischemic heart disease.
- a. *With patient seated in semi-fowlers, have them attempt to blow plunger from 20ml Syringe for 15 sec, after which time lay patient supine and elevate both legs to 45 degrees for additional 15 sec.*
- b. **Adenosine 6mg, rapid IVP.**
- c. **After 1-2 minutes, repeat Adenosine 12mg rapid IVP, repeat once in 1-2 minutes.**
- d. **If Narrow QRS Complex w/ Low BP, Synchronize Cardiovert @ 50 joules. Continue Cardioversion if indicated.**
- e. **If Wide QRS Complex (Uncertain Type), give Amiodarone 150 mg IVP Q 5-10 minutes.**

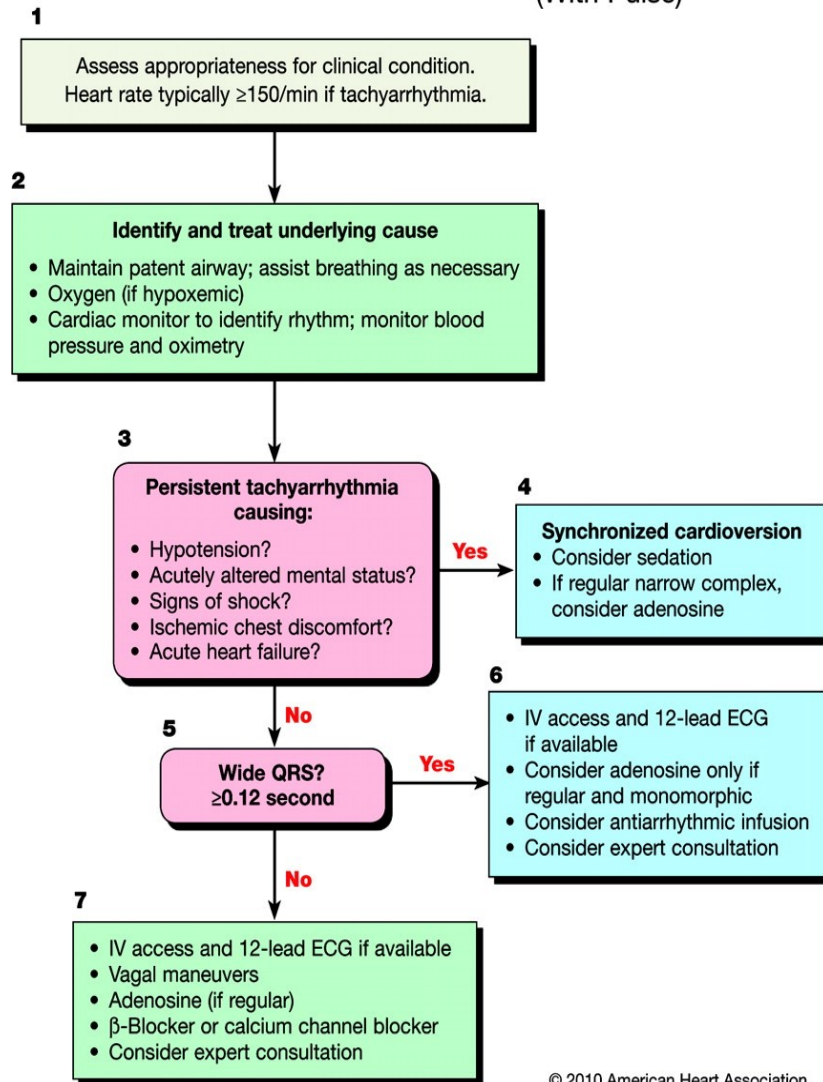
Unstable, Conscious Patient:

- a. **Versed 2 mg IV Q 5 minutes w/ max of 10 mg. –OR- Ketamine 0.25mg/kg (Must have a P3 present for administration of Ketamine)**
- b. **Synchronize Cardiovert @ 50 joules. If not converted, Synchronize Cardiovert @ 100, 200, 300, 360 joules.**

Unstable, Unconscious Patient:

- a. **Synchronize Cardiovert @ 50 joules. If not converted, Synchronize Cardiovert @ 100, 200, 300, 360 joules.**

Adult Tachycardia (With Pulse)



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.

Washington County EMS	Shock
Clinical Practice - Standing Protocols	AC 08
Adult Cardiac	

EMT - Basic

1. Assess the patient for unresponsiveness.
2. If unresponsive, check for respirations.
3. If no respirations, give two breaths; add supplement oxygen 100% with oximeter before and during O2, ASAP.
4. Check pulse. If no pulse, begin chest compressions.
5. If the patient is hypotensive (BP <90 systolic) place them in a Trendelenburg position without head injury. With patients experiencing respiratory compromise place in upright, sitting position is preferred.

EMT-Intermediate (In addition to above)

1. Rapid assessment for type of shock and prepare for immediate treatment/transport.
2. Start 2 IVs (set rate as indicated).

Paramedic (In addition to above if not yet done)

- Obtain ECG, rapid assessment for type of shock and prepare for immediate transport.

Types of Shock

Hypovolemic

- Start 2 IVs of NS bolus 20cc/kg as indicated
- Do Not use Dopamine
- PRBC's

Anaphylactic

- State IV of NS Wide Open
- **Epi 1:10,000 1 mg IV**
- **Diphenhydramine 50 mg IV/IM**

Neurogenic

- Stabilize spine.
- Start IV of NS Wide Open

Septic

- Start IV of NS Wide Open
- Dopamine

Cardiogenic

- Start IV of NS TKO
- Treat Rate and Rhythm first
- If BP is less than <90 Systolic, Dopamine

- **Dopamine for Cardiogenic Shock:** Treat the rate, rhythm and BP by administering a Dopamine drip. Put 200 or 400 mg into 250 cc D5W, start at a rate of 2-5 mcg/kg/min. *** 38 micro drops per-minute = 5 mcg/kg/min, for a 100 kg patient. Continue to monitor the ECG and Vital Signs (titrate Intropin to patient's blood pressure as needed).

Unknown

- Start IV of NS with fluid challenge
- If BP has no response, Dopamine

P-3 Level Paramedic

1. If patient is believed to be suffering from clinical hemorrhagic shock manifested by hypotension, marked tachycardia, diminished peripheral pulses, pallor, tachypnea, or agitation then the P3 Paramedic should consider administration of PRBC's (0 NEG) to the patient. For obvious hemorrhagic shock, the P3 paramedic can administer the blood products on standing delegated order. One unit of PRBCs should be initially infused after patient reassessment should signs and symptoms not improve, a second unit may be administered. However, if there is question or concern then the P3 should contact Dr. Loesch / Stark for direct orders. A consultation with the receiving physician should also occur when convenient.
2. IV access should be started with a minimum of 18g catheter.
3. Ensure blood Y tubing with filters are utilized during an infusion.
4. Prime blood tubing with normal saline and then administer blood products at a wide-open rate.
5. Observe the patient closely for chilling, nausea, vomiting, skin rashes, or tachycardia as are early indications of reactions and check vital signs every 10 minutes (include temperature) post transfusion.
6. Report sign and symptoms of reaction immediately to physician to minimize consequences. Acute reaction may occur at any-time during the transfusion. If any reactions, close clamp & run normal saline, report to doctor, save urine and observe.
7. Procedure may be repeated with second unit of packed RBC's if required.
8. If signs and symptoms are present, immediately stop infusion and refer to Allergic Reaction Protocol.

Note: In the event NS is not available, LR will be utilized.

Additional Dopamine Information:**Side effects:**

Tachydysrhythmia, V-Tach, V-fib, HTN, nausea & vomiting: ischemia (infarction).

These effects may require reduction in dose of therapy or even discontinuation of this infusion.

200 mg into 250 cc D5W = 800 mcg/ml or 13.3 mcg/micro drop.

400 mg into 250 cc D5W = 1600 mcg/ml or 26.7 mcg/micro drop.

For a 70 kg patient, starting a 2 mcg/kg/min = 5 micro drops/min.

20mcg/kg/min.= 53 micro drops/min.

Dosage Effects:

Renal Dose: 2 – 5 mcg/kg/min

Inotropic (Beta) Dose: 5 – 10 mcg/kg/min

Pressor (Alpha) Dose: > 10 mcg/kg/min

Washington County EMS	V-Fib / Pulseless V-Tach
Clinical Practice - Standing Protocols	AC 09
Adult Cardiac	

EMT - B

1. Assess mental status.
2. If unresponsive, check for respirations.
3. If no respirations, give two breaths; add supplemental oxygen 100% ASAP, with oximeter before & during O2.
4. Check pulse. If no pulse, begin chest compression.

EMT-Intermediate (In addition to above)

1. Intubate/start IV NS TKO or LR if NS is unavailable.
2. Vital Signs.

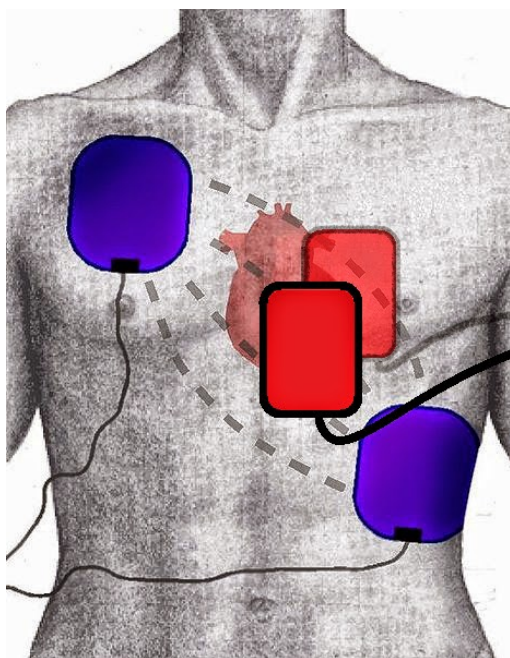
Paramedic (In addition to above)

AED: Remove, attach conventional defibrillator, if indicated continue to defibrillate at the last level of joules delivered by AED.

1. Defibrillate with 200 joules when using biphasic device or 360 joules using monophasic device.
2. Immediately continue CPR for approximately 2 minutes. Continue CPR even while defibrillator is charging.
3. Intubate and attempt IV access as soon as possible but minimize time without compressions being performed. (see page 4 “cardiac life support protocols”).
4. **EPINEPHRINE 1:10,000 1mg IVP/IO** (or 2x the dose ETT as last resort), repeated (subsequent doses should be 1mg q 3-5 minutes)
5. Defibrillate 300 joules using biphasic defibrillators or remain at 360j using monophasic devices.
6. Immediately continue CPR for approximately 2 minutes. Continue CPR even while defibrillator is charging.
7. Administer **IV AMIODARONE 300mg** (peripheral) **rapid IV Push** (Amiodarone should be administered prior to 4th shock @ 360 joules) do not delay defibrillations if problems preparing or administering Amiodarone. Consider an additional 150mg bolus if no conversion.
8. Defibrillate with 360 joules (monophasic or biphasic)
9. Immediately continue CPR for approximately 2 minutes. Continue CPR even while defibrillator is charging.

10. For patients in **refractory ventricular fibrillation after multiple attempts at defibrillation have been unsuccessful; dual defibrillation may be necessary. Using an additional cardiac monitor, apply a second set of defibrillation pads to the patient. The second set of pads should be placed anterior/posterior pad placement. (See diagram below). On the 5th shock, dual defibrillation also referred to as double-sequential defibrillation should be performed. Then simultaneously press shock on both monitors. Immediately resume CPR.

** Refractory as a ventricular fibrillation rhythm is one that has had no rhythm change by defibrillation @ 200J, 300J, 360J and 360J with high quality CPR.



11. **MAGNESIUM SULFATE 1-2 g IVP, over 1-2 minutes (for torsades des pointes or severe refractory VF).**
12. **CONSIDER SODIUM BICARBONATE 1mEq/kg initially and 0.5 mEq/kg q 10 min may be indicated or is permissible under “special resuscitation situations”** such as TCA overdose, preexisting metabolic acidosis, or hyperkalemia (ie a dialysis pt. Who has missed dialysis). May be contraindicated with lactic acidosis – the common acidosis of cardiac arrest. Use sodium bicarbonate with extreme caution in normal SCA. It can create extracellular alkalosis that will shift the oxyhemoglobin saturation curve and inhibits oxygen release

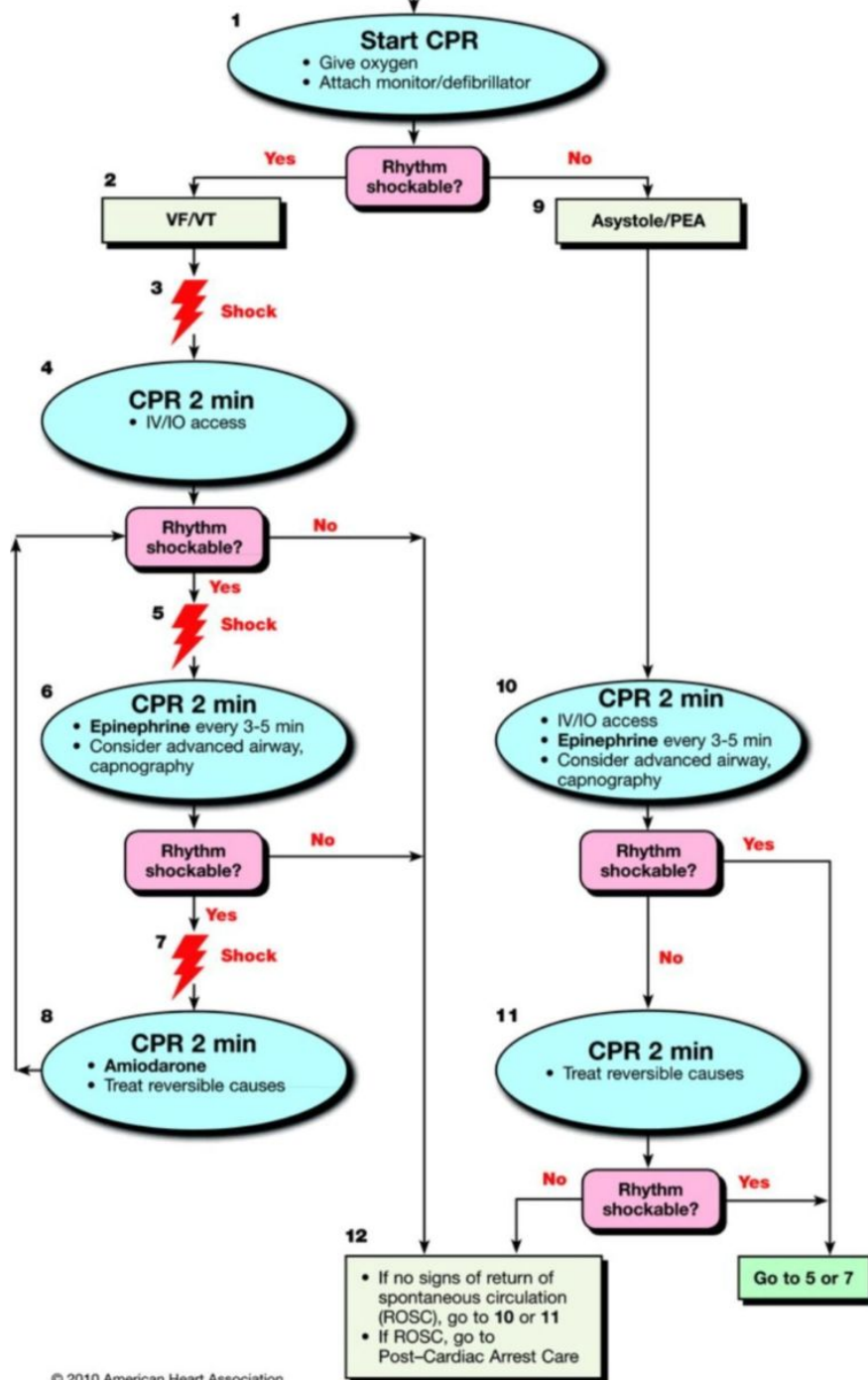
NOTE: Vasopressors and Antiarrhythmic should be administered during CPR in between defibrillations if possible. However do not delay defibrillation in order to administer medications. After approximately 2 minutes (5 cycles) of CPR the paramedic should perform a rhythm check and defibrillate accordingly. In ROSC post defibrillation scenarios, patients should receive **150mg of Amiodarone** followed by 1mg/min infusions to decrease chances of recurrent ventricular fibrillation.

•**CPR** – focus needs to be to verify ECG & **Perform High Quality Standard CPR (S-CPR)** until resources are available to properly use the **Rescue CPR System (AC/DC CPR)**. Our goal is to perform Rescue CPR System for 10 minutes before switching over to the Lucas, but once the Elegard is on scene, it should be placed under the patient. If you have not had at least 10 minutes of Rescue CPR System, you will continue with the ResQPump until you have performed 10 minutes and then apply to Lucas.

- Elegard Timeline:
 - Continuously:
 - Perform Chest Compressions
 - Minimize interruptions to no longer than 10 seconds
 - Elegard application as soon as it arrives on scene.
 - After 2 minutes with “closed” system (intubation, ResQPOD and ResQPump):
 - Patient is eligible to raise head on Elegard
 - After total time of 10 minutes of ResQPump, APPLY Lucas (if applicable) prior to moving patient
- Keep head in the raised position as long as SBP remains >90 or MAP >65.
- If SBP <90 or MAP <65, lower head using the gray “DOWN” button.
- Upon arrival to facility, if ROSC is sustained, transfer to receiving cot, removing EleGARD and elevate head of bed to approximately 30 degrees as long as SBP > 90/ MAP >65.
- If patient becomes pulseless/apneic and ITD is left off longer than 10 seconds. You need to lower the head to the “**down**” position and perform 2 minutes of CPR with the ITD before raising the head again.

Adult Cardiac Arrest

Shout for Help/Activate Emergency Response



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CPR Quality

- Push hard (≥ 2 inches [5 cm]) 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

Washington County EMS	V-Tach W/ Pulse
Clinical Practice - Standing Protocols	AC 10
Adult Cardiac	

Introduction: Ventricular Tachycardia (VT) is defined as three or more successive beats of ventricular origin at a rate of greater than 100 beats per minute. There are no normal looking QRS complexes and the rhythm is usually irregular. VT may be either well tolerated or associated with grave, life-threatening hemodynamic compromise. The hemodynamic consequences of VT depend largely on the presence or absence of a pulse (pulseless VT is treated the same as Ventricular Fibrillation). Paramedics are tasked with deciding rhythm interpretation as well as the hemodynamic effects of the rhythm. The major emphasis should be placed on whether or not the patient has rate-related cardiovascular compromise, with s/s such as altered mental status, ongoing chest pain, hypotension, or signs of shock. Paramedics should immediately provide synchronized cardioversion. Serious signs and symptoms are uncommon with rates below 150 per minute.

EMT - Basic

1. ABCs.
2. Give 100% oxygen; apply oximeter before and during O2.
3. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain ECG.

Stable Patient:

- Torsades De Pointes (Polymorphic with prolong QT interval) give **Magnesium Sulfate 1-2 gm IVP.**
- Start IV NS TKO or LR if NS is unavailable. (if not yet done).
- **Amiodarone 150 mg IV, may repeat as needed to max dose 2.2g/24hours.**
- **Amiodarone maintenance infusion may be indicated with successful conversion using Amiodarone. When indicated start at 1mg/min.**
- If V-Tach is not resolved, give **Midazolam 2mg Q 5 minutes with a Max of 10mg** and synchronize cardiovert at 100 joules. Increase joules 100-200-300-360 as needed.

Unstable, Conscious Patient:

- Start IV NS TKO or LR if NS is unavailable. (if not yet done).
- **Midazolam 2 mg Q 5 minutes w/ a Max of 10 mg. –OR- Ketamine 0.25mg/kg SIVP (Must have a P3 present for administration of Ketamine)**
- Synchronize cardiovert at 100 joules, if no conversion repeat at 200 joules, 300 joules, 360 joules (max).
- **Amiodarone 150mg IV, may repeat as needed to max dose of 2.2g/24hrs.**
- If no conversion, cardiovert with 360 joules.
- **Amiodarone maintenance infusion may be indicated with successful conversion using Amiodarone. When indicated start at 1mg/min.**

Unstable, Unconscious Patient:

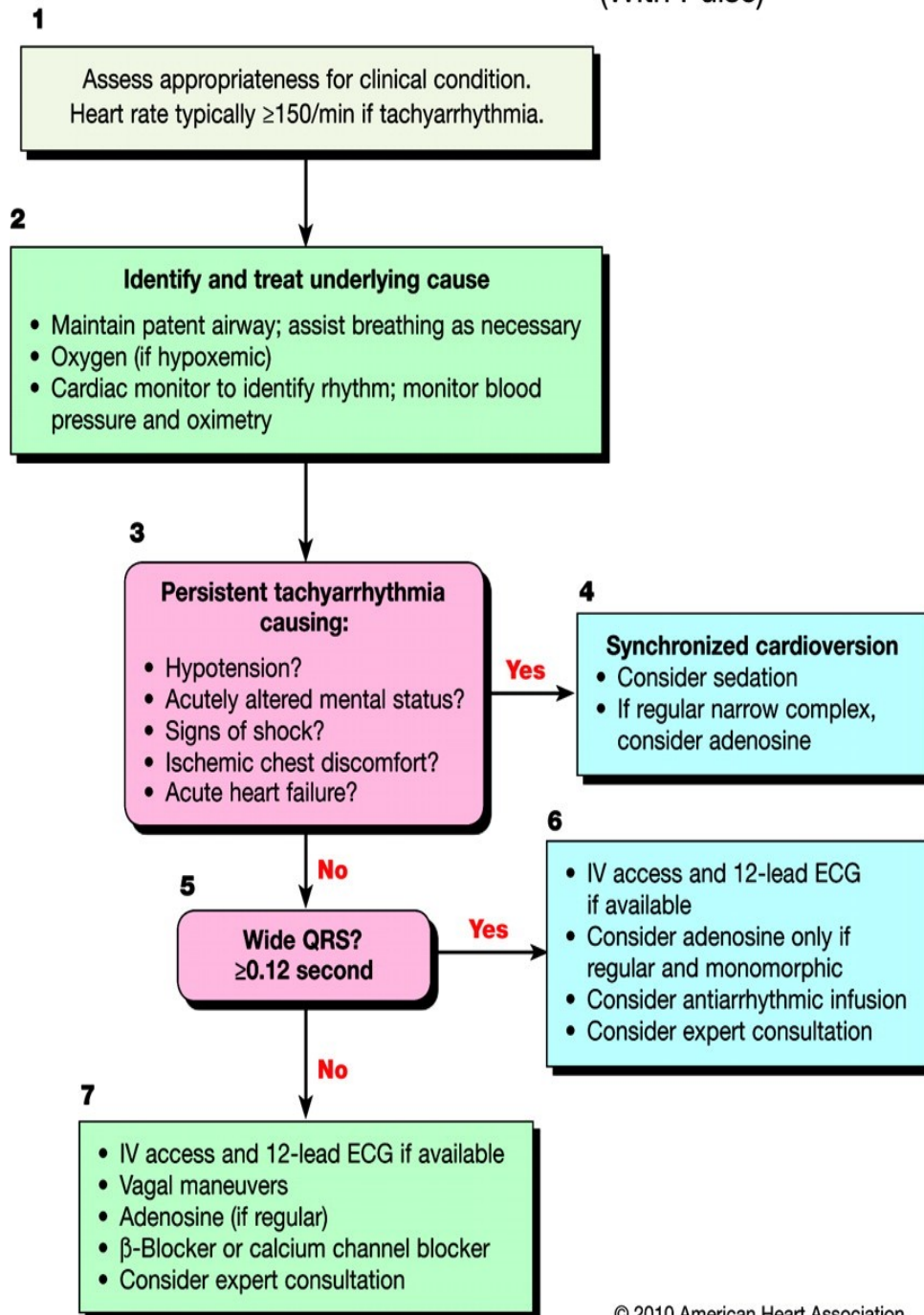
- Synchronize cardiovert at 100 joules, if no conversion repeat at 200 joules, 300 joules, 360 joules (max).
- Start IV with NS TKO or LR if NS is unavailable. (if not yet done).
- **Amiodarone 150mg IVP, may repeat as needed to a max dose of 2.2g/24hrs.** If Amiodarone converts rhythm then administer maintenance infusion.
- If no conversion, synchronize cardiovert at 360 joules.
- Cardiovert at 360 joules.

Note:

Automatic Implantable Cardioversion Defibrillator (AICD): Follow above listed protocol.

If the synchronizer will not synch on the QRS, delays in synchronizer occur, or the patient has a sine wave pattern where you cannot tell which portion is the QRS and T wave, turn off synch and blindly cardiovert (defibrillate). Stable ventricular tachycardia with short transport time may not require cardioversion at the scene. Paramedics should assure the mode of the defibrillator. Low energy unsynchronized shocks are very likely to produce ventricular fibrillation. If a problem occurs with synchronized cardioversion then the paramedic should perform high energy (standard) defibrillation shocks.

Adult Tachycardia (With Pulse)



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.

Washington County EMS	Ventricular Ectopy PVC's
Clinical Practice - Standing Protocols	AC 11
Adult Cardiac	

Introduction: Isolated or non-VT PVCs are rarely treated except for needed symptomatic relief. In the setting of an acute myocardial infarction, PVCs indicate the need to aggressively treat the ischemia/infarction with oxygen, nitroglycerin, morphine, and thrombolytic therapy. Simply making the PVCs diminish with Amiodarone or Lidocaine does little to the underlying pathology and can lure physicians into an invalid clinical security that the problem has been resolved. Routine prophylactic lidocaine administration is not recommended for patients with acute MI.

NOTE: If heart rate is less than 60/minute do not administer Amiodarone or Lidocaine.

Treat PVCs only if the patient is symptomatic:

- Chest pain
- R on T phenomena
- Multifocal PVCs
- Couplets
- Runs of Ventricular Tachycardia
- Potential for occurrence of R on T phenomenon

EMT - Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Intubate/start IV NS TKO or LR if NS is unavailable.
2. Vital Signs.

Paramedic (In addition to above)

1. Obtain ECG and monitor appropriately. If time allows the perform a diagnostic 12-LEAD ECG.
2. **Amiodarone 150 mg IVP Slow.**
3. **Start Amiodarone maintenance infusion at 1 mg/min.**

Washington County EMS	Induced Hypothermia
Clinical Practice - Standing Protocols	AC 12
Adult Cardiac	

Indications:

- All non-traumatic (post and intra arrest cooling) SCA patients with a temperature greater than 34 degrees Celsius.
- Any non-traumatic and non-hemorrhagic post arrest patient over the age of 13 years who has experienced a ROSC that is NOT immediately returned to an awake and alert mental status.
 1. Post arrest with GCS <9
 2. Initial patient temperature is greater than 34 degrees Celsius
 3. Patent airway preferably secured by ETT confirmed by at least three methods with one being EtcO₂ – capnography

Contraindications:

- Traumatic Arrest
- Cardiac Arrest resulting from hemorrhage
- Inability to manage the patients airway
- Obviously pregnant female

Equipment Needed:

- Liter bags of NaCl IV solution at a temperature of approximately 4 degrees (LR will be utilized if NS is unavailable) Celsius (39 degrees F)
- IV Tubing
- Pressure infusion devices
- Versed
- Vecuronium

Procedure:

- a. Patients meeting the above criteria will be cooled to a target range of 33-34 degrees Celsius (91F)
- b. Patients develop metabolic alkalosis with cooling. Do NOT hyperventilate.
- c. If airway is not secured with an ETT then do not proceed with hypothermia treatment without consulting physician. Recent studies have indicated possible pitfalls with supraglottic airway devices for long term management.
- d. Obtain a baseline temperature prior to inducing hypothermia
- e. Accurately document you neurological assessment
- f. Perform 12-LEAD ECG
- g. Assure adequate resources are available and **initiate transport to appropriate “cool hospital” without delay.** Do NOT delay transport to initiate induction of hypothermia.
- h. Establish IV/IO and infuse cooled saline at a rate of 30cc/kg (max of 2L) via pressure infuser. Do not run fluid through IV pumps as this will aid in warming of the fluid. Monitor for fluid overload.
- i. Expose patient and apply ice packs. Monitor patient frequently
- j. After initiating induced hypothermia via cooled saline infusion, observe the patient for signs/symptoms of shivering. Should shivering begin or the Patient reaches 34 degrees Celsius...

- k. **Administered Midazolam 2 mg Q 5 minutes with a Max of 10 mg. (OR utilize 1-3 mcg/kg Fentanyl – may consider consultation with medical control)**
- l. **Administer 0.1 mg/kg of Vecuronium to appropriately manage the hypothermic response max of 10 mg.**
- m. Paramedic should not administer Vecuronium without proper tube placement confirmation.
- n. If required: Dopamine >10 mcg/kg/min with a **goal map of 90 mmHg** (above map of 70 mmHg is acceptable)

Washington County EMS	A Fib / A Flutter RVR
Clinical Practice - Standing Protocols	AC 13
Adult Cardiac	

Introduction: Indications for treatment include sustained atrial fibrillation/flutter with a ventricular rate above 120/min with signs or symptoms (fatigue, palpitations, dizziness, diaphoresis, chest pain, dyspnea, decreased LOC, decreased B/P, shock). If the arrhythmia is sustained coronary ischemia may occur. **Caution:** monitor patient for developing hypotension.

EMT – Basic

1. ABCs
2. Administer supplemental oxygen if needed, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT – Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain a 6 second ECG strip to verify heart rate above 120/min and obtain 12 lead if time allows (per patient condition).
2. Start IV NS TKO (if not yet done) or LR if NS is unavailable

Stable Patient:

- a. Administer Diltiazem 0.25 mg/kg, max of 20 mg SIVP over 2 minutes
- b. After 15 minutes, if no change, repeat Diltiazem 0.35 mg/kg, max of 25 mg SIVP over 2 minutes
- c. If no response to second administration or Diltiazem is contraindicated, administer 150 mg amiodarone over 10 minutes.

Unstable, Conscious Patient:

- a. Versed 2 mg IV Q 5 minutes w/ max of 10 mg. –OR– Ketamine 0.25 mg/kg (**Must have a P3 present for administration of Ketamine**)
- b. Synchronize Cardiovert @ 120 joules. If not converted, Synchronize Cardiovert @ 200, 300, 360 joules.

Unstable, Unconscious Patient:

- a. Synchronize Cardiovert @ 120 joules. If not converted, Synchronize Cardiovert @ 200, 300, 360 joules.

Adult Medical Protocols



Washington County EMS	Alcohol Emergency
Clinical Practice - Standing Protocols	AM 01
Adult Medical	

Introduction: A patient who is showing signs of intoxication such as unconsciousness, confusion, disorientation, dizziness, has alcohol on the breath, anger and/or fainting.

EMT - Basic

1. ABCs.
2. Administer supplemental oxygen at 100% ASAP, with oximeter before & during O2, be prepared to assist ventilations if patient is hypoventilating.
3. Assessment/Vital Signs. CHECK FOR TRAUMA, place patient in a left lateral position on the stretcher.

EMT - Intermediate (In addition to above)

1. Intubate patient if indicated.
2. Check blood sugar with glucometer and draw blood. (draw slowly)
3. Start IV NS or LR if NS is unavailable TKO.

Paramedic (In addition above)

1. Obtain ECG.
2. Intubate patient if indicated. **May refer to RSI protocols.**
3. Check blood sugar with glucometer and draw blood. (draw slowly)
4. Start IV NS or LR if NS is unavailable, run wide open if systolic <90. If the systolic is >90 run TKO.
5. **THIAMINE 100 mg IVP.**
6. **If blood glucose is 50 or below, start IV of D10%, 250ml Solution IV. If the patient is uncooperative with the inability to allow the IV administration, give Dextrose 50ml/25gm Slow IVP, if available. May be repeated if indicated.**
7. **NARCAN 1 – 2 mg IV/IM/IN.**

Washington County EMS	Allergic Reaction / Anaphylaxis
Clinical Practice - Standing Protocols	AM 02
Adult Medical	

Introduction: Allergic reaction and anaphylaxis represent a spectrum of the same problems. At its extreme end, anaphylactic reactions are life threatening with a mortality rate of 3% requiring swift action. Care is focused on reducing or stopping the allergic reaction. The cardinal signs of anaphylaxis are stridor, bronchospasm, and hypotension. Allergic reaction can progress to anaphylaxis within minutes. Any patient presenting with urticaria (hives), shortness of breath, or shock felt to be due to allergic reaction such as a bee sting, penicillin shot, etc....

EMT - Basic

1. ABCs
2. Safely and rapidly remove patient from source of exposure, if necessary.
3. Administer supplemental **oxygen 100%** ASAP, with oximeter before & during O2.
4. Assessment/Vital Signs.
5. Place the patient in a trendelenburg position if indicated. Use this position with caution in patients with COPD, or extreme obesity since this position may cause respiratory compromise.
6. Assist ventilation's with BVM for severe respiratory distress.
7. **Albuterol 2.5mg Nebulizer, if indicated (dyspnea), may repeat as needed**

EMT - Intermediate (In addition to above)

1. Intubate if necessary
2. Start IV NS TKO or LR if NS is unavailable.
3. **Albuterol 2.5mg Nebulizer, if indicated (dyspnea), may repeat as needed**

Paramedic (In addition to above)

1. Obtain ECG.
2. Ventilate via BMV if necessary
3. Intubate if necessary (may refer to RSI if indicated)
4. Administer the appropriate following treatment:

Localized	Localized with Dyspnea	Systemic reaction & Shock (BP <90 Systolic)
1. IV of NS at TKO or LR if NS Is unavailable.	1. IV of NS TKO or LR if NS is unavailable.	1. IV of NS wide open or LR if NS is unavailable.
2. Diphenhydramine 50mg IV/IM	2. Epinephrine 1:1000 0.3mg SQ	2. Epi 1: 10,000 1mg IV
	3. Diphenhydramine 50mg IV/IM	3. Diphenhydramine 50mg IV/IM
	4. Albuterol 2.5mg Nebulizer if indicated (dyspnea), may repeat as needed	4. Consider Dopamine

NOTE: Following the administration of epinephrine, the patient should receive diphenhydramine (Benadryl) intravenously. Benadryl blocks both H1 and H2 histamine receptors, thereby limiting the effects of additional histamine release.

Key Points: Administer Epi with extreme caution in patients if evidence of Ischemic heart disease.

Washington County EMS	Asthma
Clinical Practice - Standing Protocols	AM 03
Adult Medical	

Introduction: Any patient who is short of breath and has a history of asthma, or any patient short of breath not felt to be in heart failure with wheezes. The goal of pre-hospital care is to maintain oxygenation, ventilation and reduce bronchospasm.

EMT - Basic

1. ABCs.
2. Give 100% supplemental oxygen, with oximeter before & during O2.
3. Place the patient in a sitting or semi-sitting position, assist ventilation if the patient tires and starts to hypoventilate.
4. Assessment/Vital Signs.
5. Report and document the use of any drugs, and/or inhaler within the previous 24 hours.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain ECG.
2. Start IV NS TKO (if not yet done) or LR if NS is unavailable.
3. **Administer Ipratropium Bromide 0.5mg / Albuterol Sulfate 3mg (Duo-Neb) Nebulizer.**
4. If needed, administer **Albuterol 2.5 mg/3ml Nebulizer, and repeat as necessary.**
5. If Severe, Consider **EPINEPHRINE 1:1,000** may be given, a dose of **0.3 mg** is given **subcutaneously** with tuberculin syringe
6. Consider **Magnesium Sulfate** for hyperactive airway disease not responsive to other methods. **1-2 grams IVP over 10-20 minutes.**

NOTE:

Use all forms of epinephrine with caution in any patient with cardiovascular heart disease, HR > 140, or age > 50. Pediatric give no more than 0.3 mg Epinephrine, regardless of age or weight. Be prepared to treat the patient appropriately should respiratory arrest occur.

- **Duo-Neb is only to be administered 1 time.**

Washington County EMS	COPD
Clinical Practice - Standing Protocols	AM 04
Adult Medical	

Introduction: Any patient who is complaining of shortness of breath with history of COPD, bronchitis, emphysema or heavy cigarette consumption. Heart failure must be ruled out (assisting in R/O of MI and/or failure to obtain a 12 Lead ECG). Patients with heart failure usually have a history of PND (paroxysmal nocturnal dyspnea) but not COPD patients. Patients with COPD usually have a history of chronic productive cough. When they get short of breath, the sputum increases in amount and/or changes color.

EMT - Basic

1. ABCs.
2. Administer O₂ by most appropriate method. Do not deprive the patient in distress of high oxygen flow, regardless of history.
3. Place the patient in a sitting or semi-sitting position, assist ventilation if the patient tires and starts to hypoventilate.
4. Assessment/Vital Signs.
5. Report and document the use of any drugs, and/or inhaler within the previous 24 hours.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Be prepared to intubate or RSI (see protocol) is indicated.
2. Obtain ECG. Monitor EtCO₂ and SpO₂.
3. Start IV NS TKO (if not yet done) or LR if NS is unavailable.
4. **Administer Ipratropium Bromide 0.5mg / Albuterol Sulfate 3mg (Duo-Neb) Nebulizer.**
5. **If needed, Albuterol 2.5 mg/3cc Nebulizer, and repeat as necessary.**
6. If performing CPAP on patient then administer inline nebulization.

NOTE: All patients should be carefully monitored during treatments, especially patients with history of coronary artery disease.

Note: When the Patient is unable to assist with hand held nebulizer, utilize the NRB with attachments of the hand held nebulizer. Remove the bag from the NRB and attach the nebulizer medication chamber, the tubing and connect to O₂ port.

- **Duo-Neb is only to be administered 1 time.**

Washington County EMS	CVA / Stroke
Clinical Practice - Standing Protocols	AM 05
Adult Medical	

Introduction: Definitive care for the patient with a “brain attack” (as it is now called) is no longer just rehabilitation. Hospitals now have the opportunity to intervene in acute central nervous system ischemia by treating certain patients with thrombolytic therapy. This opportunity carries with it a significant challenge-the rapid and careful assessment, selection, and treatment of appropriate, non-hemorrhagic patients within 3 hours of symptom onset. With the recent advent of stroke designation facilities these patients may require bypass protocol utilization. Refer to bypass protocol.

When lowering blood pressure in acute CVA WITHOUT marked elevation in diastolic pressure (130 mmHg or greater) you are decreasing blood flow to the brain and increasing ischemia. Hypoperfusion should be avoided to promote adequate blood flow to the brain; some recommendations suggest an ideal systolic blood pressure of 160-180 mmHg. However, every vascular accident is unique and “the brain” really knows what pressure is required and should in general be left untreated unless extremely elevated pressures are present (see below guidelines). A higher than normal pressure is indicated in stroke patients to perfuse in and around cerebral ischemia or hemorrhage. AHA recommends Labetalol due to the ease of titration and limited effects on cerebral blood vessels. Labetalol should be avoided in patients with asthma, cardiac failure, or severe cardiac conduction abnormalities.

EMT - Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs. Thrombolytic checklist.
4. Elevate head approximately 30 degrees to promote venous draining. (If trauma suspected elevate the head of the backboard 30 degrees.

EMT - Intermediate (In addition to above)

1. If time indicates start bilateral IV as directed below Paramedic's:
2. Draw blood
3. Check blood glucose and treat if indicated (under Paramedic Direction).

Paramedic (In addition to above)

1. Obtain ECG.
2. If onset of CVA is less than 90 minutes, then start bilateral **Saline IV's** tag one IV for possible use of t-PA only, and use other IV for drug administration. If over 90 minutes from onset of symptoms then just start one IV Normal Saline.
3. Draw blood.
4. Check blood glucose and treat if indicated.
5. Minimize on scene time. Remember: Time is death of the brain.

6. DO NOT treat the BP with any acute signs of CVA. (ie, paralysis, drooling, impaired speech, flaccid on one side of the face, ECT...), **unless BP is > 220/systolic or >120/diastolic or a MAP >130mm/hg.**
7. If BP is above 220/systolic or 120/diastolic or MAP>130mm/hg then administer **10 mg IVP of Labetalol Q10 minutes until desired effect.** Re-evaluate the blood pressure every 5 minutes.
8. **THIAMINE 100 mg IVP** should be administered IVP, empirically to all cachetic, malnourished, or chronic alcoholic patients with symptoms of CVA.
9. Transport to the hospital code 3.
10. When time permits, check the Thrombolytic Therapy Checklist for Ischemic Stroke. (SEE THROMBOLYTIC THERAPY CHECKLIST FOR ISCHEMIC STROKE)

Cincinnati Prehospital Stroke Scale

Facial Droop (have patient show teeth or smile):

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

Left: normal. Right: stroke patient with facial droop (right side of face). Kothari R, et al. *Acad Emerg Med.* 1997;4:986–990.

Arm Drift (patient closes eyes and holds both arms straight out 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 down compared with the other

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%.





APPENDIX C – Suspected Stroke Guidelines

ASSESSMENT GUIDELINES

Last Known Well: _____

Cincinnati Stroke Scale

- Facial Droop
- Arm Drift
- Abnormal Speech
- Complete Vital Signs

VAN – If Cincinnati Positive

- Limb Weakness plus one of the following:
 - Visual Disturbance
 - Aphasia
 - Neglect

Obtain Family Contact Information

Blood Glucose

12-Lead ECG

Thrombolytic Checklist

MINIMUM TREATMENT GUIDELINES:

- Activate a Stroke Alert
- Oxygen 2-4 L/min if required to correct hypoxia <92%; avoid hyperoxia
- IV NS TKO (as per skill level)
- 2nd Large Bore IV Line if Time Permits
- Consider antihypertensive agent for blood pressure above 220/110

TRANSPORT

- Rapid transport to appropriate facility as indicated.
- Divert to the closest hospital for airway or patient instability.
- Consider Air Medical transport for patient deterioration and decrease in transport time.

Treatment Times & Options for Qualifying Patients

- If last known well less than 4.5 hours:
 - Transport emergently to closest stroke center of any designation.
- If last known well greater than 24 hours:
 - Transport non-emergently to closest primary stroke center.
- If last known well is greater than 4.5 hours but less than 24 hours and the patient is VAN positive:
 - Transport emergently to the closest primary stroke center
- If last known well is greater than 4.5 hours but less than 24 hours and the patient is VAN negative:
 - Transport non-emergently to closest primary stroke center



APPENDIX D – Brazos Valley Stroke Centers

Comprehensive Stroke Center

- No Comprehensive Certified Stroke Center Within the Brazos Valley

Primary Stroke Center

- Baylor Scott & White Medical Center - College Station, TX
- CHI St. Joseph Health Regional Hospital – Bryan, TX
Thrombectomy Capable Center
- College Station Medical Center - College Station, TX

Acute Stroke Ready Hospital

- Baylor Scott & White Medical Center Brenham – Brenham, Texas
- CHI St. Joseph Health Burleson – Caldwell, Texas
- CHI St. Joseph Health Grimes – Navasota, Texas
- CHI St. Joseph Health, Madison – Madisonville, Texas

Requirements for Texas Stroke Center Designation

- 1) Level 1: Comprehensive Centers ("CSCs")
 - a. A 24/7 stroke team
 - b. Personnel with expertise to include vascular neurology, neurosurgery, neuroradiology, interventional neuroradiology/endovascular physicians, critical care specialists, advanced practice nurses, rehabilitation specialists with staff to include physical, occupational, speech, and swallowing therapists, and social workers.
 - c. Advanced diagnostic imaging: magnetic resonance imaging (MRI), computerized tomography angiography (CTA), digital cerebral angiography and transesophageal echocardiography.
 - d. Capability to perform surgical and interventional therapies such as stenting and angioplasty of intracranial vessels, carotid endarterectomy, aneurysm clipping and coiling, endovascular ablation of AVM's and intra-arterial reperfusion.
 - e. Supporting infrastructure such as 24/7 operating room support, specialized critical care support, 24/7 interventional neuroradiology/endovascular support, and stroke registry
 - f. Educational and research programs
- 2) Level 2: Primary Stroke Centers ("PSCs"):
 - a. 24 hour stroke team
 - b. Written care protocols
 - c. EMS agreements and services
 - d. Trained ED personnel
 - e. Dedicated stroke unit
 - f. Neurosurgical , Neurological, and Medical Support Services
 - g. Stroke Center Director that is a physician
 - h. Neuroimaging services available 24 hours a day
 - i. Lab services available 24 hours a day
 - j. Outcomes and quality improvement plan
 - k. Annual stroke CE requirement
 - l. Public education program
- 3) Level 3¹: Support Stroke Facilities ("SSFs"):
 - a. Develop a plan specifying the elements of operation they do meet.
 - b. Have a Level 1 or Level 2 center that agrees to collaborate with their facility and to accept their stroke patients where they lack the capacity to provide stroke treatment.
 - c. Identify in the plan the Level 1 or Level 2 center that has agreed to collaborate with and accept their stroke patients for stroke treatment therapies the SSF are not capable of providing
 - d. Obtain a written agreement between the Level 1 or Level 2 Stroke Center with their facility specifying the collaboration and interactions.
 - e. Develop written treatment protocols which will include at a minimum:
 1. Transport or communication criteria with the collaborating/accepting Level 1 or Level 2 center.
 2. Protocols for administering thrombolytics and other approved acute stroke treatment therapies.
 - f. Obtain an EMS/RAC agreement that:
 1. clearly specifies transport protocols to the SSF, including a protocol for identifying and specifying any times or circumstances in which the center cannot provide stroke treatment; and,
 2. specifies alternate transport agreements that comply with GETAC EMS Transport protocols.
 - g. Document ED personnel training in stroke.
 - h. Designate a stroke director (this may be an ED physician or non-Neurologist physician)
 - i. Employ the NIHSS for the evaluation of acute stroke patients administered by personnel holding current certification
 - j. Clearly designate and specify the availability of neurosurgical and interventional neuroradiology/endovascular services.
 - k. Document access and transport plan for any unavailable neurosurgical services within 90 minutes of identified need with collaborating Level 1 or 2 Stroke Center.

Washington County EMS	Dehydration
Clinical Practice - Standing Protocols	AM 06
Adult Medical	

Introduction: Dehydration can be a very serious condition and due to our geographical location in southeast Texas it can be encountered frequently paramedics. Patients suffering from dehydration may have a history of recent illness, fever, vomiting, and diarrhea. Physical findings for these patients may include poor skin turgor, little or no urine output, and dry mucous membranes. This protocol is also meant for those patients suffering from compensated hypovolemia (normotensive and tachycardia) and uncompensated hypovolemia patients (hypotensive and tachycardia).

EMT - Basic

1. Assessment including ABC's
2. Administer O2 by appropriate method
3. Initiate cooling mechanisms if appropriate (ice packs)
4. Check blood glucose level

EMT - Intermediate (In addition to above)

1. Establish IV access (large bore if possible)

Paramedic (In addition to above)

1. Treat blood glucose if indicated (see appropriate protocol)
2. Continuously monitor patient using ECG, SpO2, and EtCO2 (if indicated).
3. Perform 12-LEAD ECG
4. Administer IV bolus (20cc/kg) and re-assess blood pressure. Bolus may be repeated X2 to maintain adequate blood pressures.
5. Administer **4 mg IV/IM of Zofran** for complaints of nausea or vomiting.
6. **Or** may also consider **6.25 – 25 mg IVP of Promethazine** for complaints of nausea or vomiting. **Promethazine should be diluted with 10cc NS and given Slow IV Push. Do not exceed 25 mg in a 60 minute period.**

*Use caution with Promethazine administration in the elderly.

Washington County EMS	Diabetic Emergency
Clinical Practice - Standing Protocols	AM 07
Adult Medical	

Introduction: Sorting out the possibilities of disorders in glucose metabolism has been made much easier with the advent of the glucometer. The old adage of “when in doubt give sugar” is no longer valid when a glucometer is available. Diabetics may have abnormally high or low blood glucose leading to symptoms. The blood glucose level at which hypoglycemia occurs in an individual is variable, but is generally accepted as <50 mg/dL. Therefore, for simplification, hypoglycemia is defined as a blood glucose level < 50 mg/dL with any degree of altered mentation. Although known diabetic patients with alteration and blood glucose levels below 70 may also be treated according to this protocol. The goal in managing diabetic conditions in the pre-hospital setting is glucose measurement, treatment of identified abnormalities, and search for precipitating causes.

EMT - Basic

1. ABCs.
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.
4. A patient who has a history of diabetes and is exhibiting symptoms, administer **INSTANT GLUCOSE 15 grams (1 tube) by mouth**, for hypoglycemic patient who is able to swallow on their own and is capable of protecting their airway. **May repeat once if no response in 15 minutes.**

EMT - Intermediate (In addition to above)

1. Check blood sugar with test strip and draw blood. (Draw slowly).
2. If indicated by glucometer and neurological status is altered, start IV NS or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain ECG.
2. Check blood sugar with test strip and draw blood slowly.
3. If indicated by glucometer and neurological status is altered, start IV of **D10%, 250ml Solution IV**. If the patient is uncooperative with the inability to allow the IV administration, then **Dextrose 50 ml/25 gm Slow IVP may be administered, if available. May be repeated if indicated.**
4. Fluid therapy for hyperglycemia (BS > 300 mg/dL with associated signs and symptoms of hypo-perfusion). Infuse 1 liter of NS over 30 to 60 minutes, followed by NS at 150 ml/hr or LR if NS is unavailable. Monitor patient for signs/symptoms of fluid overload.

NOTE: Signs and symptoms of hypo-perfusion include weight loss, dehydration, hypotension and tachycardia.

Fluid therapy in hyperglycemia should be used with extreme caution in patients who cannot tolerate sudden, extreme fluid increases, (renal failure, dialysis, CHF, elderly ect.). REMEMBER that diabetics are prone to cardiovascular problems, and they typically present with less obvious symptoms. Refer to the appropriate protocol if additional problems are present or suspected.

Washington County EMS	Heat Related Emergencies
Clinical Practice - Standing Protocols	AM 08
Adult Medical	

Introduction: Heat related emergencies can be very common in southeast Texas due to heat and humidity being in excess during most of the spring, summer and fall. This protocol is intended to guide the paramedic through the treatment of emergencies. It can be difficult at times to make a sound judgment as to exactly what is going with the patient. These patients will normally be found with some exposure to heat. Patient may be normothermic or hyperthermic with any of the following signs and symptoms:

- Weakness
- Dizziness
- Nausea
- Vomiting
- Syncope or Near Syncope
- Severe Sweating
- Tachycardia

EMT - Basic

1. Assessment (monitor patient with diagnostic monitors as directed by the paramedic – SpO2, EtCO2, etc...)
2. O2 via most appropriate method (usually NRB @100% FiO2)
3. External cooling techniques
 - a. Remove clothing if necessary
 - b. Cold packs to armpits, groin, etc...
 - c. Use wet towels if needed
 - d. Be cautious about excessive cooling

EMT - Intermediate (in addition to above)

1. Initiate IV access and perform advanced airway management as indicated by the Paramedic.

Paramedic (in addition to above)

1. Monitor patient with ECG, SpO2, EtCO2
2. Vascular access (if not already done)
3. Administer fluid bolus @ 20cc/kg of NS or LR if NS is unavailable.
4. Trendelenburg if patient is hypotensive
5. If patient is nauseous or vomiting refer to appropriate protocol.
6. If patient is unconscious or unresponsive or has any need for advanced airway management then the paramedic may opt to intubate or perform RSI procedures when indicated.

HEAT CRAMPS

- Cramps in extremities or abdomen

HEAT EXHAUSTION

- Temperature Normal or 1-2 degrees above normal w/ weakness, dizziness, nausea, syncope, profuse sweating and or tachycardia

HEAT STROKE

- Temperature of 105 Degrees F or greater and any of the following: altered mental status, seizure activity, lack of sweating or cardiac arrest

Washington County EMS	Hypertension
Clinical Practice - Standing Protocols	AM 09
Adult Medical	

Introduction: This protocol is for the treatment of life threatening elevation of blood pressure. For this protocol the guideline for the definition of hypertension will be a systolic of 180 mmHg or a diastolic of 100 mmHg, with signs or symptoms. If the blood pressure is 220/120 (map 130 mmHg) it **MAY** be treated with or without signs or symptoms.

EMT - Basic

1. ABCs
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Complete mental status assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable and draw blood if possible.

NOTE: IF SIGNS AND SYMPTOMS OF A CVA (BRAIN ATTACK) ARE PRESENTED THE PATIENT SHOULD NOT BE TREATED FOR HYPERTENSION. TREATMENT COULD CAUSE CEREBRAL ISCHEMIA. IF SIGNS AND SYMPTOMS OF CVA ARE PRESENT, REFER TO THAT PROTOCOL.

Should any one or more signs and symptoms of a hypertensive crisis (restlessness, shortness of breath, blurred vision, nausea or vomiting, headache, dizziness, vertigo) accompany the elevated blood pressure, treat the blood pressure.

Paramedic (In addition to above)

1. Obtain ECG.
2. Start IV NS TKO or LR if NS is unavailable and draw blood if possible.
3. **Administer Labetalol 10mg Slow IVP.** Monitor Vital Signs every five minutes after the drug is administered.
4. Transport code one to ER.
5. **Should blood pressure remain elevated with no change in signs/symptoms after 10 minutes, re-administer 10mg of Labetalol.**

Washington County EMS	Nausea / Vomiting
Clinical Practice - Standing Protocols	AM 10
Adult Medical	

Introduction: The purpose of this protocol is to alleviate the nausea or vomiting episode occurring with a patient due to a primary medical problem (i.e. AMI, CVA, allergic reaction, side effects from medications, flu like symptoms, ear infections, etc.), or simply from unknown etiologies. The primary objective of this protocol is to increase patient comfort by alleviating the nausea and vomiting symptoms, as well as decrease the chance of aspiration (especially with a fully spinal immobilized patient).

EMT - Basic

1. ABCs, protect the patient's airway (proper positioning) and have suction readily available.
2. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. Start an IV NS at TKO or LR if NS is unavailable. (if dehydrated treat appropriately).

Paramedic (In addition to above)

1. Obtain ECG
2. Adults (13 years and older or more than 40 kg weight): Administer **Ondansetron 4 mg IV/IM.**

Contraindications:

- Known Hypersensitivity to Ondansetron
- Child less than 1 Year of Age unless dosage specified by on line medical control

Possible Adverse Events:

- Dizziness
- Sedations
- Headache
- Muscular Pain
- Shivers
- Fatigue
- Allergic Reaction or reaction at injection site
- Chest Pain
- Anxiety
- Hypotension
- Cold Sensation
- Pyrexia (fever) – especially in children

1. Or may also consider **6.25 – 25 mg IV Promethazine** for complaints of nausea or vomiting. **Promethazine should be diluted with 10cc NS and given Slow IV Push. Do not exceed 25 mg in a 60 minute period.**

Contraindications:

- Hypotension
- Altered Mental Status

Possible Adverse Events:

- Dizziness
- Vertigo
- Drowsiness
- Confusion in the elderly
- Respiratory Depression in the pediatrics

Washington County EMS	Pain Management
Clinical Practice - Standing Protocols	AM 11
Adult Medical	

Introduction: Pain frequently accompanies fractures, dislocations, significant musculoskeletal injuries and burns. If a patient with these injuries does not have respiratory or cardiovascular compromise, give Fentanyl Citrate or Morphine Sulfate for pain relief to increase comfort and reduce anxiety. Pain management is considered a high priority and patients should not go throughout transfer in severe pain unless absolutely necessary. The in charge paramedic has two primary options for pain management. For fast and short term relief of pain, the paramedic should use Fentanyl Citrate which has a rapid onset time and relatively short duration time (@~30 minutes). Fentanyl also has fewer cardiovascular affects than Morphine and virtually no histamine release or emetic effects.

However, there are certain situations that may indicate the use of MS over Fentanyl (long term pain management, when cardiovascular affects are wanted, burns, etc...) so the pharmaceutical decision for pain management is left up to the in charge paramedic. If he/she has any doubt then immediate consult with medical control should be performed. This protocol is intended to be used by all Paramedics who have been through the Pain Credentialing Process and have proven themselves competent in this protocol. All other Paramedics will need to call the on duty Supervisor or medical control for orders prior to administering pain management.

Paramedic

1. Scene safety/ABCs
2. Administer supplemental oxygen with oximeter if indicated.
3. Assessment/Vital Signs.
4. Obtain ECG and monitor EtCO₂ (continuous monitoring)
5. Start an IV at TKO.
6. **Fentanyl Citrate 25-50 mcg IV/IM/IN Q 2-5minutes until desired effect. Do not exceed 100mcg in a 5 minute period. Paramedic may choose to administer weight based dosage of 1 mcg/kg IV/IM/IN repeated every 2-5 min as needed as an alternative dosage for pain associated with large burns, pelvic fractures, and fractures of the long bones. Do not exceed 2mcg/kg in a 5 min period. EKG, EtCO₂, and SpO₂ monitoring is mandatory when given weight based dose. Patients hemodynamic status / pain level should determine max dosage of Fentanyl.**
7. **Morphine Sulfate 2 - 10 mg IV/IM/IN in 2 mg Increments.** It may be necessary to administer **4 mg Zofran** (Adults) if patients begin to complain of nausea or begins vomiting.
8. **Ketamine 0.25 mg/kg SIVP Q 2-5 minutes until desired effect. Do not exceed 1 mg/kg in a 20 minute period. Additional dosing require medical control approval. (Must have a P3 present for administration of Ketamine)**
9. **Or may also consider 6.25 – 25 mg of Promethazine IVP for complaints of nausea or vomiting. Promethazine should be diluted with 10cc NS and given Slow IV Push. Do not exceed 25 mg in a 60 minute period.**

Warnings:

1. May cause hypotension.(morphine)
2. May cause respiratory depression
3. May cause nausea and vomiting.(morphine)
4. Ketamine **MUST** be given SIVP (over 60 seconds)
5. Ketamine can cause nystagmus (rhythmic eye movement) but is transient
6. Do not use in head injury patients unless performing RSI
7. Do not use in undiagnosed abdominal pain.
8. Do not use in combination with excessive alcohol, barbiturates, or other depressant drugs.
9. Remember, pts age, weight, and daily medications should be taken into consideration before given any pain management.
- 10. Morphine and Fentanyl can be reversed with Narcan.**

Washington County EMS	Psychiatric Emergency
Clinical Practice - Standing Protocols	AM 12
Adult Medical	

Introduction: Psychiatric emergencies require careful assessment. It is important to maintain a professional demeanor with the necessary degree of authority in one's voice. In all cases, substance-induced disorders (intoxication, withdrawals, etc.), organic causes (cerebral lesions etc.), endocrine emergencies (hypoglycemia and hyperglycemia etc.), and hypoxia must be ruled-out before a patient's condition is diagnosed as psychiatric. Remember that these patients are often agitated, suicidal and may be under the influence of alcohol or drugs. This creates a particularly hazardous situation for pre-hospital providers. A behavioral emergency is an intrapsychic (psychiatric condition); environmental, situational, or organic alteration that results in behavior that cannot be tolerated by the patient or other members of society.

EMT - Basic

1. Scene safety.
2. ABCs
3. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
4. Assessment/Vital Signs.
5. Physical restraints as needed for patient and provider protection (must clearly document need).

EMT - Intermediate (In addition to above)

1. If indicated by the paramedic start an IV of NS at TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Obtain ECG if indicated.
 2. Treat the following if the patient is a risk to themselves or others.
- Due to the numerous types of disorders (depression, schizophrenia, anxiety disorder, manic disorders, suicide concerns, etc...) it difficult to accurately assess a patient's mental sanity in the field. The paramedic primary concern should be safety of himself, crew then the patient.
 - Once patient contact is made these patients should not be left alone unless crew safety dictates. These patients should have constant vigilance.
 - Refer to patient restraint protocol when indicated.
 - If sign of EPS (extra pyramidal syndrome) then treat with **Diphenhydramine 50mg IV/IM.**
 - Law enforcement should be consulted with any suicidal or overdose patient. These patients can-not sign a refusal.

NOTE: EPS SIGNS-

- Dystonia (muscle tone)
- Dyskinesia (a defect involuntary movement)
- Akathisia (inability to sit still)
- Abnormal posture
- Excessive salivation

Washington County EMS	Seizures / Epilepticus
Clinical Practice - Standing Protocols	AM 13
Adult Medical	

Introduction: Seizures are defined as an episode of abnormal neurologic function caused by an abnormal electrical discharge of brain neurons. Remember that “not everything which falls down and shakes is a seizure.” There are many episodic disturbances of neurological function, which can mimic a seizure. Status Epilepticus is a true medical emergency defined as either continuous seizure activity for 30 minutes or more, or two or more seizures which occur without full return of consciousness. Most patients with seizure disorders evaluated by EMS are post-ictal, having seized prior to EMS arrival.

EMT - Basic

1. ABCs, do not force anything into the patient’s mouth.
2. Administer supplemental oxygen 100% ASAP, with oximeter before and during O2, assist ventilations with BVM if indicated.
3. Assessment/Vital Signs.
4. If no evidence of significant trauma, place patient in a left lateral position on the stretcher. Secure the patient; LOOSELY strap the patient to the stretcher; do not over-restrain. If the patient has a seizure, tight restraints may cause injury to the patient. If the patient has another seizure, do not try to force anything into the mouth or to restrain the patient. If trauma or head injury is suspected, use the protocol also.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO or LR if NS is unavailable.

NOTE: Look for reason for seizure:

- a. Check temperature in children <6 years of age or anyone who you suspect for heat stroke or heat exhaustion.
- b. Check blood sugar with test strip, treat if indicated.
- c. Check ECG.
- d. Consider causes for seizures other than hypoglycemia and seizure disorder, then refer to the appropriate protocol (examples can include overdose, hypoxia, eclampsia, and alcohol withdrawal).

Paramedic (In addition to above)

1. Obtain ECG.
2. Start IV NS TKO or LR if NS is unavailable. (if not yet done).
3. **IF THE PATIENT IS ACTIVELY SEIZING** administer **Versed 2 mg IM/IN with a max of 10 mg.**
4. Observe for respiratory depression and hypotension.
5. If no IV access is available administer **Versed 2 mg IM/IN with a max of 10 mg.**

Washington County EMS	Toxicological Emerg/Poisonings/Overdose
Clinical Practice - Standing Protocols	AM 14
Adult Medical	

Introduction: It is impossible to include all potential toxic exposures or poisonings in this protocol. Management of the poisoned/exposed patient focuses on several principles. Decontamination limits further absorption and minimizes the extent of toxicity; supportive care limits the effects of the serious complications of poisoning on the primary systems at risk; and definitive care limits the severity or duration of toxicity through the use of pharmacologic antagonists (antidotes) or enhances elimination of the toxin itself. The poisoning/exposure may be accidental or intentional. It is important to remember that a toxic exposure poses a significant risk to both rescuer and patient. Appropriate scene management and decontamination are critical.

EMT - Basic

1. Scene safety (park unit upwind, use appropriate Personal Protective Equipment). Identify substance and assure appropriate patient decontamination completed by trained, equipped providers.
2. ABCs.
3. Administer supplemental oxygen 100% ASAP, with oximeter before & during O2.
4. Assessment/Vital Signs. Obtain history of the incident (what, when, how much, other drugs or alcohol ingested, circumstance around event).
5. Contact the Poison Control Center: 1-800-222-1222.
6. Flush skin/mucous membranes with appropriate solution, if indicated.

EMT - Intermediate (In addition to above)

1. Start IV NS TKO if indicated and draw blood slowly or use LR if NS is unavailable.
2. Check blood sugar with glucometer.
3. Intubate the patient if indicated.

Paramedic (In addition to above)

1. Obtain ECG.

Conscious Patient:

- Contact Poison Control first, give **15 grams Activated Charcoal followed by a minimum of 8 ounces of warm tap water.**
- If the patient vomits, inspect for pills and record findings.
- If possible alcohol, administer **Thiamine 100 mg IV.**

Unconscious Patient:

- Start IV NS TKO, if not initiated yet.

- Check blood sugar, give D50 if indicated.
- Administer **Narcan 2 mg IV/IM / IN**
- If possible Alcohol, administer **Thiamine 100 mg IV**.
- If the patient is at the risk for aspiration due to being in an unconscious state, the paramedic may intubate or refer to RSI protocol.

NOTES:

*Ammonia Inhalants – May be use at Paramedic Discretion with suspected comatose/lethargic Patients

*Every attempt should be made to convince attempted suicide patient to go with the ambulance to the hospital instead of law enforcement. (Suicidal patient cannot sign refusal)

*Be aware that the history from an overdose patient is often inaccurate, and additional amounts or different drugs may have been ingested.

*The 3 most common Calcium Channel Blockers include Verapamil, Nifedipine, and Diltiazem. Others include: Nicardipine, Nimodipine, Felodipine, Amlodipine, Bepridil, Flunarizine, Isradipine, Nisoldipine, Nitrendipine. Symptomatic Calcium Channel Blocker overdose (bradycardia, conduction delays, hypotension, lethargy, slurred speech, nausea/vomiting): **Administer Atropine 1.0 mg IVP for Symptomatic Bradycardia.**

*Symptomatic Tricyclic Antidepressant overdose: (sustained tachycardia >120 bpm, widened QRS complex (>.10), or hypotension not responsive to IV fluids): **Administer Sodium Bicarbonate 1 mEq/kg IV bolus over 2 minutes.**

*Symptomatic Organophosphate poisoning (muscle fasciculation, diarrhea, wheezing, abdominal cramping, salivation, seizures, altered mental status): **Administer Atropine 2 mg bolus every 5 to 15 minutes until signs of atropinization occur (mydriasis, tachycardia, flushing, anhidrosis, drying of secretions).**

Washington County EMS	Sepsis
Clinical Practice - Standing Protocols	AM 15
Adult Medical	

Introduction: Sepsis is a clinical syndrome that results from the human body's immune response. When the immune system senses a threat; bacterial, fungal, viral, or parasitic, the body responds with white blood cell production and localized inflammatory responses. In severe sepsis, the body's balance between inflammatory and anti-inflammatory chemical responses becomes unbalanced. A release of pro-inflammatory mediators creates an uncontrolled inflammatory response. This systemic inflammatory response is known as SIRS(Systemic Inflammatory Response Syndrome). A small percentage of patients with uncomplicated sepsis will progress to severe sepsis as defined by one or more organs begin to show signs of failure. Indications for treatment will meet 2 or more of diagnostic criteria. Diagnostic criteria will include Fever above 38.3 C or 100.9 F, Hypothermia (core temp below 36 C or 96.8 F), Heart Rate above 90bpm, Respiratory rate above 20 bpm.

Some patients will exhibit signs of organ dysfunction, which include Lactate above 2 or ETCO2 below 25, SBP <90 or 40mmHg lower than last normal BP for patient. A MAP <65 also signifies organ dysfunction.

EMT - Basic

1. ABC's
2. Administer supplemental oxygen as needed, with SpO2 and EtCO2 before & during O2.
3. Assessment/Vital Signs including temperature
4. Obtain blood glucose reading
5. Obtain blood lactate reading

EMT - Intermediate (In addition to above)

1. Manage airway as necessary
2. Draw blood (gray tube is priority)
3. Administer fluids (If signs of organ dysfunction, 30cc/kg bolus)
4. Draw blood cultures if trained to do so, or call for a field blood culture draw

Paramedic (In addition to above)

1. Obtain ECG.
2. Vasopressors may be administered after initial fluid bolus is ineffective with a systolic blood pressure of 90 or a MAP of 65.

Transport destination should be to a facility that has a sepsis protocol/policy in place. Priority should be to get the patient to IV antibiotics as quickly as possible. P3 Credentialed Paramedics OR those who have specifically been trained by the Baylor, Scott and White-Brenham Lab can perform the blood culture procedure. They will have demonstrated the ability to complete this procedure adequately with the emphasis on the aseptic technique and avoiding contamination.

Sepsis Alert

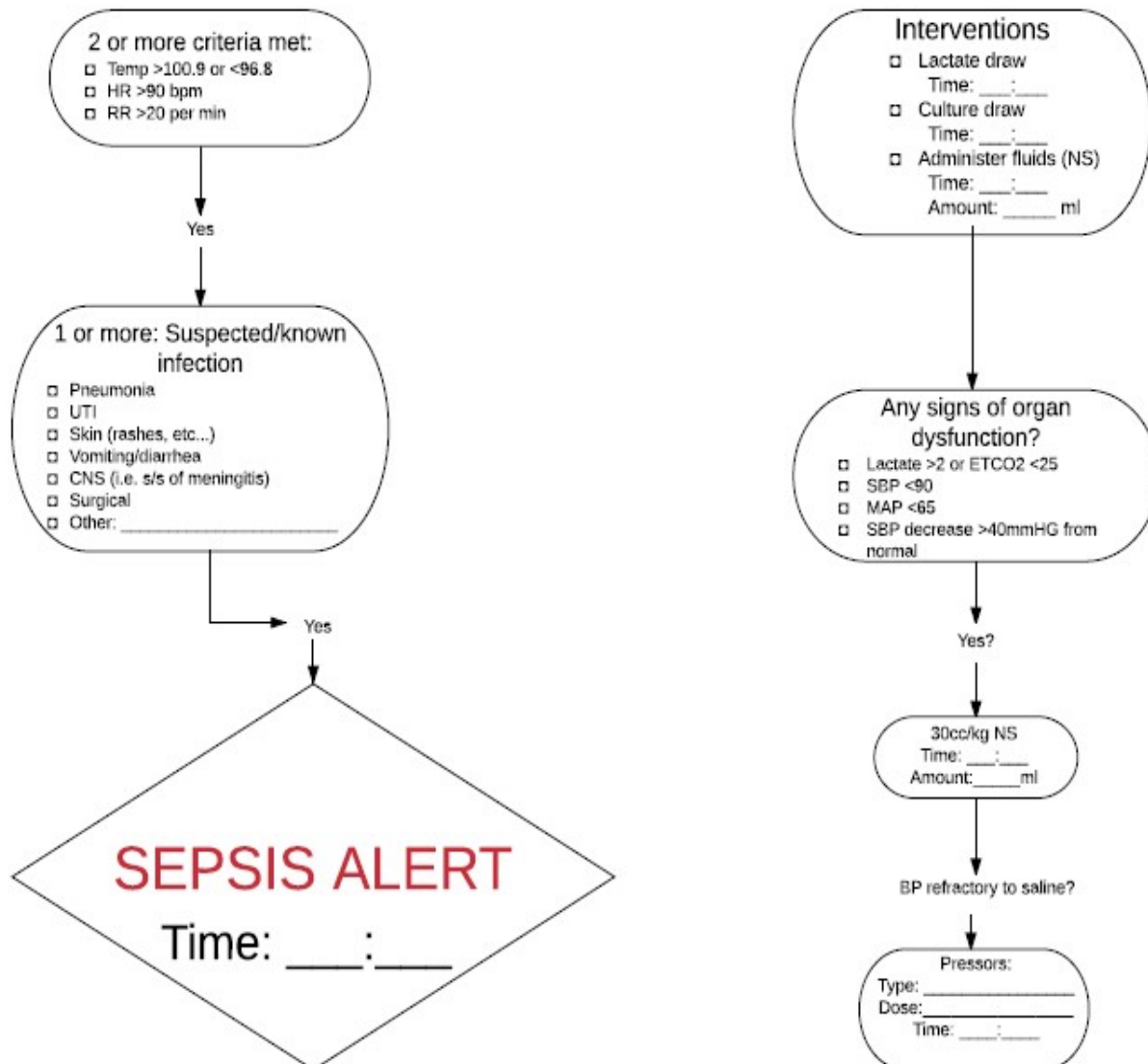


Name: _____

DOB: ____/____/____

Vitals: Temp: _____ HR: _____ RR: _____ BP: _____ MAP: _____ ETCO2: _____ BGL: _____

GCS: _____



Lead Medic: _____ Sign _____ Print _____

Medic Drawing Cultures: _____ Sign _____ Print _____

Washington County EMS	Mental Health Transport Guidelines
Clinical Practice - Standing Protocols	AM 16
Adult Medical	

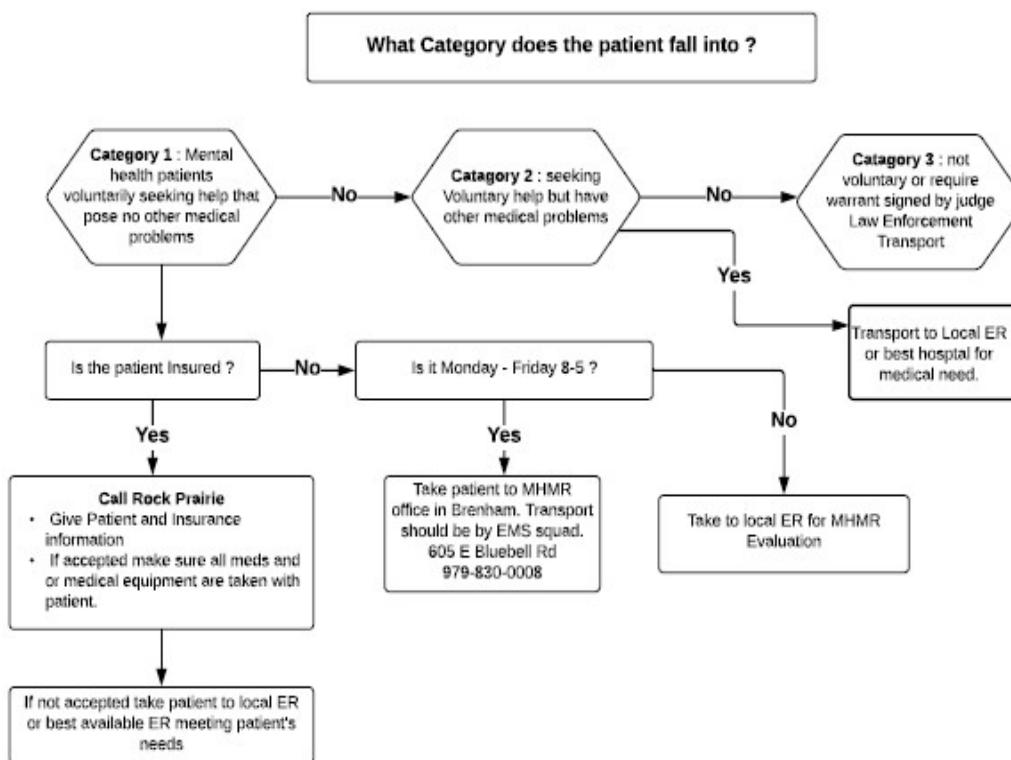
WCEMS Mental Health Transport Guidelines

AM-16

March 2018

These are guidelines for the transport of mental health patients that are voluntarily seeking help:

Mental Health patients are placed in three different categories. This protocol helps ensure that patients get to the proper facility the first time. Category one and two patients will be transported by EMS using the algorithm below. Category three patients will usually be transported by Law Enforcement although at times both EMS and LE will be needed.



Category 1 are mental health patients voluntarily seeking mental help that pose no other medical problems (ie.. currently having chest pain, SOB, diabetic emergency, or are a dialysis patient or a patient with an LVAD, or mental retardation).

Category 2 are mental health patients that are voluntarily seeking mental help but DO POSE other medical problems OR are aggressive, require restraints, need IV therapy, have unstable vitals, or mental retardation.

Category 3 are mental health patients that are not voluntary and require law enforcement intervention or a warrant signed by a judge.

AM-16

March 2018

Adult Trauma Protocols



Washington County EMS	Basic Trauma Life Support (BTLS)
Clinical Practice - Standing Protocols	AT 01
Adult Trauma	

Primary Survey: Less than two minutes. Does not necessarily have to be in exact order

1. Scene Survey
2. LOC
3. C-Spine Control
4. Airway Assess
5. Pulse Check
6. Skin Qualities: Temperature, Color, Dry/Moist
7. Neck : Trauma, JVD, Tracheal Deviation
8. Chest: DCAPP/BLS/TIC, Breath Sounds (two fields only)
9. Abdomen: Rigid, Pain, Etc.
10. Pelvis: DCAPP/BLS/TIC
11. Lower extremities: DCAP/BLS/TIC/PMS
12. Upper extremities: DCAP/BLS/TIC/PMS
13. Back check

Critical Interventions:

1. Basic or Advanced Airway Management (In-line intubation)
2. Removal of airway obstruction
3. Stop major bleeding
4. Seal sucking chest injury
5. Decompress tension pneumothorax

Secondary Survey:

1. Re-assess LOC/ABCs
2. Vital signs
3. Hx: SAMPLE: s/s, allergy, medication, past history, last meal/fluid intake,
Event(s) leading up to incident
4. Head: Pupils: DCAP/BLS/TIC
5. Neck
6. Chest: Breath Sounds (four fields)
7. Heart tones
8. Abdomen
9. Pelvis (remember to scoop for fracture)
10. Extremities: DCAP/BLS/TIC/PMS
11. Skin Qualities
12. Repeat vital signs

Washington County EMS	Burns
Clinical Practice - Standing Protocols	AT 02
Adult Trauma	

THERMAL BURNS

EMT - Basic

1. Scene safety (turn off the power or contact the electric department, extinguish flames, wear PPE).
2. Evaluate the patient according to Initial Assessment & Treatment of Trauma Patient. Look closely for any evidence of inhalation injury (hoarseness, stridor, sooty sputum, and singed facial hair). **May refer to Rapid Sequence Intubation Protocols.**
3. Prepare for rapid transport, if significant burn or inhalation injury.
4. Remove any jewelry, belts, shoes, etc. from areas of burns as these object may retain heat and increase the burn; also swelling of burned areas may make subsequent removal difficult. In addition, remove any burned or singed clothing that is not stuck to the underlying skin of the patient.
5. Assess depth of burn (first, second, third) as well as the total area of the burn (use “rule of nines) or for smaller/irregular burns, the size can be estimated using the surface of the victim’s hand as about 1% to the total body surface area (TBSA).
6. Perform local burn care as follows:
 - a. Ice is absolutely contraindicated.
 - b. Do not apply ointments or solutions to burns.
 - c. Do not attempt to open blister.
 - d. **Small Burns (2nd degree < 10% of TBSA):**
 - Wear sterile gloves and mask until burn(s) are covered.
 - Cooling should be done with sterile water, but this should be undertaken for a maximum of one minute since the burn is only 1 or 2 millimeters thick. Cooling for longer periods of time is detrimental and induces hypothermia. With extended transport time rotation of the cooling process should be administered.
 - Following the brief period of cooling, manage burns by the use of clean, dry sheets and blankets to keep the patient warm and prevent hypothermia.
 - e. **Larger Burns: 10% TBSA 2nd or 3rd degree**
 - Wear sterile gloves and mask until burn(s) are covered.
 - Cover with dry, sterile or clean sheets (It is not necessary to have sterile sheets). Do not use wet dressing since they may cause hypothermia.
 - Cover with additional sterile clean sheets or blankets to prevent loss of heat.

EMT - Intermediate and Paramedic (In addition to above)

7. **If evidence of inhalation injury present with progressive airway compromise, intubation** may be required if long transport times. **Refer to RSI protocols.**
8. IV therapy on major burns should be attempted en-route to hospital as not to delay arrival to receiving facility.

Burns IV Fluid Resuscitation Formula:

Initial Fluid Management : *Pediatric 0-5 years old, 125ml/hr*

Child 6-13 years old, 250 ml/hr

Adult, 500 ml/hr

Maintenance Infusion: *Adult: 2ml x weight in kg x % TBSA*

Child: 3ml x weight in kg x % TBSA

9. Pain Management:

- a. **Large Burns:** With moderate to severe pain give **Morphine Sulfate 0.1mg/kg IV push**, with SBP >90 mm Hg. **Subsequent doses of 0.05mg/kg can be repeated every 5 min until pain is relieved and SBP is >90mm Hg.** If patient is anxious, consider anti-anxiety medication, **2mg of Midazolam IV Q 5 minutes with a Max of 10 mg.** Pulse Oximeters, EtCO₂, and ECG monitoring is mandatory during and after administration of Morphine Sulfate and Midazolam.
- b. **Small Burns:** With moderate pain give **Morphine Sulfate 2 mg increments Q 5 minutes with a Max of 10 mg.**

10. Early notification of receiving facility

11. Consider Air-Medical activation and burn facility locations.

NOTE: Shock in the very early stages of a burn is generally not associated with the burn, thus one should rule out other life-threatening injuries.

CHEMICAL BURNS

EMT - Basic, EMT - Intermediate & Paramedic

1. Scene safety.
2. Evaluate the patient according to Initial Assessment & Treatment of Trauma Patient.
3. Remove any and all clothing that has been saturated or contaminated with the chemical.
4. If dry chemicals are present on the skin, brush them off prior to irrigation (contact medical control with name and amount of chemical as special considerations are needed for certain chemicals).
5. Flush the chemical off of the body with large volumes of water or saline unless contraindication to irrigation with water exists (remember Sodium metal generates tremendous heat when exposed to H₂O). If chemical burns involve the eyes, flush with copious amounts of water or Normal Saline: using a minimum of 2 liters for each eye. If the substance is alkaline in nature perform continuous irrigation during transport. Contact lenses should be removed properly if present.

ELECTRICAL BURNS / ELECTROCUTION

EMT - Basic

1. Scene safety.
2. Evaluate the patient according to Initial Assessment & Treatment of Trauma Patient.
3. Cover entrance and/or exit wounds with dry sterile dressings.
4. Splint any fractures or deformities as required.

EMT - Intermediate & Paramedic (In addition to above)

1. Obtain ECG, SpO₂, and EtCO₂ monitoring and treat if indicated
2. Establish 2 large bore IVs with Normal Saline or Lactate Ringers if NS is unavailable.
3. **Pain Management:**
 - a. **Large Burns:** With moderate to severe pain give **Morphine Sulfate 0.1 mg/kg IV push**, with SBP >90 mm Hg. **Subsequent doses of 0.05mg/kg can be repeated every 5 min until pain is relieved and SBP is >90mm Hg.** If patient is anxious, consider anti-anxiety medication, **2mg of Midazolam IV Q 5 minutes with a Max of 10 mg.** Pulse Oximeters, EtCO₂, and ECG monitoring is mandatory during and after administration of Morphine Sulfate and Versed.
 - b. **Small Burns:** With moderate pain give **Morphine Sulfate 2 mg increments Q 5 minutes until pain is relieved with a Max of 10 mg.**
4. Continuously monitor for arrhythmias.

Washington County EMS	Closed Head Injury
Clinical Practice - Standing Protocols	AT 03
Adult Trauma	

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient, suspect C-spine injury, & provide 100% O2.
2. If the patient is hypoventilating, assist or provide ventilation with supplemental oxygen, maintaining good ventilation (not hyperventilation) at rate of about 15 breaths per minute.
3. Have suction readily available. Be prepared to log roll patient, should vomiting occur (not with pelvic fracture).
4. Take seizure precautions (ie, IV, O2, & Monitor SpO2, EtCO2, and ECG) and prepare for rapid transport.
5. Record baseline observation (Glasgow Coma Score), sensation, and voluntary motor activity.

EMT - Intermediate (In addition to above)

1. Initiate IV access in addition to above using Normal Saline solution and consider advanced airway management strategies.

Paramedic (In addition to above)

1. May require endotracheal intubation while observing C-spine precautions. If the patient is unconscious or had decrease LOC with limited gag reflex, endotracheal intubation should be performed.
2. Initiate two large bore IVs Normal Saline and run at appropriate rate. In the past it was thought that fluids should be limited in head-injured patients. It has been found that the danger of increasing brain swelling by giving fluids is much less than the danger of allowing the patient to be hypotensive.
3. Apply cardiac monitor and treat the arrhythmia.
4. If seizures occur and are prolonged greater than 15-30 seconds, administer **Midazolam 2 mg Q 5 minutes with a Max of 10 mg** until seizure stops. If intubation has not been performed prior to seizure, it should be considered after diazepam has been administered so that hyperventilation if needed may be more effectively performed and the airway better protected.
5. Refer to RSI protocol if indicated.

NOTE: Recently it has been shown that hyperventilation actually has only a slight effect on brain swelling, but causes a significant decrease in cerebral perfusion from vasoconstriction. This causes cerebral hypoxia. The injured brain does not tolerate hypoxia. Hypoventilation or hypoxia increases mortality. Hyperventilation for head injury is no longer recommended, **except in herniation syndrome**. Characterizations of herniation syndrome are decrease LOC, rapidly progresses to coma, dilation of the pupil and outward-down-ward deviation of the eye on the side of the injury, paralysis of the arm and leg on the side opposite the injury, and decerebrate posturing.

Washington County EMS	Drowning / Near Drowning
Clinical Practice - Standing Protocols	AT 04
Adult Trauma	

EMT - Basic

1. Be aware of potential for C-spine injury in association with drowning. Try to immobilize or protect the C-Spine during rescue **when indicated**. Move the patient to stable surface.
2. ABCs
3. Administer supplement oxygen 100% ASAP, use oximeter, have suction ready, be prepared to log roll if vomiting occurs.
4. Treat for hypothermia if indicated.
5. Assessment/Vital Signs.

EMT - Intermediate (In addition to above)

1. If indicated by paramedic intubate (in-line endotracheal intubation).
2. Start IV NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. If indicated, provide more definitive airway (in-line endotracheal intubation) while observing C-spine precautions, if not yet done.
2. Start IV NS TKO or LR if NS is unavailable, if not yet done.
3. Obtain ECG and treat arrhythmia as indicated.
4. Always transport to hospital.

Washington County EMS	Eye Injuries
Clinical Practice - Standing Protocols	AT 05
Adult Trauma	

CHEMICAL SUBSTANCES TO THE EYE(S):

EMT - Basic, EMT - Intermediate & Paramedic

1. Evaluate the patient according to Initial Assessment & Treatment of Trauma Patient.
2. Flush the affected eye(s) with copious amounts of water, Normal Saline – using a minimum of 2 liters for each eye. If the substance is alkaline in nature, perform continuous irrigation during transport. Contact lenses should be removed correctly if present.

BLUNT OR PENETRATING EYE INJURIES:

EMT - Basic, EMT - Intermediate & Paramedic

1. Evaluate the patient according to Initial Assessment & Treatment of Trauma Patient.
2. Have the patient lie flat or with the head slightly elevated.
3. DO NOT attempt to open the injured eye(s).
4. Instruct the patient to close both eyes.
5. DO NOT place any type of compressive dressing over the injured eye(s), and be careful not to apply any pressure to the eye.
6. In general, DO NOT remove any penetrating object from the eye.

Washington County EMS	Helmet Removal
Clinical Practice - Standing Protocols	AT 06
Adult Trauma	

Introduction: The following guidelines should be followed when dealing with a patient who has a possible spinal injury and is wearing a helmet.

EMT - Basic, EMT - Intermediate & Paramedic

Motorcycle Helmets (and other helmet types, not including football): These helmets should be VERY carefully removed using proper two-person technique to ensure proper cervical alignment. No patient should be immobilized without proper removal of these helmets. Airway is not accessible with a helmet on.

1. One rescuer stabilizes the helmet by placing his/her hands on each side of the helmet, with the fingers on the mandible to prevent movement. The second rescuer loosens the strap under the chin.
2. The second rescuer places one hand on the mandible at the angle of the jaw and the other hand posteriorly at the occipital region. The rescuer holding the helmet pulls the sides of the helmet apart and gently slips the helmet halfway off the patient's head then stops.
3. The rescuer maintaining stabilization of the neck repositions and slides his or her posterior hand superiorly to prevent the head from falling back after complete helmet removal. After the helmet is completely removed, the rescuer can proceed with spinal immobilization.

Football Helmets: Should be left on if at all possible during immobilization of these patients. These patients also have shoulder pads in place, which keeps the spine in alignment. By removing the football helmet you may cause serious spinal damage to these patients. All facemask on these helmets should be removed with Trainers' Angel and/or proper equivalent device. This will give the rescuer better access to the patient's airway. If for any reason you must remove the helmet in a critical situation you should have multiple rescuers to assist in removal. Remember you must remove the shoulder pads at the same time you remove the helmet to maintain alignment of the cervical and thoracic spine.

NOTE:

- Rescuer(s) will not be able to apply a cervical collar to the patient wearing a football helmet.
- The helmet must be totally immobilized to the backboard to properly transport the patient.
- It is the responsibility of the rescuer to become familiar with the latest football helmet/face mask and shoulder pads removal technique.

Washington County EMS	Initial Assessment & Trmt. of Trauma Pt
Clinical Practice - Standing Protocols	AT 07
Adult Trauma	

Introduction: The initial assessment and treatment of a trauma patient must be performed in a rapid, systematic, and thorough fashion. Evaluation of the patient according to establish priorities will help to identify serious life threatening situations quickly, so that intervention can take place, possibly preventing further deterioration in the patient's status. The most important priorities in the evaluation and treatment of the trauma patient are found in the primary survey of the patient. Frequently, patient assessment must occur simultaneously with patient treatment during this phase of the patient's evaluation. At times, invasive procedures (in-line intubation, removal of airway obstruction, stop major bleeding, seal sucking chest wound, decompress tension pneumothorax) or initiation of rapid transport may be required before the complete, overall patient assessment is achieved.

Basic and Advanced Treatment:

The PRIMARY SURVEY of the trauma patient should be performed in less than 2 minutes as followed:

1. Level of consciousness, AVPU & Glasgow Coma Score (Motor, Verbal, and Eye Response)
2. Rate and quality of breathing.
3. Rate and quality of pulse (carotid & radius). Note the skin quality.
4. Quick head-to-toe survey to identify any "Load-and-go"; shock, respiratory difficulty, decrease LOC, tender & rigid belly, pelvic fracture (never role "scoop"), bilateral femur fractures. NOTE: Don't forget to check the patient's back for injuries.

The SECONDARY SURVEY should be performed enroute to the hospital in the following order:

1. Vital Signs.
2. SAMPLE History of patient and trauma event.
3. Head-to-toe exam.
4. Further bandaging and splinting if indicated.
5. Continue monitoring.

REASSESSMENT, REASSESSMENT, REASSESSMENT, ECT...

NOTE: BTLS (Basic Trauma Life Support) Acronyms –

DCAPP: Deformity, contusions, abrasions, penetrations, paradoxical motion.

DCAP: Deformity, contusions, abrasions, penetrations.

BLS: Burns, lacerations, swelling.

TIC: Tenderness, instability, crepitation.

PMS: Pulse, motor, sensation.

Critical Interventions:

Listed are the only aspects of patient care that, in most cases, would be performed prior to the initiation of the patient's transport.

- a. BLS, ALS Airway Management (In-line intubation)
- b. Removal of airway obstruction.
- c. Stop major bleeding.
- d. Seal sucking chest injury.
- e. Decompress tension pneumothorax.

Critical Actions:

- a. Maintain C-spine (In-line).
- b. Recognize "Load-and-go".
- c. Give oxygen.
- d. Transport in appropriate amount of time.
- e. Contact receiving facility (active trauma alert and/or trauma code).

Washington County EMS	Insect, Animal or Snake Bites
Clinical Practice - Standing Protocols	AT 08
Adult Trauma	

Introduction: This protocol is intended to be utilized when the paramedic suspects or has evidence of an envenomation by snake or insect. Patient may present with pain or swelling to site of bite. These patients are usually well aware of the historical incident; however, some people may not know the difference between snakes or insects. When time permits the paramedic or EMS crew should attempt to visualize the insect or snake to assist with identification purposes.

EMT - Basic

1. Assessment and appropriate monitoring techniques
2. Administer O2 via most appropriate method
3. Avoid tourniquets
4. If bite is to an extremity attempt to keep affected extremity below the level of the patient's heart.

EMT - Intermediate (In addition to above)

1. Initiate IV NS access and airway management as directed by the paramedic. LR will be utilized if NS is unavailable.

Paramedic (In addition to above)

1. Initiate IV NS access. LR will be utilized if NS is unavailable.
2. Monitor with ECG, SpO2, and EtCO2 (if indicated)
3. Be prepared for seizure activity and treat according to protocol.
4. If you strongly suspect significant envenomation then by-pass protocols may be utilized to assure anti-venom can be readily available. The paramedic should be aware of local hospital treatment modalities.

Washington County EMS	Penetrating Injuries
Clinical Practice - Standing Protocols	AT 09
Adult Trauma	

KNIFE AND GUNSHOT WOUNDS

EMT - Basic

Truncal wounds (chest, abdomen, back, proximal extremities).

1. Evaluate/treat ABCs according to Initial Assessment & Treatment of Trauma Patient.
2. Prepare for rapid transport, even if vital signs are stable.
3. If impaled object – do not remove.
4. Treat open chest wound according to guidelines for sucking chest wound.
5. Treat evisceration of abdominal contents by covering the tissue with saline-moistened gauze, sponges or sterile towel. DO NOT try to replace abdominal contents through the wound.

EMT - Intermediate (In addition to above)

1. While enroute start 2 large bore IVs with Normal Saline (or LR if NS is unavailable) and run at the appropriate rate per patient's condition.

Paramedic (In addition to above)

1. Establish 2 large bore IVs with Normal Saline or LR if NS is unavailable (attempt IV enroute to hospital) and run at the appropriate rate per patient's condition.
2. If airway is compromised or deteriorating then manage appropriately up to and including RSI protocol if indicated.

NECK WOUNDS

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient, maintain a high index of suspicion for C-spine, tracheal blood vessel and lung injuries.
2. Prepare for rapid transport, even if vital signs are stable.
3. Monitor closely for signs of soft tissue swelling in the neck that could lead to airway obstruction.
4. Have suction set up and ready to clear airway of blood or secretions.
5. Observe closely for signs of a tension pneumothorax.

EMT - Intermediate (In addition to above)

1. Enroute start 2 large bore IVs with Normal Saline or LR if NS is unavailable and run at the appropriate rate per patient's condition.

Paramedic (In addition to above)

1. Establish 2 large bore IVs with Normal Saline or LR if NS is unavailable (attempt IV enroute to hospital) and run at the appropriate rate per patient's condition.
2. Intubation may be required if airway compromise from neck swelling.(see RSI if indicated)
3. Chest decompression may be necessary if s/s of tension pneumothorax develop.

HEAD/FACE WOUNDS

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient, suspect C-spine, tracheal, and blood vessel injuries.
2. Prepare for rapid transport.
3. Have suction available.
4. Elevate the head of backboard 15-30 degree – DO NOT try to elevate head by flexing the neck.

EMT - Intermediate (In addition to above)

1. Enroute start 2 large bore IVs with Normal Saline or LR if NS is unavailable and run at the appropriate rate per patient's condition.

Paramedic (In addition to above)

1. Intubate patients that are unconscious or decrease LOC without gag reflex.
2. Maintain good ventilation (not hyperventilation) at a rate of about 15 breaths per minute with high-flow oxygen.
3. Intubation maybe required if any airway compromise from the neck swelling.

NOTE: Recently it has been shown that hyperventilation actually has only a slight effect on brain swelling, but causes a significant decrease in cerebral perfusion from vasoconstriction. This causes cerebral hypoxia. The injured brain does not tolerate hypoxia. Hypoventilation or hypoxia increases mortality. Hyperventilation for head injury is no longer recommended, except in herniation syndrome. Characterizations of herniation syndrome are decrease LOC, rapidly progresses to coma, dilation of the pupil and outward-down-ward deviation of the eye on the side of the injury, paralysis of the arm and leg on the side opposite the injury, and decerebrate posturing

ISOLATED EXTREMITY WOUNDS

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient, check neurovascular status distal to wound.
2. Control bleeding with direct pressure first, then pressure dressing if required, or tourniquet if necessary (**Reference Quick Clot**).
3. Splint affected extremity as required.
4. Elevate affected extremity 15-30 degrees.
5. Rapid transport if extremity wound is close to the trunk, even if vital signs are stable.

EMT - Intermediate (In addition to above)

1. Administer IV NS or LR if NS is unavailable as directed by the paramedic

Paramedic (In addition to above)

1. If wound is close to the trunk or thigh area with s/s of shock, initiate at least one large bore IV Normal Saline or LR if NS is unavailable and run at the appropriate rate per the patient's condition.
2. IV's may also be indicated if the paramedic chooses to utilize the pain management protocol or thinks he/she may utilize analgesics during transport.
3. **Paramedic's** must maintain high index of suspicion for acute traumatic rhabdomyolysis or "**Crush Syndrome**". These patients mandate early recognition and treatment by pre-hospital personnel. Without appropriate pre-hospital treatment these patients can rapidly deteriorate. Treatment should follow these guidelines.
 - a) Maintain ABC's
 - b) Maintain renal flow by administering **Saline solution at 500cc/hr** and monitoring urine output.
 - c) Attempt to prevent worsening rhabdomyolysis and sudden arrest by administering **50mEq of NaHCO₃ (Sodium Bicarbonate) per Liter of Saline solution (mix 1amp NaHCO₃ into 1L Saline)**

IMPALED OBJECT

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient.
2. In general, do not remove impaled object. If impaled object is causing airway/compromise resulting in respiratory distress, and this cannot be corrected without removal of the foreign body, contact ER physician for further orders.
3. When possible, stabilize the impaled object on the body so that it does not move around and cause more internal injury

4. Any impaled object to the torso (chest, abdomen, back, lower neck, or proximal extremities) should be considered a potentially life threatening injury and treated as such. Transportation should be initiated ASAP, even if the patient appears stable.
5. If manpower is available and time allows during transport, continue future evaluation and treatment of patient according to page 30 guidelines.

EMT - Intermediate (In addition above)

1. Administer IV and assist management of airway as directed by the attending Paramedic.

Paramedic (In addition to above)

1. If wound is close to the trunk or thigh area, with s/s of shock, initiate at least one large bore IV Normal Saline or LR if NS is unavailable and run at the appropriate rate per the patient's condition.
2. Pain management protocols may be utilized as indicated.

SUCKING CHEST WOUND

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient.
2. Seal the wound as rapidly as possible, preferably with Vaseline coated gauze, to prevent further collapse of the lung.
3. In general, the dressing should be sealed on three sides only. This allows it to act as a one way valve – allowing air in the pleural space (chest cavity) to get out when the lungs expands, but preventing air on the outside from entering the chest cavity through the wound.
4. Watch closely for s/s of a tension pneumothorax. If these signs develop, usually lifting one corner to the occlusive dressing will relieve the tension pneumothorax.
5. As time allows and manpower permits, continue evaluation and treatment according page 30.

EMT - Intermediate (In addition to above)

1. Administer IV's and manage airway as directed by in charge Paramedic

Paramedic (In addition to above)

1. Initiate two large bore IVs with Normal Saline or LR if NS is unavailable and run at appropriate rate.
2. If lifting the gauze dressing does not relieve the s/s associated with a tension pneumothorax, then needle decompression may be indicated.

NOTES: If the patient is awake and cooperates, have him/her cough (this removes as much of the air as possible from the chest cavity), and then apply the Vaseline gauze immediately afterwards.

CLOSED HEAD INJURY

EMT - Basic

1. ABCs according to Initial Assessment & Treatment of Trauma Patient, suspect C-spine injury, & provide 100% O₂.
2. If the patient is hypoventilating, assist or provide ventilation with supplemental oxygen, maintaining good ventilation (not hyperventilation) at rate of about 12 breaths per minute.
3. Have suction readily available. Be prepared to log roll patient, should vomiting occur (not with pelvic fracture).
4. Take seizure precautions (ie, IV O₂ Monitor) and prepare for rapid transport.
5. Record baseline observation (Glasgow Coma Score), sensation, and voluntary motor activity.
6. Elevate head of backboard when possible.

EMT - Intermediate (In addition to above)

1. Initiate IV access and manage airway as directed by attending Paramedic.

Paramedic (In addition to above)

1. Also refer to Rapid Sequence Intubation Protocols.
2. May require endotracheal intubation while observing C-spine precautions. If the patient is unconscious or had decrease LOC with limited gag reflex, endotracheal intubation should be performed.
3. Initiate two large bore IVs Normal Saline or LR if NS is unavailable and run at appropriate rate. In the past it was thought that fluids should be limited in head-injured patients. It has been found that the danger of increasing brain swelling by giving fluids is much less than the danger of allowing the patient to be hypotensive.
4. Apply cardiac monitor and treat the arrhythmia.
5. If seizures occur and are prolonged greater than 15-30 seconds, **administer Midazolam 2 mg IV Q 5 minutes with a Max of 10 mg.**

NOTE: Recently it has been shown that hyperventilation actually has only a slight effect on brain swelling, but causes a significant decrease in cerebral perfusion from vasoconstriction. This causes cerebral hypoxia. The injured brain does not tolerate hypoxia. Hypoventilation or hypoxia increases mortality. Hyperventilation for head injury is no longer recommended, **except in herniation syndrome**. Characterizations of herniation syndrome are decrease LOC, rapidly progresses to coma, dilation of the pupil and outward-down-ward deviation of the eye on the side of the injury, paralysis of the arm and leg on the side opposite the injury, and decerebrate posturing.

Washington County EMS	Quick Clot
Clinical Practice - Standing Protocols	AT 10
Adult Trauma	

Introduction: QuikClot is a sterile, traumatic wound treatment that rapidly arrests high- volume blood loss and achieves homeostasis in large wounds, arresting the hemorrhage before the victim goes into shock. QuikClot affects coagulation in moderate- to- severe wounds, including high- volume venous and arterial bleeding. The granules act like a sponge absorbing the fluid from the blood cell, and leaving the components that help form clots.

Indications:

QuikClot is to be used to stop moderate- to –severe bleeding by promoting rapid coagulation in traumatic injuries. Injuries where dramatic blood loss is evident should be controlled with direct pressure then the use of QuikClot. QuikClot is not an alternative to Physician care, it is to be used only as a last ditch effort to stop bleeding. QuikClot is a temporary quick fix to moderate- to – major bleeding. Only employees who have undergone proper training are cleared to utilize this protocol.

Precautions:

- Avoid contact with wet skin. Product reacts with small amounts of water and can cause burning. Stop burning by brushing away granules and flooding area with large volume of water. If ingested, immediately drink 2 or more glasses of water
- Avoid breathing dust or getting in eyes. Dust may irritate eyes, nose, throat, and skin. If inhaled, get to fresh air. Flush eyes with water for 15 minutes. Product contains trace amounts of quartz.
- Keep away from children

Washington County EMS	Trauma Management General
Clinical Practice - Standing Protocols	AT 11
Adult Trauma	

Introduction: The general initial assessment and management of a traumatically injured adult and child are essentially the same. Airway and breathing must be evaluated and managed first followed by assessment of circulation, then a brief neurological examination and complete exposure of the patient. One of the most important responsibilities of the pre-hospital care provider is to spend as little time on the scene as possible to evaluate the patient, to perform lifesaving maneuvers, and to prepare the patient for transportation to the hospital. Our goal is to be on-scene no greater than 10 minutes with critical trauma patient(s).

EMT - Basic

1. Scene safety.
2. ABCs (follow the prior page INITIAL ASSESSMENT & TREATMENT OF TRAUMA PATIENT).
3. Administer supplement oxygen 100%, ASAP, with oximeter before & during O2.
4. Spinal immobilization if indicated.
5. Place patient in Trendelenburg position if indicated.

EMT - Intermediate (In addition to above)

1. Advanced airway control as needed.
2. Peripheral intravenous access, administer NS TKO or LR if NS is unavailable.

Paramedic (In addition to above)

1. Advanced airway control as needed. **May refer to RSI protocols if indicated.**
2. Peripheral intravenous or intraosseous access (IO access in life threatening circumstances only). Administer NS or LR if NS is unavailable at 20 ml/kg by rapid infusion with signs and symptoms of hypo-perfusion.
3. Obtain ECG, if indicated.
4. Use pain management if indicated, reference Analgesic Protocol

NOTE: Narcotic analgesia may mask signs and symptoms in multi-system trauma. Use with extreme caution and perform very good assessments prior to pain management to r/o any abdomen or occult injuries that could be hidden by administering analgesics.

Glasgow Coma Score: Child/Adult Response

Best Motor:

- 1- No Response
- 2- Extension (Decerebrate)
- 3- Flexion (Decorticate)
- 4- Withdraws from Pain
- 5- Localizes Pain
- 6- Obeys

Best Verbal:

- 1- No Response
- 2- Incomprehensible
- 3- Inappropriate
- 4- Disoriented
- 5- Oriented & Converses

Eye Response:

- 1- No Response
- 2- To Pain
- 3- To Verbal Command
- 4- Spontaneously

Glasgow Coma Score: Infant Response

Best Motor:

- 1- No Response
- 2- Extension (Decerebrate)
- 3- Flexion (Decorticate)
- 4- Withdraws from Pain
- 5- Localizes Pain
- 6- Spontaneous

Best Verbal:

- 1- No Response
- 2- Moans, Grunts
- 3- Cries to Pain
- 4- Irritable Cries
- 5- Coos, Babbles

Eye Response:

- 1- No Response
- 2- To Pain
- 3- To Speech
- 4- Spontaneously

Total Score: _____ (GCS \leq 8? Intubate)

Washington County EMS	Trauma Protocol / Scene Survey
Clinical Practice - Standing Protocols	AT 12
Adult Trauma	

GENERAL TRAUMA PROTOCOLS

INITIAL SCENE SURVEY: (All levels of certification)

This protocol should be used in the initial assessment of the scene where a trauma patient(s) is located.

1. Survey the scene for possible hazards and re-survey intermittently.
2. Protect yourself first, and then victims from hazards (do not become a victim).
3. Identify mechanism of injury and severity of mechanism.
4. Identify all potential patients and give appropriate size up to communications for resource allocations.
5. Prioritize patients if more than one using the same international triage system – If multiple, severely injured patients with inadequate resources, leave cardiac arrest victims until last.
6. Secure the scene.

TRAUMATIC ARREST

EMT - Basic

1. If not already done, evaluate/treat ABC's according to Initial Assessment & Treatment of Trauma Patient.
2. Initiate CPR and prepare for rapid transport.
3. Provide a more definitive airway using C-spine precautions.

EMT - Intermediate (In addition to above)

1. EMT-I's perform IV's, Intubation

Paramedic (In addition to above)

1. Correct any causes for hypoxia that are present (obstructed airway, tension pneumothorax, flail chest, etc.).
2. Establish 2 large bore IVs with Normal Saline or Lactate Ringers if LR is unavailable en-route to the hospital (unless pinned), only administer enough for adequate peripheral perfusion. PERIPHERAL PERFUSION may be defined as producing a peripheral pulse, maintaining level of consciousness, and maintaining an adequate blood pressure of 90 – 100 mmHg systolic.
3. Apply ECG electrodes and determine cardiac rhythm.
4. If rhythm other than PEA (EMD), treat cardiac arrhythmia per protocol during transport if sufficient manpower available.

5. Continue to re-assess the patient and contact the receiving facility.

NOTE: PEA (EMD) in a trauma patient is most likely due to hypovolemia from blood loss. Definitive therapy is usually required to stop the source of hemorrhage and blood transfusions are needed usually ASAP. Hence rapid extrication and transport is essential. Remember that Normal Saline helps expand the circulating blood volume, but do not carry oxygen. The paramedic and EMS crew must make every minute of scene time functional and productive. The majority of care should be rendered during transport when possible.

TRAUMATIC SHOCK

This protocol should be used for the treatment of traumatic shock (signs and symptoms of hypoperfusion). Frequently, shock in a trauma patient is due to internal or external bleeding (hemorrhagic shock), it can be recognized by hypotension, tachycardia, diaphoresis, pallor, cyanosis, tachypnea, and other clinical signs of shock.

EMT - Basic

1. Evaluate/treat ABCs according to Initial Assessment & Treatment of Trauma Patient.
2. Prepare for rapid transport.
3. If indicated, provide a more definitive airway using C-spine precautions.

EMT - Intermediate (In addition to above)

1. EMT-I's perform IV's, Intubation

Paramedic (In addition to above)

1. Make sure shock is not due to hypoxia from airway obstruction, tension pneumothorax, flail chest, or tamponade.
2. Establish 2 large bore IV's with Normal Saline or LR if NS is unavailable enroute to the hospital (unless pinned), only administer enough for adequate peripheral perfusion. PERIPHERAL PERFUSION may be defined as producing a peripheral pulse, maintaining level of consciousness, and maintaining an adequate blood pressure of 90 – 100 mmHg systolic.
3. Apply ECG electrodes and determine cardiac rhythm.
4. Continue to re-assess the patient and contact the receiving facility.

NOTES: Fluid resuscitation in children is performed according to weight. See “special considerations” in pediatric protocols. Definitive therapy is usually required to stop the source of hemorrhage and blood transfusions frequently are needed ASAP.

Washington County EMS	Trauma Protocol / C-Spine Clearance
Clinical Practice - Standing Protocols	AT 13
Adult Trauma	

Introduction: The purpose of this policy is to better ensure the most optimal application of spinal motion restriction measures in the prehospital environment. This is not an absolute and the paramedic should use sound clinical judgments when utilizing this protocol.

Indications for Immobilization:

Spinal motion restriction (SMR) is **MANDATORY** for any patient for whom a mechanism of injury with the potential to have caused injury to the patient's spine (MVC, fall, or an injury resulting in ANY evidence of trauma above the clavicles), **AND ANY ONE OR MORE** of the following criteria is present:

- **Neurologic deficit:** The patient offers a subjective report or objective evidence of otherwise unexplainable numbness, tingling, weakness or paralysis of any extremity.
- **AMS:** ANY alteration in the patient's level of consciousness at the time of evaluation; and/or a report by the patient, bystander or witness that the patient had experienced a loss of consciousness.
- **Intoxication :** Suspicion of intoxication due to drugs or alcohol;
- **Communication :** A significant language or communication barrier exists between EMS personnel and the patient;
- **Age:** Patient is younger than **8** years of age;
- **Distracting injuries:** Of any kind (i.e. long bone fractures, abdominal trauma, chest pain, crushing injuries, extensive BSA burns, etc.)

Exceptions for Immobilization :

Patients with penetrating trauma to the head, neck, or torso **and** no evidence of spinal injury **should not** be immobilized on a backboard.

Clinical Clearance of the Cervical Spine:

If the patient meets NONE of the above clinical indications, paramedics may elect to implement "clinical clearance" procedures. Paramedics **MAY STILL** apply **SPINAL MOTION RESTRICTION** whenever it is determined to be appropriate, or when the injury mechanism or other factors may preclude clearance of the spine in the out-of-hospital setting.

For the purpose of "clinical clearance", the following procedure shall be followed:

1. Maintain manual stabilization of the head and neck and ask the patient: "Does your neck hurt?"
 - a. If the answer is "yes", apply spinal motion restrictions and transport the patient.
 - b. If the answer is "no", continue to step 2.
2. Palpate the posterior cervical spine beginning at vertebrae prominens (C7) while asking: "Does this cause you any pain?"
 - a. If the answer is "yes", apply spinal motion restrictions and transport the patient.
 - b. If the answer is "no", continue palpating along the entire cervical spine. If, at any point, the patient complains of tenderness, apply spinal motion restrictions and

transport the patient. Upon reaching the occiput, if the patient has not complained of tenderness, move on to step 3.

3. Tell the patient, "I am going to ask you to slowly move your head." Instruct the patient to immediately stop and tell you if moving his/her head causes the patient ANY pain in the neck, or any funny sensation, such as "pins and needles" in either his/her arms or hands. Then ask the patient to:
 - a. Slowly move his/her head forward (bending the chin to the chest), then backward, then side to side.
 - b. If the patient reports ANY discomfort or paresthesia, slowly return their head to neutral position, apply spinal motion restrictions and transport the patient.
 - c. If there is no discomfort and no paresthesia, spinal motion restrictions are not required.
 - d. Clearly DOCUMENT each step on the ePCR and indicate: "cervical spine clinically cleared".
 - e. Palpate the remainder of the patient's spine. If there is ANY midline tenderness, place the patient on a rigid spine board for transport. If there is NO midline tenderness, a spine board is not indicated.
 - f. If moving the patient's neck into a more neutral position causes pain/discomfort/paresthesia, then immobilize the spine in a less painful position, as optimally as possible.

NOTE:

Always err on the side of utilization of cervical spine motion restriction if any questions exist. Elderly patients are more prone to osteoporosis and other bone disease that may make them more susceptible to fractures or injuries. Keep this in mind and if questions arise call medical control if c-spine clearance protocol is utilized, then all negatives should be noted in the patient run report.

Formulary



Washington County EMS	Activated Charcoal
Drug Formulary by Generic Name	Form 1

Generic Name: Activated Charcoal

Trade Name: Actidose - Aqua

Class: Adsorbent, Antidote

Action: Activated Charcoal is a fine black powder that binds and adsorbs ingested toxins. Once the drug binds to the activated charcoal, the combined complex is excreted among feces.

Pharmacokinetics: Onset Immediate. Duration Continual while in the GI tract

Contraindications: Corrosives, Caustics, Petroleum Distillates, GI bleeding, AMS (not able to control airway)

Adverse Effects: Nausea, Vomiting, Constipation, Diarrhea

Indications: Many oral poisonings and medication overdoses

Appears in the following section:

- AM 14 Toxicological Emergencies, Poisoning and Overdose

15 grams followed by 8oz H2O

Washington County EMS	Adenosine
Drug Formulary by Generic Name	Form 2

Generic Name: Adenosine

Trade Name: Adenocard

Class: Anti-Dysrhythmic

Action: Slows AV node conduction, interrupts reentry pathways.
Adenosine works in a variety of receptors grouped into a group called P1 receptors. The true mechanism is somewhat unclear, Adenosine works through the activation of cAMP and coupled G-proteins to cause its cardiac effects.

Pharmacokinetics: Immediate onset and peak, half-life 10 seconds.

Contraindications: Known hypersensitivity. Sick Sinus Syndrome. Second or third degree AV block. Use with caution in patients with severe asthma.

Adverse effects: Flushing, Chest Pain, Headache, Nausea, Vomiting, Hypotension

Indications: Symptomatic (poor perfusion) narrow complex tachycardia with a pulse

Appears in the following sections:

- AC 07 PSVT
- AC 10 V-Tach w/ Pulse

6mg, 12mg, 12mg Rapid IV Push

Washington County EMS	Albuterol
Drug Formulary by Generic Name	Form 3

Generic Name: Albuterol

Trade Name: Proventil

Class: Sympathomimetic Bronchodilator

Action: Beta2 adrenergic. Smooth muscle relaxant. Minimal Beta1 effects. Reduces mucous secretions and edema via histamine inhibition.

Pharmacokinetics: Onset 5-15 minutes, peak 1-1.5 hours, duration 3-6 hours, half-life 3 hours

Contraindications: Known hypersensitivity

Adverse Effects: Tachycardia, palpitations, peripheral vasodilatation, tremors, headache, sore throat, dry mouth, PVCs, nausea, vomiting

Indications: Allergic Reaction, Anaphylaxis, Obstructive Airway Disease, Reactive Airway Disease, CHF/Pulmonary Edema

Appears in the following sections:

- *AC 05 Congestive Heart Failure (CHF)*
- *AM 02 Allergic Reaction / Anaphylaxis*
- *AM 03 Asthma*
- *AM 04 COPD*

2.5mg Nebulizer, repeat as needed

Washington County EMS	Amiodarone
Drug Formulary by Generic Name	Form 4

Generic Name: Amiodarone

Trade Name: Cordarone

Class: Anti-Dysrhythmic

Action: Prolongs the duration of the action potential and refractory period of all Cardiac fibers. It depresses the Phase 0 slope by causing a sodium blockade and causes a Beta block as well as a weak calcium channel blockade. Therefore it decreases the SA nodes rate of firing, suppresses automaticity, interrupts reentrant pathways and prolongs PR, QT and QRS intervals. Relaxes vascular smooth muscle, decreases peripheral vascular resistance, and increases coronary contractility.

Pharmacokinetics: Rapid onset, serum concentrations drop to 10% within 30-45 minutes.

Contraindications: Cardiogenic shock, bradycardia, second/third degree block

Adverse effects: Vasodilatation (usually not associated with decreased cardiac output secondary to the negative inotropic effects), hypotension, bradycardia, AV block, increased QT interval, V-Tach

Indications: V-Fib, Pulseless V-Tach, V-Tach with a pulse, PSVT, Ventricular Ectopy

Appears in the following sections:

- **AC 07 PSVT**

150mg IVP over 10 minutes. Repeat as VF reoccurs.

- **AC 09 V-Fib/Pulseless V-Tach**

300mg IV prior to 4th Shock

Consider additional 150mg IV if no conversion

150mg additional dose for ROSC patients

- **AC 10 *V-Tach with a Pulse***

150mg IVP, may repeat

- **AC 11 *Ventricular Ectopy***

150mg IVP Slow

Amiodarone Drip Adult Dosing: 1mg/min

Washington County EMS	Asprin
Drug Formulary by Generic Name	Form 5

Generic Name: Aspirin

Trade Name: Acetylsalicylic Acid

Class: Analgesic, Antipyretic, NSAID, platelet inhibitor

Action: Inhibits the formation of prostaglandins associated with pain, fever, and inflammation. Inhibits platelet aggregation by acetylating cyclooxygenase permanently disabling it so that it cannot synthesize prostaglandins and Thromboxanes. Since Thromboxane A2 is important in clotting its absence does not allow blood to clot effectively.

Pharmacokinetics: Onset 5-30 minutes, peak in 15 minutes to 2 hours, duration is 1-4 hours

Contraindications: Allergy, Asthma, Ulcer, GI bleeding

Adverse effects: Nausea, Vomiting, diarrhea, heartburn, GI bleeding

Indications: Chest Pain

Appears in the following sections:

- **AC 02 Chest Pain**

324mg PO

Washington County EMS	Atropine Sulfate
Drug Formulary by Generic Name	Form 6

Generic Name: Atropine Sulfate

Trade Name: Atropen

Class: Para-Sympatholytic

Action: Competitive antagonist that selectively blocks all muscarinic responses to Ach. Blocks vagal impulses, thereby increasing SA node discharge, thereby enhancing AV conduction and cardiac output. Potent anti-secretory effects caused by the blocking of acetylcholine at the muscarinic site. Atropine is also useful in the treatment of the symptoms associated with nerve agent poisoning.

Pharmacokinetics: Rapid onset, peak in 2-4 minutes IV, half-life 2-3 hours.

Contraindications: A-Fib, A-Flutter, second degree type II or third degree block, tachycardia, glaucoma. Use with caution in suspected AMI.

Adverse Effects: Pupil Dilation, Tachycardia, V-Tach, V-Fib, Headache, dry mouth.

Indications: Bradycardia and organophosphate poisoning (adult and Pedi.), Pediatric RSI

Appears in the following sections:

AC04 Bradycardia

0.5mg – 1.0mg IV, repeat 1mg Q 3-5 minutes. Max 3mg

AM14 Toxicological Emergencies/Poisoning/Overdose

1mg IV for Symptomatic Bradycardia

2mg IV for Organophosphate Poison Q 5-15 minutes until desired effect.

SP 05 Special Operations

2mg IV for Nerve Agent Poisoning

Washington County EMS	Clopidogrel
Drug Formulary by Generic Name	Form 7

Generic Name: Clopidogrel

Trade Name: Plavix

Class: P2Y12 Platelet Inhibitor

Action: Decreases the rate of a combined endpoint of cardiovascular death, myocardial infarction or stroke as well as a rate of combined endpoint of cardiovascular death, MI, stroke or refractory ischemia.

It inhibits the platelet activation and aggregation through irreversible binding of its active metabolite to the P2Y12 class of ADP receptors on platelets.

Pharmacokinetics: A pro-drug and it metabolized to a pharmacologically active metabolite and inactive metabolites.

Contraindications: Active Bleeding
Hypersensitivity
Over 75 years of age

Adverse Effects: Bleeding

Indications: Acute Coronary Syndrome (ACS)
Recent MI, Recent Stroke, or Established Peripheral Arterial Disease

Appears in the following section:

- ***AC 02 Acute Coronary Syndrome “Chest Pain”***

300 mg PO for patients less than 75 years of age

Washington County EMS	Dextrose
Drug Formulary by Generic Name	Form 8

Generic Name: Dextrose 10% Solution, Dextrose 50%

Trade Name: Insta-Glucose

Class: Carbohydrate. Dextrose (aka Glucose) is one of the basic building blocks of all sugars. Glucose is a monomer and is therefore readily processed in the blood. Through glycolysis, glucose is turned into pyruvate giving off a small amount of chemical energy (ATP). Pyruvate is further processed through the Citric Acid Cycle (Krebs Cycle) yielding even more energy (GTP, FADH₂ and NADH) and CO₂. The GTP, FADH₂ and NADH are then converted into a large amount of ATP through the use of a specialized cell membrane and then ability of Oxygen to receive extra protons and carbon to form water and CO₂. Insulin turns excess glucose into glycogen when blood sugars are high. Glucose is a large molecule that forms a ring, this structure is incapable of being absorbed into a cell with a mediator (insulin) and therefore increases damage to epithelium as it floats through the blood stream. It also causes an osmotic pressure as concentrations vary across membranes. The pressure is less with D5 and D10 therefore they are used in pediatrics.

Action: Principal form of glucose used by the body

Pharmacokinetics: Rapid absorption in bloodstream

Contraindications: Use with caution in patients with suspected increased ICP.

Adverse effects: Patients may complain of warmth, pain, or burning at the injections site. Extravasations causes necrosis.

Indications: Glucose abnormalities, Newborn resuscitation, AMS unknown cause

Appears in following sections:

- **AM 01 Alcohol Emergencies**
- **AM 07 Diabetic Glucose Emergencies**

D10%, 250ml Slow IVP

D50: 25 grams Slow IVP

Washington County EMS	Diltiazem
Drug Formulary by Generic Name	Form 9

Generic Name: Diltiazem

Trade Name: Cardizem

Class: Calcium Channel Blocker

Action: Inhibits extracellular calcium ion influx across membranes of myocardial cells and vascular smooth muscle cells, resulting in inhibition of cardiac and vascular smooth muscle contraction and thereby dilating main coronary and systemic arteries; no effect on serum calcium concentrations; substantial inhibitory effects on cardiac conduction system, acting principally at AV node, with some effects at sinus node.

Pharmacokinetics: Onset 2-5 minutes, peak 2-4 hours, half-life 5-7 hours.

Contraindications: Sick sinus syndrome, high degree AV block, AMI, severe CHF, A-Fib with WPW or LGL, hypotension, ventricular tachycardia, known allergy, patient use of digoxin. **Use in caution in patients taking beta blockers.**

Adverse Effects: Hypotension, 2nd or 3rd degree block, PVCs.

Indications: Atrial fibrillation with RVR or atrial flutter with RVR (as defined as HR > 120).

Appears in the following sections:

AC13 A-Fib/A-Flutter RVR

0.25mg/kg max of 20mg SIVP over 2 minutes, repeat after 15 minutes as needed at
0.35mg/kg max of 25mg SIVP over 2 minutes

Washington County EMS	Diphenhydramine
Drug Formulary by Generic Name	Form 10

Generic Name: Diphenhydramine

Trade Name: Benadryl

Class: Antihistamine, Ethanolamine, Anticholinergic

Action: Diphenhydramine blocks the effects of Histamine (H1 histamine) on the H1 receptor site through a competition for the peripheral H1 site. When Diphenhydramine is bound the H1 site cannot be stimulated preventing the effects of histamines (Swelling, ETC...). As an H1 blocker Diphenhydramine blocks the effects of H1 on its receptor in the cortex as well this causes a change in the cortex neural potassium channels causing neurons in the cortex to have a higher threshold to depolarize. This results in an increase in sedation as a result of the H1 block. As an antihistamine, Diphenhydramine is one of the most effective antihistamines.

Pharmacokinetics: Onset of 15 minutes IV, peak 1-4 hours, ½ life 2-10 hours.

Contraindications: Known allergy

Adverse effects: Potent Anticholinergic agent. Mydriasis, Photophobia, ataxia, tachycardia

Indications: Allergic reaction/anaphylaxis

Appears in the following sections:

- **AC08 Shock (Anaphylactic)**
- **AM02 Allergic Reaction / Anaphylaxis**
- **AM12 Psychiatric Emergencies – EPS**

50mg IV / IM

Washington County EMS	Dopamine
Drug Formulary by Generic Name	Form 11

Generic Name: Dopamine

Trade Name: Intropin

Class: Sympathomimetic, Catecholamine

Action: Naturally occurring hormone and precursor to norepinephrine. This catecholamine has different effects at different doses due to the sensitivity of receptors at different sites being related to the concentration of dopamine present. At low doses (2-5 mcg/kg/min) dopamine increases the perfusion of the mesenteric arteries and the kidneys. Low doses can be used to try and perfuse an ischemic bowel or a failing kidney. Has a direct action on alpha and beta-adrenergic receptors. As doses are increased (5-10mcg/kg/min), beta receptors are stimulated increasing force of contraction as well as heart rate and conduction. As dopamine becomes more concentrated (10-20mcg/kg/min) the less sensitive peripheral alpha receptors become activated this causes an increase in vascular constriction that increases as the drug becomes more concentrated until a 20mcg/kg/min the effects are mainly on the peripheral vasculature.

Pharmacokinetics: Onset <5 minutes, duration <10 minutes, ½ life 2 minutes

Contraindications: Pheochromocytoma (adrenal tumors), tachydysrhythmias, HTN

Adverse Effects: Tachydysrhythmias, VF, VT, AMI, N/V, HA

Indications: Non-traumatic hypotension/hypoperfusion, Bradycardia, Post Resuscitation

Appears in the following sections:

- *AC 04 Bradycardia*
- *AC 08 Shock*
- *AC 12 Induced Hypothermia*

2-10 mcg/kg/min

Washington County EMS	Epinephrine
Drug Formulary by Generic Name	Form 12

Generic Name: Epinephrine

Trade Name: EpiPen

Class: Sympathomimetic

Action: Naturally occurring catecholamine obtained from animal adrenal glands. Acts on alpha and beta adrenergic receptors. The most potent alpha agonist. Beta 1: Strengthens myocardial contraction, increases systolic blood pressure (may decrease diastolic blood pressure), increases heart rate and cardiac output. Beta 2: Dilates bronchiole arterioles, inhibits histamine release, constricts arterioles in the skin, mucous membranes and kidneys but dilates those in the skeletal muscle. Action is through a natural hormonal mechanism.

Pharmacokinetics: Onset < 2 minutes IV. 3-10 minutes SQ. Peak 5 minutes IV and 20 minutes SQ. Duration 5-10 minutes IV and 20-30 minutes SQ

Contraindication: Tachydysrhythmias. Coronary Artery Disease

Adverse Effects: Headache, Nausea, Vomiting, Tachydysrhythmias, AMI, Diaphoresis, Anxiety, Palpitations

Indications: Allergic Reaction, Anaphylaxis, Asthma, Bradycardia, Pulseless Arrest, Neonatal Resuscitation

Appears in the following sections:

EPI 1:1,000

- **AM 02 Allergic Reaction / Anaphylaxis**
- **AM 03 Asthma**

0.3mg SQ

EPI 1:10,000

- **AC 03 Asystole / PEA**

1mg IV/IO Q 3-5 minutes

- **AC 08 Shock (Anaphylactic)**

1mg IVP

- **AC 09 V-Fib / Pulseless V-Tach**

1mg IV/IO repeat 1mg Q 3-5 minutes

- **AM 02 Allergic Reaction / Anaphylaxis**

1mg IV

EPI Drip Adult Dosing: 2-10mcg/min

Note – If prefilled syringes of Epinephrine 1:10,000 are not available; a multi-dose vial of Epinephrine 1:1,000 may be used. Mix 1 mg of Epinephrine 1:1000 with 9 ml of Sodium Chloride.

Washington County EMS	Etomidate
Drug Formulary by Generic Name	Form 13

Generic Name: Etomidate

Trade Name: Amidate

Class: Non-Barbiturate Sedative-Hypnotic

Action: Etomidate is a hypnotic drug without analgesic activity. IV injection produces hypnosis characterized by a rapid onset of action, usually within 1 minute. Duration is dose dependent but relatively brief. Typically 3-5 minutes when using 0.3 mg/kg regimen.

Pharmacokinetics: Duration: Short 4-12 minutes. CNS: decrease CBF, seizures. CVS: Minimal, decrease MAP & SVR, BP usually maintained in unstable patients. No histamine release.

Contraindications: Known hypersensitivity. Use caution with seizure disorders.

Adverse effects: Clinical data indicates that Etomidate may produce cardiac depression in elderly patients, particularly those with HTN. Elderly may require lower doses if used. Age-related differences in pharmacokinetic parameters have been observed in clinical studies. If given with Fentanyl as pre-sedation N/V is common.

Indications: It is intended for induction of general anesthesia by IV injection.

Appears in the following section:

- GP 19 RSI - *Rapid Sequence Intubation*

0.3 mg/kg IVP

Washington County EMS	Fentanyl
Drug Formulary by Generic Name	Form 14

Generic Name: Fentanyl Nitrate

Trade Name: Sublimaze

Class: Narcotic Analgesic

Action: The principal actions of therapeutic value are analgesia and sedation.

Pharmacokinetics: Opioid (narcotic, CNS-acting) analgesics are derivatives of opium. These drugs modify the perception of pain and provide a sense of euphoria by binding to specific opiate receptors throughout the central nervous system. Many of the characteristics of particular opioids relate to the receptor to which they bind. Fentanyl is classified as a full agonist and binds to receptor sites, blocks pain impulses, and produces maximum pain control. Onset immediate, peak 3-5 minutes. Duration 30-60 minutes.

Contraindications: Fentanyl is not indicated for primary use in ischemic type chest pain (Primary medication should be Nitro for ischemic type chest pain). MAOI use, asthma, myasthenia gravis, evidence of hypoperfusion.

Adverse effects: Fentanyl may cause muscle rigidity, particularly involving the muscles of respiration. In addition, skeletal muscle movements of various groups in the extremities, neck and external eye have been reported during induction of anesthesia with Fentanyl; these reported movements have, on rare occasions, been strong enough to pose patient management problems. This effect is related to the dose and speed of injection and its incidence can be reduced by slower administration and lower doses titrated to effect. As with other narcotic analgesics, the most common serious adverse reactions reported to occur with Fentanyl are respiratory depression, apnea, rigidity, bradycardia. If these remain untreated, respiratory arrest, circulatory depression or cardiac arrest could occur. Other adverse reactions that have been reported are hypertension, hypotension, dizziness, blurred vision, nausea, emesis, laryngospasm, and diaphoresis.

Indications: Pain management, Sedation during RSI

Appears in the following sections:

- ***AC 02 Acute Coronary Syndrome***
- ***AM 11 Pain Management***

25-50 mcg IV / IM / IN Q 2-5 minutes

- ***AM 11 Pain Management (Long Bone, Pelvic Fracture, Large Burns)***

1 mcg/kg IV / IM / IN Q 2-5 minutes

- ***AC 12 Induced Hypothermia***
- ***GP 19 Rapid Sequence Intubation (Pre-medicate)***
- ***GP 19 Rapid Sequence Intubation (Sedation)***

1-3 mcg / kg IVP

- ***GP 20 Transport Ventilator***

1-3 mcg / kg IVP

Washington County EMS	Furosemide
Drug Formulary by Generic Name	Form 15

Generic Name: Furosemide

Trade Name: Lasix

Class: Loop Diuretic

Action: Rapid-acting sulfonamide loop diuretic with antihypertensive properties. Decreases renal vascular resistance and increases renal perfusion. Inhibits resorption of Na⁺ and Cl⁻ in the Loop of Henle and also in the proximal and distal tubules. Fluid then follows the Na⁺ and is extracted with the Na⁺. Furosemide is not potassium sparing and patients on Lasix should be on a Potassium supplement or hypokalemia may result. Also acts as a venous dilator, reducing preload, therefore cardiac workload.

Pharmacokinetics: Onset 5-10 minutes. Peak diuresis effect 20-60 minutes. Duration 6 hours with a ½ life of 30 minutes.

Contraindications: Dehydration, hypokalemia, hepatic coma, SBP <100

Adverse effects: Hypokalemia, hypotension, dehydration, urinary urgency

Indications: CHF/Pulmonary Edema (Adult Only)

Appears in the following section:

- **AC 05 CHF**

40mg IVP Slow

Washington County EMS	Ipratropium Bromide
Drug Formulary by Generic Name	Form 16

Generic Name: Ipratropium Bromide

Trade Name: Atrovent

Class: Anticholinergic Bronchodilator

Action: Bronchodilation through inhalation of vagally mediated reflexes and acetylcholine

Pharmacokinetics: Onset 15 minutes, Duration 3-4 Hours

Contraindications: Known hypersensitivity to Ipratropium Bromide

Adverse Effects: Bronchitis, Dyspnea, Cough

Indications: Asthma, COPD Exacerbation

Appears in the following sections:

Asthma

COPD

1 Prefilled Ipratropium Bromide/Albuterol Sulfate

Washington County EMS	Ketamine Hydrochloride
Drug Formulary by Generic Name	Form 17

Generic Name: Ketamine Hydrochloride

Trade Name: Ketelar

Class: NMDA receptor Antagonist, Dissociative Anesthetic

Action: Primarily acts as an antagonist to NMDA receptors resulting in rapid, profound analgesia, normal pharyngeal-laryngeal reflexes, normal or slightly enhanced skeletal muscle tone, CV and respiratory stimulation.

Pharmacokinetics: Onset: 30 sec (IV); 3-4min (IM)

Duration: 5-10min (IV); 12-25min (IM); dissociative state may last >20min.

Contraindications: Known hypersensitivity, profound HTN

Adverse effects: Emergence reaction, HTN, Nystagmus, Increased HR, Hypersalivation, nausea, muscular clonus, respiratory depression (rapid IVP). Use caution with asthma patients as there may be a hypersensitivity upon administration.

Indications: Analgesia, combative patient, RSI induction, procedural sedation

Appears in the following sections: (Must have a P3 present for administration of Ketamine)

- AC 07 PSVT
- AC 04 Bradycardia
- AC 10 V-Tach w/ Pulse
- AM 11 Pain Management
- GP 16 Patient Restraint
- GP 19 Rapid Sequence Intubation
- GP 20 Transport Ventilator

Synchronized Cardioversion: 0.25 mg/kg SIVP/IO

TCP: 0.25 mg/kg SIVP/IO

Pain management: 0.25 mg/kg SIVP/IO

RSI Induction: 2 mg/kg SIVP/IO

Post-intubation management: 1 mg/kg SIVP/IO

Patient Restraint: 2 mg/kg SIVP/IO or 4 mg/kg IM

Sedation Management 1 mg/kg SIVP/IO

Washington County EMS	Labetalol
Drug Formulary by Generic Name	Form 18

Generic Name: Labetalol

Trade Name: Trandate

Class: Alpha and beta adrenergic blocker

Action: Labetalol is a competitive α_1 receptor blocker as well as a nonselective beta receptor blocker that is used for lowering blood pressure in hypertensive crisis. Because of alpha and beta blocking properties, blood pressure is reduced without reflex tachycardia, and total peripheral resistance is decreased without a significant alteration in cardiac output. In emergency care, it is administered intravenously.

Pharmacokinetics: Onset with-in 5 minutes. Duration 3-6 hours.

Contraindications: Bronchial asthma, Uncompensated CHF, Second and Third Degree heart block, Bradycardia, Cardiogenic Shock, Pulmonary Edema

Adverse Effects: Headache, Dizziness, Edema, Fatigue, Vertigo, Ventricular Dysrhythmias, Dyspnea, Allergic Reaction, Facial Flushing, Diaphoresis, Dose related Orthostatic Hypotension

Indications: Hypertensive Emergencies /Stroke/ STEMI

Appears in the following sections:

- ***AC 02 Acute Coronary Syndrome***

10mg IVP may be considered. Consult Medical Control.

- ***AM 05 CVA/Stroke***
- ***AM 09 Hypertensive Crisis***

10mg Slow IV Q 10 minutes until desired effect

Washington County EMS	Lidocaine
Drug Formulary by Generic Name	Form 19

Generic Name: Lidocaine

Trade Name: Xylocaine

Class: Antidysrhythmic, Sodium channel blocker

Action: Blocks the rapid influx of Na⁺ during the initial phase of depolarization. Raises the threshold for ventricular contractions and lowers the threshold for defibrillation and cardioversion. Suppresses automaticity in the His-Purkinje system and by elevating the electrical stimulation threshold of ventricular contractions. This is accomplished by blocking the rapid influx of Na⁺ during the initial phase of depolarization. Typically shortens the action potential and the refractory period secondary to the blockade of sodium channels that usually (in procainamide's blockade) continue to function normally through phase 2 of the action potential. Lidocaine functions well in hyperkalemic and acidotic states therefore it works well on ischemic tissues.

Pharmacokinetics: Onset 3 minutes, peak 5-7 minutes. Duration 10-20 minutes. $\frac{1}{2}$ life 1.5-2.0

Contraindications: Elderly patients (>70 years old $\frac{1}{2}$ dose max or just omit procedure). Bradycardia, AV Blocks, CHF, Shock.

Adverse effects: Seizures, slurred speech, AMS

Indications: RSI – patients who could suffer or deteriorate from increased ICP during the RSI process (ex: head injury patients, CVA)
IO – pain and anxiety management

Appears in the following sections:

- ***GP 12 EZIO Infusion***

40 mg IVP Slow

- ***GP 19 Rapid Sequence Intubation (Pre-medicate)***

100 mg IVP

Washington County EMS	Magnesium Sulfate
Drug Formulary by Generic Name	Form 20

Generic Name: Magnesium Sulfate

Trade Name: Mannitol

Class: Electrolyte

Action: Molecularly Mg^{+} is very similar to Ca as it has the same electron valence. Because of this, it is chemically very similar to Ca and in some reactions in the body. Ca^{+} is significantly larger than Mg^{+} therefore; Mg^{+} does not adequately replace it in cases that are not purely chemical. Because of these qualities, Mg^{+} can prevent Ca^{+} from binding to Troponin and prevent muscles from contracting as described in the action for Calcium Gluconate. Because of its extremely positive charge, it also blocks neuromuscular transmissions by changing the electric potentials threshold.

Pharmacokinetics: Onset immediate. Duration 30 minutes

Contraindications: Renal disease, AV blocks, previous myocardial damage

Adverse Effects: Flushing, Sweating, Asystole, Cardiac Arrest, Respiratory/CNS depression, Hypotension

Indications: Obstetrical Emergencies, Pulseless Arrest

Appears in the following sections:

- ***AC 09 V-Fib / Pulseless V-Tach***

1-2 grams IVP over 1-2 min for Torsades or Refractory VF

- ***AC 10 V-Tach w/ a Pulse (Torsades)***

1-2 grams IVP

- ***AM 03 Asthma***

1-2 grams IV over 10-20 minutes

- ***SP 02 Obstetrical Emergencies***

1-2 grams IVP – Contact Medical Control

Washington County EMS	Midazolam Hydrochloride
Drug Formulary by Generic Name	Form 21

Generic Name: Midazolam Hydrochloride

Trade Name: Versed

Class: Sedative, Short acting Benzodiazepine

Action: As a benzodiazepine this drug functions on GABA receptors to inhibit brain impulses similarly to the action of “Diazepam”. Midazolam is a short-acting muscle-relaxant, anticonvulsant, in addition to these effects Midazolam also has anterograde amnestic effects, is therefore preferred prior to cardioversion.

Pharmacokinetics: Onset 1-3 min, peak 20-60, duration 2-6 hours (dose dependent), half-life 1-4 hours

Contraindications: Shock, Hemodynamically unstable, acute narrow glaucoma

Adverse Effects: Respiratory depression, hypotension, bradycardia, headache, nausea/vomiting

Indications: Psychiatric Emergencies, RSI, seizures, V-Tach, PSVT/symptomatic bradycardia

Appears in the following sections:

- ***AC 04 Bradycardia***
- ***AC 07 Paroxysmal Supraventricular Tachycardia (PSVT)***
- ***AC 10 Ventricular Tachycardia w/ Pulse***
- ***AC 12 Induced Hypothermia***
- ***AM 13 Seizure & Status Epilepticus***
- ***AT 02 Burns (Large Burns)***
- ***AT 09 Penetrating Injuries : General Guidelines***
- ***GP 16 Patient Restraint***
- ***GP 19 Rapid Sequence Intubation***
- ***GP 20 Transport Ventilator***

2mg Q 5 minutes w/ a maximum of 10mg

Washington County EMS	Morphine Sulfate
Drug Formulary by Generic Name	Form 22

Generic Name: Morphine Sulfate

Trade Name: Astromorph/PF

Class: Narcotic (Opioid) Analgesic

Action: Natural opium alkaloid that acts on opiate receptors in the brain providing both analgesia and sedation (blocks pain sensation). Increases peripheral venous capacitance and reduces venous return. Reduces cardiac workload and decreases myocardial oxygen demand. In pulmonary edema, the reduced preload also reduces pulmonary venous congestion.

Pharmacokinetics: Onset: immediate IV, 15-30 minutes IM. Peak: 20 minutes IV, 30-60 IM. Duration 2-7 hours.

Contraindications: Head injury, depressed respiratory drive, hypotension, AMS

Adverse Effects: Hypotension, respiratory depression, decreased LOC, N/V, and bradycardia

Indications: RSI, Pain Management, Burns

Appears in the following sections:

- ***AM 11 Pain Management***
- ***AT 02 Burns (Small Burns)***
- ***GP 19 Rapid Sequence Intubation***

2-10mg IVP, 2mg increments Q 5 minutes

- ***AT 02 Large Burns***

Initial Dose 0.1 mg/kg IV, 0.05 mg/kg subsequent dosing,
Repeat Q5 minutes until relieved

Washington County EMS	Naloxone
Drug Formulary by Generic Name	Form 23

Generic Name: Naloxone

Trade Name: Narcan

Class: Narcotic (Opiate) Antagonist

Action: Competitive antagonist for opioids competing for opiate receptor sites in the brain. Displaces narcotic molecules from opiate receptors through this competition. Higher doses are needed to overcome overdoses of opiates that have a higher affinity for the opiate receptor in the brain.

Pharmacokinetics: Onset <2 minutes, peak <2 minutes, duration 2-20 minutes, half-life 60-90 minutes.

Contraindications: Neonates with narcotic-addicted mothers

Adverse Effects: Withdrawal symptoms

Indications: Overdose

Appears in the following sections:

- *AM 01 Alcohol Emergency*
- *AM 14 Toxicological / Emergencies / Poisoning / OD*

1-2mg IV / IM / IN

Washington County EMS	Nitroglycerine
Drug Formulary by Generic Name	Form 24

Generic Name: Nitroglycerine

Trade Name: Nitrostat

Class: Nitrate

Action: Potent vasodilator with antianginal, antischemic, and antihypertensive effects. Relaxes vascular smooth muscle by an unknown mechanism. Decreases peripheral vascular resistance, preload, and afterload.

Pharmacokinetics: Onset 1-3 minutes SL. Peak 5-10 minutes SL. Duration 20-30 minutes SL.

Contraindications: Hypotension, hypovolemia, right-sided AMI (call for orders have IV access), severe bradycardia or tachycardia, use of erectile dysfunction drugs within the past 24 hours.

Adverse Effects: Hypotension, headache, syncope, tachycardia

Indications: AMI, CHF, Pulmonary Edema

Appears in the following sections:

- *AC 02 Acute Coronary Syndrome*
- *AC 05 CHF*

0.4mg Tablet Sublingual, may repeat @ 5 minutes as needed w/ BP >100

Washington County EMS	Nitroglycerine Drip
Drug Formulary by Generic Name	Form 25

Generic Name: Nitroglycerine Drip

Trade Name:

Class: Vasodilator

Action: It was originally believed that nitrates and nitrites dilated coronary blood vessels, thereby increasing blood flow to the heart. It is now believed that atherosclerosis limits coronary dilation and that the benefits of nitrates and nitrites result from dilation of arterioles and veins in the periphery. The resulting reduction in preload and to a lesser extent in afterload decreases the work load of the heart and lowers myocardial oxygen demand.

Pharmacokinetics: Nitroglycerin is very lipid soluble and is thought to enter the body from the GI tract through the lymphatics rather than the portal blood.

Contraindications: Hypersensitivity
Pericardial tamponade
Restrictive cardiomyopathy
Constrictive pericarditis

Do not use within 24 hours of selective phosphodiesterase inhibitors such as Sildenafil (Viagra) or Vardenfil (Levitra) or 438 hours of Tadalafil (Cialis) due to potential risk of fatality **

Adverse Effects: Transient headache
Postural syncope
Reflex tachycardia
Hypotension
Allergic reaction

Indications: Ischemic chest pain
Hypertension

Appears in the following sections:

- *AC 02 Acute Coronary Syndrome*
- *AC 05 CHF*

5mcg/min Initial or 12.5 to 25 mcg Loading Dose if no SL dose given.

Washington County EMS	Ondansetron
Drug Formulary by Generic Name	Form 26

Generic Name: **Ondansetron**

Trade Name: **Zofran**

Class: Antiemetic, 5-HT₃, receptor antagonist

Action: Ondansetron is a selective 5-HT₃ receptor antagonist. While its mechanism of action has not been fully characterized, Ondansetron is not a dopamine-receptor antagonist. Serotonin receptors of the 5-HT₃ type are present both peripherally on vagal nerve terminals and centrally in the chemoreceptor trigger zone of the area postrema. It is not certain whether Ondansetron's antiemetic action is mediate centrally, peripherally or in both sites. The released serotonin may stimulate the vagal afferents through the 5-HT₃ receptors and initiate the vomiting reflex.

Pharmacokinetics: Rapid onset, half life of 3-4 hours

Contraindications: If the patient is sensitive to or has ever had an allergic reaction to Ondansetron Hydrochloride, do not give Zofran. If drugs similar to Zofran (for instance, Anzemet or Kytril) have caused a reaction, Zofran may cause one too. If you patient has phenylketonuria (an excess of the amino acid phenylalanine) Zofran also contains this substance. A child less than 1 year of age unless dosage specified by on line medical control.

Adverse Effects: Dizziness, sedations, headache, muscular pain, shivers, fatigue, allergic reaction or reaction at the injection site, chest pain, anxiety, hypotension, cold sensation, pyrexia (fever) especially in children.

Indications: Nausea, Vomiting or Motion Sickness

Appears in the following sections:

- *AC 02 Acute Coronary Syndrome*
- *AM 06 Dehydration*
- *AM 10 N/V or Motion Sickness Episodes*
- *AM 11 Pain Management*

4mg IV / IM

Washington County EMS	Oral Glucose
Drug Formulary by Generic Name	Form 27

Generic Name: Oral Glucose

Trade Name: Glucose

Class: Monosaccharide Carbohydrate

Action: After absorption from the GI tract, glucose is distributed in the tissues and provides a prompt increase in circulating blood sugar.

Pharmacokinetics: Onset 10 minutes

Contraindications: None

Adverse Effects: Nausea

Indications: Hypoglycemia

Appears in the following section:

- *AM 07 Diabetic Glucose Emergencies*

15 grams PO, may repeat once in 15 minutes

Washington County EMS	Oxygen
Drug Formulary by Generic Name	Form 28

Generic Name: Oxygen

Trade Name: Oxygen

Class: Gas

Action: Provides oxygenation to organs and tissues.

Pharmacokinetics: Oxygen is the electron receptor and provides oxidative metabolism. It is used in the release of energy from glucose during respiration. Oxygen is pumped from the heart into the blood, where it supplies every cell in your body. The body is made of cells, and cells need oxygen to survive. Hemoglobin is the molecule that carries oxygen, so it can be thought of as the 'root' or base that allows it to do its job.

Contraindications: Paraquat (pesticide) poisoning

Adverse Effects: Prolonged use of O₂ with chronic COPD patients may lead to reduction in ventilation stimulus.

Indications: Absent/inadequate ventilation following an acute medical or traumatic event.

Appears in the following sections:

- Most Protocols

Washington County EMS	Promethazine
Drug Formulary by Generic Name	Form 29

Generic Name: Promethazine

Trade Name: Phenergan

Class: Antiemetic, Antihistamine

Action: Reduces Nausea and Vomiting. Potentiates Narcotics

Pharmacokinetics: It acts primarily as a strong antagonist of the H₁ receptor (antihistamine) and a moderate mACh receptor antagonist (anticholinergic). Another notable property of Promethazine is that it is a local anesthetic, via blockade of sodium channels.

Contraindications: Hypotension and Altered Mental Status.
Patient is under the age of 2 years.

Caution: Patients over the age of 60 years.

Adverse effects: Drowsiness, Dizziness, Vertigo. Confusion in the elderly.

Indications: Active treatment of motion sickness. Prevention and control of nausea and vomiting.

Appears in the following sections:

- ***AC 02 Acute Coronary Syndrome (Chest Pain)***
- ***AM 06 Dehydration***
- ***AM 10 N/V or Motion Sickness Episodes***
- ***AM 11 Pain Management***

6.25-25 mg IVP Slow (Dilute with 10cc NS) 25mg Max in 60 minutes

Washington County EMS	Rocuronium Bromide
Drug Formulary by Generic Name	Form 30

Generic Name: Rocuronium Bromide

Trade Name: Zemuron

Class: Non-depolarizing neuromuscular blocker

Action: Used to facilitate endotracheal intubation, to provide skeletal muscle relaxation and facilitate mechanical ventilation in intubation.

Pharmacokinetics: It acts by competing for cholinergic receptors at the motor end-plate. This action is antagonized by acetylcholinesterase inhibitors, such as neostigmine and edrophonium. The duration of action of Rocuronium 1 mg/kg is approximately equivalent to the duration of other intermediate acting neuromuscular blocking drugs.

Contraindications: Patients known to have hypersensitivity to Rocuronium Bromide. Inability to continuously monitor tube placement via qualitative continuous capnography. Inability to re-intubate if required.

Adverse Effects: Prolonged neuromuscular block.

Indications: To maintain endotracheal intubation and to provide skeletal muscle relaxation during prolonged mechanical ventilation.

Supplied: Injection is available in the following:
5 mL multiple dose vials containing 50 mg rocuronium bromide injection (10 mg/mL) and 10 mL multiple dose vials containing 100 mg rocuronium bromide injection (10 mg/mL)

Storage: Should be stored in a refrigerator, 2–8°C (36–46°F). DO NOT FREEZE. Upon removal from refrigeration to room temperature storage conditions (25°C/77°F), use within 60 days.

Appears in the following section:

- **GP 19 Rapid Sequence Intubation**

0.05 - 0.1 mg/kg IVP for defasciculating dose

1 mg/kg IVP for fasciculating dose

Washington County EMS	Sodium Bicarbonate
Drug Formulary by Generic Name	Form 31

Generic Name: Sodium Bicarbonate

Trade Name: Sodabrade

Class: Electrolyte

Action: Short-acting, potent, systemic antacid. Immediately raises the pH of blood plasma by buffering excess hydrogen ions. This occurs because the Na⁺ (sodium) and the HCO₃⁻ (bicarbonate ion) separate in solution. While separate the negative charge on the bicarbonate is able to accept (and will prefer over sodium) hydrogen ions. The HCO₃⁻ then becomes H₂CO₃ which the body will turn into water and CO₂. In tricyclic overdoses the Na⁺ ion is important also in its use to attempt to overcome the sodium blockade that occurs.

Pharmacokinetics: Onset immediate, duration 1-2 hours

Contraindications: Possible Lactic Acidosis – the most common acidosis of cardiac arrest (use with caution). It can create extracellular alkalosis that will shift the oxyhemoglobin saturation curve and inhibits oxygen release.

Adverse effects: Metabolic acidosis, hypokalemia, fluid overload

Indications: Overdose, Cardiac Arrest, Crush Injuries

Appears in the following sections:

- ***AC 03 Asystole / PEA***
- ***AC 09 V-Fib / Pulseless V-Tach***

1 mEq/kg IV initial Dose, 0.5 mEq/kg Q 10 minutes for special situations

- ***AM 14 Toxicological Emergencies / Poisonings / OD***

1 mEq/kg Slow IVP for Tricyclic Antidepressant OD over 2 minutes

- ***AT 09 Penetrating Injuries: General Guidelines***

50 mEq per liter NS

Washington County EMS	Succinylcholine Chloride
Drug Formulary by Generic Name	Form 32

Generic Name: Succinycholine

Trade Name: Anectine

Class: Depolarizing neuromuscular blocker

Action: The relaxation of skeletal muscles which facilitates endotracheal intubation.

Pharmacokinetics: Stimulates motor endplate acetylcholine receptors. Produces what appears to be a “persistent” depolarization of the neuromuscular junction. This causes depolarization by mimicking the effect of acetylcholine (Ach) but without being rapidly hydrolyzed by acetylcholinesterase. Propagation of an action potential is prevented by the area of inexcitability that occurs around the Ach receptors.

Onset less than 1 minute Duration 5-12 minutes

Contraindication: History or family history of malignant hyperthermia. Spinal Cord Injury less than 6 months old. Use with extreme caution in patient with paraplegia, myopathies (especially Duchenne’s) as it can cause extended blockade or hyperkalemia. Neuromuscular disorders (Guillai-Barre Syndrome, Myasthenia Gravis). More than 24 hours post significant burn. More than 4 hours post significant crush injury.

Adverse effects: Bradycardia, Hypotension, Cardiac arrhythmias, Hyperkalemia, Prolonged paralysis, Malignant Hyperthermia

Indications: To facilitate endotracheal intubation

Appears in the following section:

- **GP 19 RSI (Rapid Sequence Intubation)**

1.5 mg/kg IVP

Washington County EMS	Thiamine
Drug Formulary by Generic Name	Form 33

Generic Name: Thiamine

Trade Name: Betaxin

Class: Vitamin B1

Action: Thiamine combines with adenosine triphosphate (ATP) to form thiamine pyrophosphate coenzyme, a necessary component for carbohydrate metabolism. Most vitamins required by the body are obtained through diet, however, certain states such as alcoholism and malnourishment may affect the intake, absorption and utilization of thiamine. The brain is extremely sensitive to thiamine deficiency.

Pharmacokinetics: Onset Rapid. Duration depends on the degree of the deficiency.

Contraindications: None

Adverse Effects: Hypotension (rapid injection of a large dose), Anxiety, Diaphoresis, Nausea, Vomiting, Allergic Reaction (usually from IV injection) – Angioedema

Indications: AMS of unknown origin, Alcohol Emergency, Stroke, Toxicological Emergency

Appears in the following sections:

- *AM 01 Alcohol Emergencies*
- *AM 05 CVA / Stroke*
- *AM 14 Toxicological Emergencies / Poisoning / OD*

100 mg IVP

Washington County EMS	Tenecteplase (TNKase)
Drug Formulary by Generic Name	Form 34

Generic Name: Tenecteplase

Trade Name: Tacrine

Class: Plasminogen Activator

Action: When administered as a single bolus, it exhibits a biphasic disposition from the plasma.

Pharmacokinetics: TNKase (Tenecteplase) is cleared from plasma with an initial $\frac{1}{2}$ life of 20-24 minutes. The terminal phase of TNKase is 90-130 minutes. It is a sterile, white to off-white, lyophilized powder for single IV after reconstitution with sterile water injection.

Contraindications: Active Internal Bleeding
History of Cerebrovascular Accident
Intracranial or Intraspinal Surgery or Trauma within 2 months
Known Bleeding Diathesis
Severe Uncontrolled Hypertension

Adverse Effects: Bleeding

Indications: Indicated for the use in the reduction of mortality associated with Acute Myocardial Infarction (AMI). Treatment should be indicated as soon as possible after the onset of AMI symptoms appear.

Appears in the following section:

- **AC 02 Acute Coronary Syndrome “Chest Pain”**

1cc/10kg Max of 50mg IV

Washington County EMS	Tranexamic Acid
Drug Formulary by Generic Name	Form 35

Generic Name: Tranexamic Acid

Trade Name: Cyklokapron

Class: Anti-fibrinolytic agent

Action: Inhibits fibrinolysis by displacing plasminogen from fibrin

Pharmacokinetics: Peak plasma time 3 hours, half-life 2-11 hours

Contraindications: Hypersensitivity, subarachnoid hemorrhage. >3 hours since injury

Adverse Effects: Visual abnormalities, hypotension (with rapid injection), nausea, vomiting, diarrhea

Indications: Multisystem trauma with suspected uncontrolled hemorrhage

Appears in the following sections:

- GP34

TXA (Adults: 1GM IVP over 1 minute/Pedi: 15mg/kg over 1 minute)

Washington County EMS	Vecuronium Bromide
Drug Formulary by Generic Name	Form 36

Generic Name: Vecuronium Bromide

Trade Name: Norcuron

Class: Non-depolarizing neuromuscular blocker

Action: The relaxation of skeletal muscles which facilitates endotracheal intubation and mechanical ventilation

Pharmacokinetics: Binds to receptors and prevents acetylcholine (Ach) from stimulating receptors. It competes with Ach for nicotinic receptor binding sites. The blockade is competitive, hence muscle paralysis occurs gradually
Duration 30 minutes (approximate)

Contraindications: Inability to continuously monitor tube placement. This must be done by quantitative continuous capnography. Inability to re-intubate if required.

Adverse effects: Prolonged paralysis

Indications: To maintain endotracheal intubation and to relax skeletal muscle during prolonged mechanical ventilation.

Appears in the following sections:

- ***AC 12 Induced Hypothermia***

0.1 mg/kg IVP

- ***GP 19 RSI (Rapid Sequence Intubation)***

0.01 mg/kg IVP for defasciculating dose

0.1 mg/kg IVP for fasciculating dose

General Protocols



Washington County EMS	Air Medical Rescue
Clinical Practice - Standing Protocols	GP 01
General Protocols	

Introduction: WCEMS has adopted and attempts to follow the Brazos Valley Regional Air-Medical Activation Protocol. If conflicts arise between the following guidelines and local healthcare or medical rescue operations then contact medical control for assistance. Refer to Washington County EMS SOP 1.

Brazos Valley Regional Advisory Council Air Medical Activation Protocol

Purpose:

The purpose of the BVRAC Air Medical Provider (AMP) Protocol is to provide guidelines for a standardized approach for ground emergency medical service providers to request a scene response by an AMP. The intent is to reduce delays in patient care and reduction in mortality and morbidity. Obviously, there can not be a single protocol developed to meet the needs for every situation. Most emergencies can be adequately stabilized in local hospitals before a helicopter can reach the scene. However, clearly in certain situations the patient can not be handled at a local facility (or there are no local facility in close proximity to the scene) and should be considered a candidate for Air Evacuation to the appropriate facility. **The primary determinant should be to get the patient to the most appropriate facility in the shortest amount of time.** Local EMS protocols should be developed in conjunction with the local health care facilities and EMS Medical Directors as to when a patient should be transported to the local facility or when the patient should be flown from the scene to a higher level of trauma center. The AMP Activation protocol should be utilized not only in isolated instances but also in close conjunction with the Facility By-pass and Triage Protocol (see policy for further).

Considerations:

Several factors should be considered when evaluating the need for activating an air evacuation. There are numerous scenarios when its may be beneficial to activate an AMP. One thing that ground EMS provider should focus on is getting the patient to the most appropriate facility in the shortest amount of time. The ground EMS providers should also consider AMP protocols when considering facility by-pass. The ground EMS providers should also pay particular attention to:

- The patient meets "Major Trauma Criteria / Trauma Alert" as set by local criteria
- Number of patients will overwhelm EMS local resources or will overwhelm local hospital resources
- Patient is not easily accessible by ground EMS due to terrain or inclement weather (icy roads, bridge out, etc...)
- Ground EMS Providers must focus on two main components: Proper Clinical Care and total "Response Times" when considering to utilization of AMP's. **Total Response Times = response to the scene + scene time of Airmed Crew + transport time to facility.** The goal is to choose the transport mode that will deliver the patient to the appropriate facility the fastest.
- Extended Extrication: which would allow time for the AMP to respond as the extrication was in process.
- Ground Providers should not wait on scene awaiting the arrival of helicopter transport more then 15 minutes.

AMP Selection Criteria:

In order to assure BVRAC goals as set forth in the Trauma System Plan and other guidelines are followed. When choosing the appropriate AMP the ground EMS provider should look at several aspects when establishing their local protocols and these minimums should be adhered to. Each AMP providing service to the BVRAC trauma service (TSA) area should:

- Meet the minimum participation standards as established by the BVRAC
- Participate as requested in the BVRAC performance improvement activities
- Clinical capabilities of the AMP

The AMP chosen should also best meet the patients' needs in reference to clinical care and patient transport

- One versus two patient capable aircraft
- Response Times (response time + scene time + transport time)
- Each AMP in the BVRAC should be CAMTS accredited or "actively seeking CAMTS accreditation"
 - This in an attempt to assure minimum safety requirements are met by each AMP

Dispatching Information:

The obvious normal dispatching information should be adhered to as far as:

- Name of requesting Agency
- Location of Incident (Key map / GPS)
- Ground Contact information
- Nature of call
- Number of patients
- LZ instructions

Remember the goal is to get the patient the best care as soon as possible. Access to air evacuation services should assure prompt dispatch of a helicopter when appropriate while discouraging dispatch when it's not necessary. Access should be made by persons with training in the prehospital care of injured patients, knowledge of the local air medical evacuation guidelines and when possible participants of the BVRAC (TSA) to ensure the appropriate AMP is dispatched and criteria is followed. In most situations access should be made by the local EMS agency, but trained first responders can also provide early access in some situations. In fact most registered first responders in the BVRAC are participating members.

Washington County EMS	Blood Draw
Clinical Practice - Standing Protocols	GP 02
General Protocols	

General: Paramedics and EMT Intermediates who are employed by Washington County Emergency Medical Services may perform intravenous blood draw for clinical purposes on any patient where the primary attending paramedic believes there is a potential for clinical benefit of the blood draw procedure. Some examples include blood draw for lab measurements such as cardiac enzymes, CBC, chemistry analysis, or any other laboratory analysis that could affect patient outcomes. Other than clinical intravenous blood draws WCEMS paramedics are also able to perform intravenous blood draws as an **agency assist** for the following reasons:

Per **HB 3775** of the State of Texas, a Justice of the Peace in the State of Texas can order a paramedic to draw blood for the purpose of determining the alcohol content or presence of chemical substances. **This bill became effective 09/01/99.**

- A certified / licensed Paramedic acting at the request of a Justice of the Peace shall not incur any civil or criminal liability as a result of the blood draw.
- If, for any reason, a Washington County EMS Paramedic feels uncomfortable with the procedure, he/she should contact a supervisor immediately. The County Attorney may be contacted for legal advice if there are unusual circumstances surrounding the situation through the on call EMS Command Staff

Currently under the Texas Transportation Code Chapter 724 EMS Personnel are not allowed to draw blood specimens. However, evidentiary search and seizure warrants do not fall under the Texas Transportation Code and therefore paramedic are permitted to perform these blood draw procedures. Affidavits for search warrants are detailed in Chapter 18 of the Code of Criminal Procedure (Art. 18.08). This policy has been approved by the Office of the District Attorney – 21st Judicial District of Texas as well as the County Attorneys Office of Washington County. Paramedics are permitted to perform this procedure only:

- If you are requested and presented with official paperwork that request “*order for assistance in execution of search warrant*” by a law enforcement officer of the State of Texas and:
 - Has a signed and complete Affidavit for Search Warrant complete and accurate with appropriate signatures of peace officer, magistrate, etc...
 - A copy of the affidavit paperwork should be made available for the paramedics’ documentation.

Blood draws for the purpose of collecting DNA samples

- Washington County EMS paramedics, acting in concert with Washington County Community Supervision and Corrections Department personnel, may draw blood for the purpose of collecting DNA samples pursuant to Section 411.146 of the Texas Government Code. Under 411.146 an individual that is properly trained to collect blood samples may draw blood from a consenting individual or from an individual that is required to provide a sample by law. Person required to provide a sample shall include, but not be limited to, persons defined by Chapter 62 of the Code of Criminal Procedure and Section 411.1471 of the Government Code.

Procedure:

1. Intravenous blood draws performed under HB 3775 should be performed under the supervision of the requesting Justice of the Peace.
2. Intravenous blood draws performed for search and seizure procedures should be performed under supervision of the magistrate or the Texas Peace Officer who is serving the search warrant and **by paramedics only** (not EMT-Intermediates).
3. Seizure or Search Warrant blood draws should be performed **in a sanitary environment**.
4. If request is performed as an agency assist (Justice of the Peace or Search Warrant) the paramedic should utilize the blood draw kit provided by the requesting entity.
5. Don appropriate personal protective equipment.
6. Cleanse the venipuncture site using an iodine prep pad. **Do NOT use alcohol preps** for search warrant or JP requested blood draws as it may alter accuracy of the test results.
7. Make venipuncture with an 18 or 20 ga catheter/needle. Withdraw blood into the blood tube, provided by the requesting entity, using the needless vacutainer equipment or standard syringe technique.
8. Slowly invert the tubes at least 5 times to assure proper mixing of blood and the anticoagulant. The paramedic should write his/her initials, date, and time on the tube before handing the tube to the requesting JP, Peace Officer, or Magistrate.
9. IV blood draws for clinical purposes should be made while obtaining IV access for fluid administration when possible. This prevents unnecessary venipuncture and pain when possible. If for JP or Search Warrant Request then discontinue the I.V. after successful blood draw is performed. For clinical blood draws, WCEMS will use the appropriate color and type of blood tubes as requested by Scott and White-Brenham.
10. The paramedic should sign any forms, labels, or paperwork as requested by the JP or Peace Officer and hand the tubes directly to the requesting entity. Also observing the blood tubes being sealed by the officer or JP.
11. Normal documentation procedures should be adhered to on all blood draws no matter what the purpose which includes:
 - a. Recording the name of the JP and or Officer
 - b. Time, date, and place of blood draw
 - c. Include documentation of procedure, site preparation, etc...
 - d. Purpose for performing the blood draw procedure
 - e. Have the officer or JP sign as having received the blood specimen to document chain of custody after being drawn from the paramedic. This documentation is important to assure that the integrity of the blood draw by the WCEMS Paramedic is not in question.

Washington County EMS	Blind Nasal Tracheal Intubation
Clinical Practice - Standing Protocols	GP 03
General Protocols	

Introduction: This method should not be attempt if a basilar skull fracture is suspected. This method of intubation requires that the patient be breathing. BNTI is a difficult skill in the best of scenarios. Routine practice of this skill and its steps are essential to the success of this procedure. Recent studies do not suggest this procedure to patients who have a sympathetic response, this could cause adverse effects. These patients should be referred to RSI protocol (i.e. CHI w/ICP, AAA).

EMT - Intermediate & Paramedic

1. While maintaining ventilations, hyperventilate the patient with 100% oxygen.
2. Assemble, check equipment and lubricate the distal end of a proper size tube.
3. The BVM is removed with in-line cervical traction being performed, if indicated.
4. Remove the oral airway.
5. Place the patient's head and neck into a relaxed position. If spinal injury is suspected maintain the head and neck in a neutral (in-line) position.
6. Inspect the nose, and select the large nostril as your passageway.
7. Insert the ET tube into the nostril, with the flanged end of the tube along the floor of the nostril or facing the nasal septum, in order to avoid damaging the turbinate. The gently guide it in an anterior to posterior direction.
8. As the tube is felt to drop into the retropharyngeal space, listen closely at the open end of the tube for the patient's respirations. These sounds are loudest when the tube is proximal to the epiglottis. Care must be taken when the tube tip reaches the posterior pharyngeal wall, because it must then be directed toward the glottic opening. At this point in the procedure, the tip of the tube may become "hung up" in the periform sinus. You can recognize this by the "tenting up" of skin on either side of the Adam's Apple. With the patient's next inhaled breath, advance the tube rapidly into the glottic opening and continue passing it until the distal cuff is just past the vocal cords. At this point, the patient may cough, buck, or strain. Gagging is a sign of esophageal placement, but bulging and anterior displacement of the larynx usually indicates correct placement of the tube. When correctly placed in the trachea, the patient's exhaled air will be felt coming from the tube. At the same time, breath condensation should intermittently fog the clear plastic tube.
9. Hold the tube in place with one hand to prevent displacement.
10. Check for proper placement by observing breath sounds, chest rise and the absence of lung sounds over the epigastrium. Check breath sounds in five locations.
11. Inflate the distal cuff with 5 to 10 mL of air.
12. Secure the tube while continuing to assist ventilations.
13. Recheck proper tube placement

NOTE: Use Endotrol tubes if available, in sizes of 6.0, 7.0, & 8.0.

Washington County EMS	Bypass Protocol
Clinical Practice - Standing Protocols	GP 04
General Protocols	

Introduction: All patients with an emergent (i.e. life-threatening) condition as deemed by paramedic assessment should be transported to ***the closest appropriate hospital***. Critical patients whom can be stabilized (by on scene paramedics) for transport, should be transported to the closest appropriate hospital. In order to properly make these decisions, the paramedics at WCEMS must be well versed on each hospital's capabilities. The following is a guideline, however if conflict or indecisiveness occurs, contact medical control, Scott and White Hospital in College Station or receiving hospital physician. For Trauma patients please ***see trauma bypass protocol***.

Definitions:

- **Appropriate Facility**: A hospital, not necessarily located nearest the scene of an incident, that possesses the resources and capability to care for a patient based upon the patient's specific medical needs.
- **Bypass**: The intentional movement of a patient from the scene of an incident to a specific hospital, not necessarily the nearest hospital, based upon the patient's medical needs.
- **Diversion**: The intentional movement of a patient from the scene of an incident to an alternate hospital capable of caring for the patient at the request of that hospital because they advise that current circumstances indicate that hospital lacks the available resources or capability to treat the patient. Hospitals wishing for EMS to divert patients is a "status update" and not a mandatory order. EMTALA strictly prohibits hospitals from turning away critical patients or EMS, simply because they are on diversion.
- **Transfer**: the movement of a patient from one hospital to another hospital based upon the patient's medical needs. The procedure is also known as inter-hospital transport.

A patient who request to be transported to another facility besides SW-Brenham can be transported to that facility (within reason) considering the following:

- Severity of the patient's condition
- Hospital's level of care
- Patent airway
- Inclement weather conditions
- Availability of EMS units in county (If no units are available in county and patient requests be transferred out of county, contact command staff.)
- Can the patient be definitively treated at hospital of choice (in region or closest appropriate)

Should the paramedic have a question on diversion, contact on-line medical-control.

The following is a list of what a facility can or cannot **definitively** handle:

	SW-Brenham	SW-College Station	St. Josephs Reg Med Center	College Station Medical Center	Comments
Trauma Center Level Designation	Level IV	Level III	Level II	Level III	
Burn Center	No	No	No	No	
Pediatric Trauma Center	Stabilization Only	Stabilization only	Stabilization Only	Stabilization Only	BSW - CS Will keep <u>minor</u> obs injuries & surgical admits
PICU	No	No	No	No	
Regional Resuscitation Center & Hypothermia Center	No	Yes	Yes	Yes	
Vascular Surgery	No	Yes	Yes	Yes	
Reimplantation	No	No	No	No	BSW - CS Hand coverage provided but no reimplantations.
24 hour Interventional Heart Cath	No	Yes	Yes	Yes	
24/7 Ortho Coverage	No	Yes / Some pelvis	Yes / Most Pelvis	Yes / Except Pelvis	BSW - CS Will keep geriatric fragility fx (elderly falls) not high energy, young pelvic fx.
Primary Stroke Center	Level 3	No - Pursuing	No	Yes	
Comprehensive Stroke Center	No	No	Yes	No	
Average Time to PCI (please report door to therapy)	NA	45.4 minutes	59 minutes	47 minutes	
What % of the patients in 2015 received door to therapy in 90 minutes?	NA	100%	100%	100%	
Emergency Dialysis Capability	No	Yes	Yes	Yes	
Hyperbaric Treatment Capability	No	No	Yes	Yes	

Does your facility have concerns with the following prehospital treatment modalities? Meaning if these patients arrived to your facility by our paramedics what reaction would we anticipate receiving from the healthcare providers if any? Our goal is to not subject patients to an environment that can not support or have significant concerns with the prehospital treatment modalities they received.					
Induction of Hypothermia to ROSC cardiac arrest patients?	No	No	No	No	
Field administration of thrombolytics for STEMI patients who can not be meet the 90 min FMC to therapy guidelines?	No	No	No	No	
Field administration of blood products for patients that meet the treatment guidelines?	No	No	No	No	
Prehospital Ketamine administration?	No	No	No	No	
Prehospital Fentanyl administration?	No	No	No	No	
Prehospital ultrasound (FAST Exams)?	No	No	No	No	
Prehospital POC (point of care testing - iSTAT)?	No	No	No	No	

Diversion Activation Categories:

A request for diversion may be honored if any of the following conditions is reported by the requesting hospital:

- Emergency Department (ED) saturation;
- Intensive Care Unit (ICU) saturation;
- Operating Room (OR) saturation;
- Equipment repair or maintenance; or
- Internal disaster.

Authorization for Override of Diversion Requests:

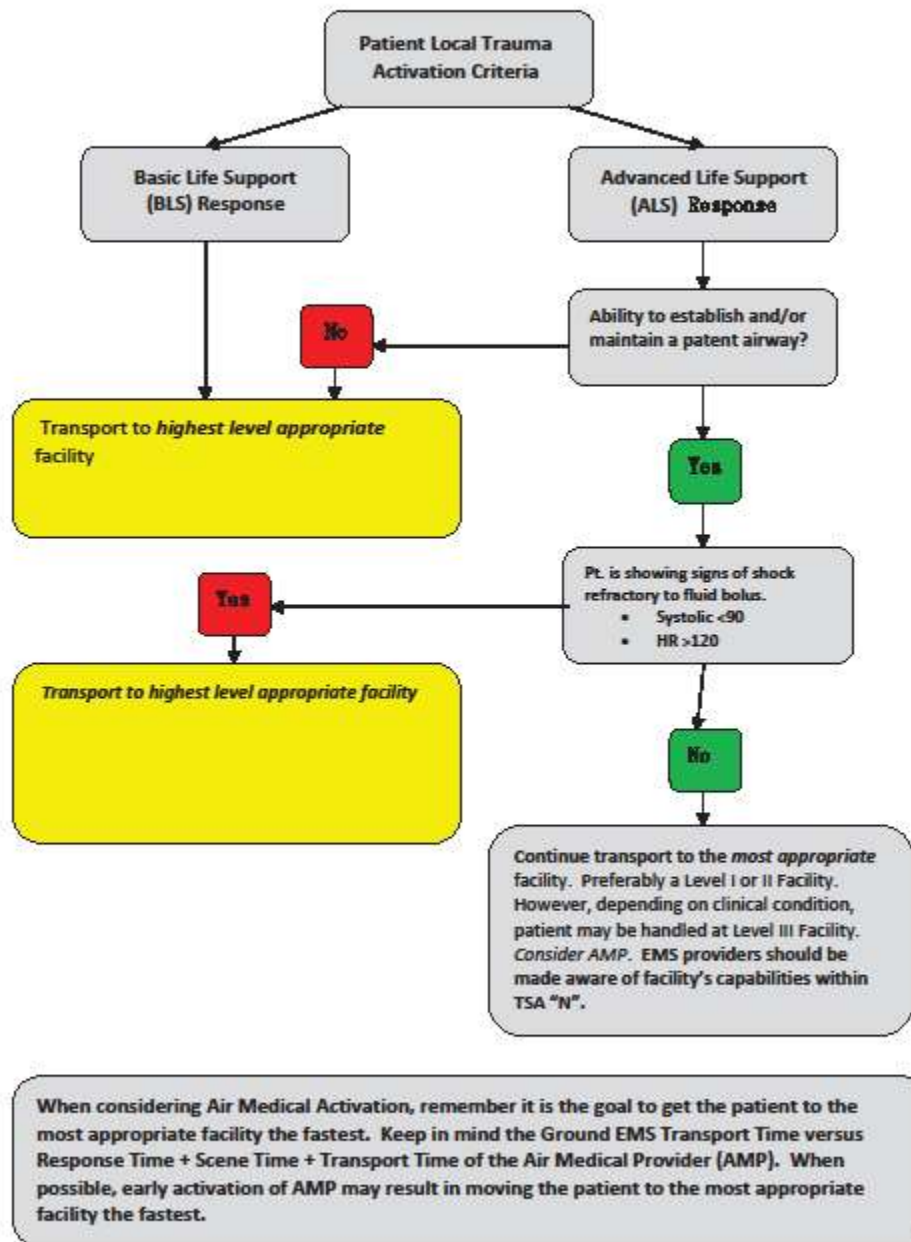
When a facility requests to be placed on diversion status, Washington County EMS personnel should attempt to divert appropriate patients to other facilities whenever possible. Washington County EMS personnel should consider the condition of the patient, distance to alternate facilities, and the diversion status of alternate facilities in determining the destination for the patient.

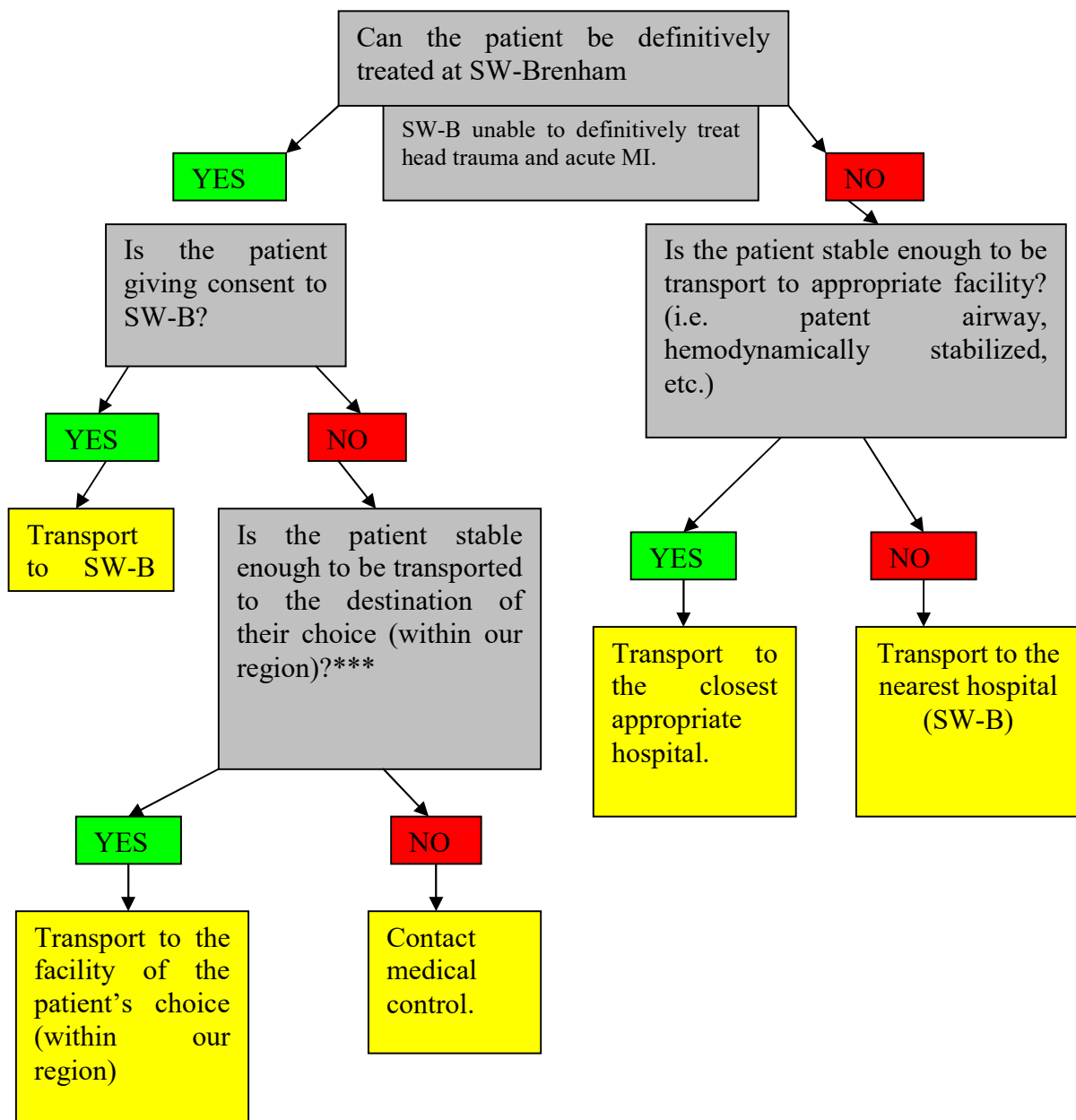
- Severity of the patient's condition;
- Distance and estimated time to an alternate appropriate facility;
- Patient's request;
- Inclement weather conditions;
- System level; and
- Whether all potential receiving facilities within a fifteen (15) minute radius of the patient's location have requested diversion consideration

In general WCEMS crews will attempt to follow the regional by-pass protocol flow chart outlined by the Brazos Valley RAC (N) facility by-pass protocols (see below). However, sound judgment by the on-scene in-charge paramedic must be utilized. There is no protocol that can properly plan on each and every scenario. Paramedics working for WCEMS should be well versed in what the local hospital (SW-Brenham) can and can't handle. If questions arise pertaining to facility bypass then contact medical control immediately for guidance.



APPENDIX B – Patient Local Trauma Activation





***Make it clear to the patient that we have standing orders to transport to any hospital within our region. (i.e. St. Joseph's Bryan, Grimes County or Burleson County, CSMC, Bellville Regional, St. Mark's)

Washington County EMS	Chest Decompression
Clinical Practice - Standing Protocols	GP 05
General Protocols	

Introduction: The purpose of this protocol is to relieve the existence of a tension pneumothorax by reducing pressure from air built up within the pleural space.

Clinical Signs and Symptoms: dyspnea/tachypnea, diminished/absent breath sounds on affected side, hyper resonance on affected side, distended neck veins (unless associated with severe hemorrhage).

Indications for treatment: loss of radial pulse, loss of consciousness, respiratory distress and cyanosis, traumatic arrest with suspected thoracic injuries (in the traumatic arrest situation when arrest is refractory to advanced airway control and volume replacement – with suspicion of thoracic trauma) In patients whom are not arrested but have the MOI for a tension pneumothorax, these patients should be demonstrating deteriorating vital signs. This does not mean you should wait for late signs, like tracheal deviation, it simply means have a reason for performing this procedure.

THERE ARE NO CONTRAINDICATIONS FOR THIS PROCEDURE.

Paramedic

1. Assist ventilation with 100% oxygen with BVM.
2. Initial choice for location should be 4th or 5th ICS Anterior-Axillary, followed by 2nd ICS Mid Clavicular or 4th or 5th ICS Mid-Axillary
3. Using aseptic technique, insert 14 gauge over-the-needle catheter, immediately superior to the fifth or sixth rib, Anterior-Axillary.
4. Insert catheter through the parietal pleura until air escapes.
5. Remove needle (stylet), leaving plastic catheter in place.
6. Attach IV tubing to end of catheter, place cut end of tubing in bottle/cup of water – keep reservoir below decompression site. Or utilize some other form of one-way valve (i.e. gloved finger) A commercially available one-way valve is available for use on our units.

NOTE:

- A. Decreased lung compliance (squeezing of BVM becomes more difficult) is an indication of developing tension pneumothorax.
- B. The intercostal artery and vein run around the inferior margin of each rib and improper needle placement can lacerate one of the vessels with resultant hemorrhage.
- C. If incorrectly diagnosed, needle insertion may result in creation of a pneumothorax.
- D. Poor technique or inappropriate insertion can cause laceration of lung.

Washington County EMS	Supraglottic Airway Devices
Clinical Practice – Standing Protocols	GP 06
General Protocols	

USING THE COMBITUBE

1. Test the cuffs. Tube #1 (blue) should hold -100 cc of air and cuff #2 (clear) should hold -15 cc of air.
2. Lubricate the outside of the device with a water soluble lubricant (if available).
3. With one hand open the mouth and pull the tongue forward. With the other hand, insert the distal end of the Combitube into the oropharynx following the natural curvature of the oropharynx using caution not to tear the cuffs on any sharp teeth edges.
4. Advance the Combitube **until the teeth (or gums) fall between the 2 blank lines of the tube**. Do not force the tube. Remove and reposition the tube if it will not advance with gentle pressure.
5. Once the Combitube has been placed, **inflate the large cuff through the blue (#1) pilot balloon**, using -85cc of air. The tube will shift slightly as if it is being ejected from the mouth due to normal adjustment of the tube to fit the oropharynx.
6. Next, **inflate the small cuff through the white (#2) pilot balloon** using – 12 cc of air
7. Attempt to **ventilate the patient** by attaching the BVM to the blue (#1) tube. Listen for lung sounds, gastric sounds and watch for either chest or stomach rise. The esophageal placed Combitube may cause an audible vibration of the vocal cords and is not a cause for concern.
8. In the majority of cases, the Combitube will have entered the esophagus and is ready for use by ventilating with the BVM attached to the **Blue (#1) port**.
9. **If no chest rise and fall is noticed, lung sounds are absent, and gastric sounds are heard**, then the clear (#2) tube has probably entered the trachea. In these cases, connect the BVM to the clear (#2) tube and attempt to ventilate, listening for lung sounds over the chest and epigastric areas. If lung sounds are present, then confirm by using the end-tidal CO2 detector (monitor), and if satisfactory ventilate the patient through this clear (#2) port. In these cases, medications can be given through the clear (#2) port as if it were an endotracheal tube intubation.
10. Tube position and adequacy of ventilation should be checked frequently during use of the Combitube.

Special Notes:

- The Combitube is for adult patients only and is meant to be a rescue device for those patients that cannot be successfully endotracheally intubated.
- The EtCO2 detector/monitor can be used to help confirm ventilation of the proper tube.
- The Combitube is contraindicated in the following patients:
 1. Under 16 years old and or under 4 feet tall (too small and risk of esophageal perforation).
 2. Intact gag reflex, history of recent caustic ingestion, known esophageal trauma, or known esophageal disease.
 3. Patients with tracheostomy or laryngectomy.

Using the King LT

A. Goal / Purpose:

- a. The King LT-D Airway is to be used as an alternative to endotracheal intubation for advanced airway management. It is placed in the esophagus and serves as a mechanical airway when ventilation is needed for patients who are over 4 feet tall and apneic or unconscious with effective ventilations.
- b. The King Airway is a latex free single use device. It consists of a curved tube with ventilation apertures located between 2 inflatable cuffs. Both cuffs are inflated using a single valve/pilot balloon. The distal cuff is designed to seal the esophagus, while the proximal cuff is intended to seal the oropharynx. Attached to the proximal end of the tube is a 55mm connector for attachment to a standard breathing circuit or resuscitation bag.

B. Indications:

- a. When endotracheal intubation is unsuccessful after 2 attempts.
- b. Patients over 4 feet tall in respiratory failure or cardiac arrest.
- c. It is not necessary to attempt intubation if a difficult airway is anticipated or visualized. The King airway may be used as a first line airway in these cases.

C. Contraindications:

- a. Active gag reflex.
- b. Caustic ingestion or extensive airway burns.
- c. Known esophageal disease.
- d. Laryngectomy with stoma.
- e. Height less than 4 feet.

D. Precautions:

- a. The King airway may not protect from effects of regurgitation and aspiration.
- b. High airway pressures may divert gas into the atmosphere or stomach.
- c. Intubation of the trachea cannot be ruled out a potential complication of insertion of the King airway.
- d. After placement, perform standard checks for chest rise and breathe sounds and utilize capnography.
- e. Lubricate only the posterior surface of the King LT-D to avoid blockage of the ventilation apertures or aspiration of the lubricant.

E. Equipment:

- a. The King LT-D airway has 3 sizes. (Size 3: 4-5ft) (Size 4: 5-6ft) (Size 5: >6ft)
- b. The King may come prepackaged in a kit that may include the tube, a 60cc or 80cc syringe and lubricant.
- c. A tongue blade may be used to facilitate placement of the King airway.

F. Procedure:

- a. Choose the correct size based of the patient's height.
- b. Test the cuff inflation system by injecting the maximum recommended volume of air into the cuffs.
- c. Remove all air from the cuffs prior to insertion.
- d. Apply water based lubricant to the beveled distal tip and posterior aspect of the tube by taking care to avoid the introduction of lubricant in or near the ventilator openings.
- e. Pre-oxygenate the patient.
- f. Position the head. The ideal position for insertion of the King airway is the sniffing position; tube can also be used with the head in neutral position.
- g. Hold the King airway at the connector end with the dominant hand. With the non-dominant hand hold the mouth open and apply a chin lift unless contraindicated due to the suspected spinal injury.
- h. With the king airway rotated laterally 45-90 degrees such that the blue orientation line is toughing the corner of the mouth and advance behind the base of the tongue. Never force the tube in position.
- i. As the tube passes under the tongue rotate the tube back to the midline (blue orientation line faces the chin).
- j. Without exerting excessive force, advance the King airway until the base of the connector aligns with the teeth or gums.
- k. Fully inflate the cuffs using the maximum volume the according to the size of tube.
- l. Attach the bag – valve mask device to the 15mm connector of the King and gently start bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
- m. Note the depth markings to give an approximate distance in cm's to the vocal cords.
- n. Confirm proper position by auscultation, chest movement and verification using CO2 capnography.
- o. Readjust cuff inflation to just seal the airway.
- p. Secure the King airway using a commercially acceptable device. Use care not to place tape over the proximal opening of the gastric access device.

G. Removal: (If required)

- a. Once it is in the correct position, the King is well tolerated until the return of protected reflexes.
- b. Suction must always be available with the King is removed.
- c. It is important that both cuffs are completely deflated prior to removal.
- d. Anticipate vomiting with removal of the King airway and position the patient on the left lateral side if possible.

H. Special information / Considerations:

- a. If unable to place the King airway is 2 attempts, abandon further attempts and utilize bag-valve-mask ventilation.
- b. Depth of insertion is key to providing a patent airway. Ventilatory openings of the King airway must align with the laryngeal inlet for adequate ventilation to occur. Accordingly, the insertion depth should be adjusted to maximize ventilation. Initially placing the King airway deep enough to align the base of the connector to the teeth and gums, inflating the cuffs, and withdrawing the tube until ventilations are optimized will assist in optimal placement.
- c. Ensure that the cuffs are not over inflated. Inflate the cuffs with the maximum volume necessary to seal the airway at the peak ventilator pressure.
- d. Most unsuccessful attempts relate to the failure to keep the tube in a midline position during insertion.
- e. Do not force the tube during insertion; this may result in trauma to the airway or esophagus.

Washington County EMS	Dead On Scene / DNR
Clinical Practice - Standing Protocols	GP 07
General Protocols	

Introduction: Competent and informed patients have a moral and legal right to consent to or refuse recommended medical procedures, including CPR. The generally accepted method for withholding CPR at the patient's request in the pre-hospital environment is through the State of Texas Prehospital **Do Not Resuscitate (DNR) Order**. Signed forms, bracelets, or necklaces are used to identify the existence of DNR orders. Even though CPR may be withheld, it is still appropriate, depending upon the advanced directive, not to withhold IV fluids, oxygen, pain medications, or other supportive care interventions.

Dead-on-scene (DOS) refers to those patients in which resuscitative efforts may have been attempted without success, or in certain instances, not attempted due to evidence of obvious clinical and biological death being present, in either situation patient transportation was not initiated.

All Certification Levels

Indications for withholding resuscitation (no DNR required).

Signs of obvious death (no DNR paperwork required) as evidenced by:

- Decomposition
- Incineration
- Rigor mortis
- Decapitation
- Dependent lividity
- Obvious mortal wounds (severe traumatic injuries with obvious signs of vital organ destruction such as brain, thoracic contents, etc.) with no spontaneous pulse or respirations.
- Extended “down time” after SCA. Remember the victims chance of survival reduces 10% per minute.
- Patient has a Valid State of Texas Prehospital DNR Order.

Resuscitation must be attempted in any patient in whom none of the above circumstances are present or are questionable. EMS personnel frequently encounter patients who have valid DNR paperwork and wish no resuscitation efforts to be initiated. The decision to honor, or not honor, an out-of hospital DNR must be made quickly and accurately. This order does not mean the patient refuses all medical care. Other treatment may be provided prior to cardiac or respiratory arrest. More extensive limitations of treatment are accomplished through advance directives where specific treatments or procedure can be refused. Patients with a terminal illness are unique and require thoughtful consideration at critical times. Healthcare providers should always remember: “to cure something, relieve occasionally, comfort always.”

The person who executes the DNR order may request to have any of the following procedures withheld, with documentation of each procedure present at the top of the DNR order:

- a. Cardiopulmonary resuscitation;
- b. Endotracheal intubation or other advanced airway management;
- c. Artificial ventilation;
- d. Defibrillation;
- e. Transcutaneous cardiac pacing, and
- f. Administration of cardiac resuscitation medications.

Resuscitation may be withheld in the pulseless and apneic patient ONLY if the following criteria have been met.

- a. An official Texas DNR identification bracelet or necklace is being **worn** by the patient; **OR**
- b. An official TDH out-of-hospital do-not-resuscitate order is presented upon patient contact with all necessary patient information, signatures and boxes completed and presented on the form; **OR**
- c. The patient's private physician is either on-scene or via phone directs the provider to withhold any resuscitative efforts. (Phone conversations should be documented through EMS communications).

The Texas DNR form is not to be honored, and full resuscitative efforts including BLS and ACLS are to be initiated, if any of the following conditions exists:

THE PATIENT:

- a. Destroys the form and removes the identification device; **OR**
- b. Directs someone in their presence to destroy the form and remove the identification device; **OR**
- c. Communications to the responding health care professionals or the attending physician that it is his/her intent to revoke the order; **OR**
- d. Notifies the attending physician, if the physician is not present, that the order has been revoked.

THE PERSON WHO EXECUTED THE ORDER:

- a. Destroys the form and removes the identification device; **OR**
- b. Directs someone in their presence to destroy the form and remove the identification device; **OR**
- c. Notifies the attending physician, if the physician is not present, that the order has been revoked.

THE ATTENDING PHYSICIAN: (or the physician's designee)

- a. If present at the time of revocation, records in the patient's medical record the time, date, and place of the revocation; **OR**
- b. If not present, records the time, date and place that the physician received notice of the revocation; **and**
- c. Enters the word "VOID" on each page of the order in the person's medical record.

In addition to the above, the Texas DNR order is not to be honored if:

- The patient is known to be pregnant.
- Unusual or suspicious circumstances are involved (suspected homicide or suicide).

If any of these reasons for revocation are met the provider must:

- Initiate full resuscitative efforts.
- Record the time, date, and place of the revocation for

DNR order revocation incident reporting to the TDH by the Washington County EMS Administrative Assistant's Office.

NOTE: The following instructions provide suggested modifications to the Out of Hospital DNR Order (revised September 27, 1996) to comply with legislative changes effective on September 1, 1999.

- Only one qualified family member's signature is required.
- Only one witness must meet the qualifications listed on the reverse side of the form.
- An individual is no longer required to have a terminal condition.
- A photocopy or other complete facsimile or the completed form may be used for any purpose for which the original written order may be used.
- The instructions listed on the back of the OUT-OF-HOSPITAL DNR form must be completed.

FURTHER GUIDANCE OF OOH –DNR'S:

Should the patient expire prior to the initiation of transport by EMS, the EMS crew shall:

1. Discontinue all medical care.
2. Prepare the body for viewing by the family and/or friends.
3. Allow the family/friends to view the body as they wish. Answer any questions regarding the patient's clinical status upon your arrival and your actions, to the best of your ability.
4. Notify field Medical Control of the situation.
5. Notify, via the Communications Center, the appropriate law enforcement agency of an out-of-hospital death.
6. Complete all appropriate documentation.
7. Release the scene to law enforcement upon their arrival, providing them with a copy of the documentation.

If a patient who is under a valid DNAR directive becomes pulseless and apneic **during** transport, the EMS crew shall:

1. Note the time the patient became pulseless and apneic.
2. Continue any care that is in progress at that point (e.g., oxygen administration, etc.).
3. DO NOT initiate any additional medical care.
4. Continue transport, in non-emergency traffic mode, to the destination facility.

5. Upon arrival at the destination facility, release the patient to the appropriate health care professional. Notify the receiving health care professionals that the patient became pulseless and apneic during transport and that, as per the patient's binding directive, EMS did not treat the cardiac arrest.
6. Complete all appropriate documentation and leave copies with the receiving facility.

LIMITATIONS OF CARE:

Competent adult patients have the right to select the care they receive from health care professionals. This right extends to emergency situations, the out-of-hospital care arena and even to resuscitation and end-of-life cases.

This right may be exercised verbally by a competent adult patient (as described and defined in the Consent and Refusal policy). This right may also be exercised by written directive, executed by a patient when he/she was competent, even if that patient is no longer competent to consent to or refuse care. Last, selection and limitation of healthcare options and procedures may be exercised by a duly authorized representative of the patient (family member or representative empowered to do so by a Durable Power of Attorney) in cases where the patient is incompetent or unable to communicate their wishes.

A directive to withhold or limit resuscitative measures shall not prevent EMS from providing appropriate emergency care to ameliorate suffering, such as oxygen administration, airway suctioning, or authorized analgesia.

Should EMS personnel encounter a patient with an apparent terminal condition or in whom there is a reason to believe the patient and/or family may wish to limit the care administered to the patient by EMS, the EMS personnel shall:

1. Determine the presence or absence of any written or verbal directives pertaining to limitations of care. If there is a written directive, review it carefully and clarify any unclear components with the patient and/or patient's authorized representative.
2. Discuss the treatment options available to the patient from EMS with either the patient (if competent and able to communicate) or the patient's authorized representative.
3. Clarify the interventions to which the patient (or representative) does and does not consent, prior to initiating transport.
4. Consult with online medical control for direction and clarify with family members/Power of Attorney.
5. Document the directive(s), either written or verbal, received from the patient or representative on the EMS chart.



OUT-OF-HOSPITAL DO-NOT-RESUSCITATE (OOH-DNR) ORDER

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

This document becomes effective immediately on the date of execution for health care professionals acting in out-of-hospital settings. It remains in effect until the person is pronounced dead by authorized medical or legal authority or the document is revoked. Comfort care will be given as needed.

[Print Form](#)

Person's full legal name _____

Date of birth _____

☐ Male
☐ Female

A. Declaration of the adult person: I am competent and at least 18 years of age. I direct that none of the following resuscitation measures be initiated or continued for me: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Person's signature _____

Date _____

Printed name _____

B. Declaration by legal guardian, agent or proxy on behalf of the adult person who is incompetent or otherwise incapable of communication:

I am the: ☐ legal guardian; ☐ agent in a Medical Power of Attorney; OR ☐ proxy in a directive to physicians of the above-noted person who is incompetent or otherwise mentally or physically incapable of communication.

Based upon the known desires of the person, or a determination of the best interest of the person, I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____

Date _____

Printed name _____

C. Declaration by a qualified relative of the adult person who is incompetent or otherwise incapable of communication: I am the above-noted person's:

☐ spouse, ☐ adult child, ☐ parent, OR ☐ nearest living relative, and I am qualified to make this treatment decision under Health and Safety Code §166.088.

To my knowledge the adult person is incompetent or otherwise mentally or physically incapable of communication and is without a legal guardian, agent or proxy. Based upon the known desires of the person or a determination of the best interests of the person, I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____

Date _____

Printed name _____

D. Declaration by physician based on directive to physicians by a person now incompetent or nonwritten communication to the physician by a competent person: I am the above-noted person's attending physician and have:

☐ seen evidence of his/her previously issued directive to physicians by the adult, now incompetent; OR ☐ observed his/her issuance before two witnesses of an OOH-DNR in a nonwritten manner.

I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Attending physician's
signature _____

Date _____

Printed
name _____Lic

E. Declaration on behalf of the minor person: I am the minor's: ☐ parent; ☐ legal guardian; OR ☐ managing conservator.

A physician has diagnosed the minor as suffering from a terminal or irreversible condition. I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____

Date _____

Printed name _____

TWO WITNESSES: (See qualifications on backside.) We have witnessed the above-noted competent adult person or authorized declarant making his/her signature above and, if applicable, the above-noted adult person making an OOH-DNR by nonwritten communication to the attending physician.

Witness 1 signature _____

Date _____

Printed name _____

Witness 2 signature _____

Date _____

Printed name _____

Notary in the State of Texas and County of _____. The above noted person personally appeared before me and signed the above noted declaration on this date: _____.

Signature & seal: _____

Notary's printed name: _____

Notary Seal

[Note: Notary cannot acknowledge the witnessing of the person making an OOH-DNR order in a nonwritten manner]

PHYSICIAN'S STATEMENT: I am the attending physician of the above-noted person and have noted the existence of this order in the person's medical records. I direct health care professionals acting in out-of-hospital settings, including a hospital emergency department, not to initiate or continue for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Physician's signature _____

Date _____

Printed name _____

License # _____

F. Directive by two physicians on behalf of the adult, who is incompetent or unable to communicate and without guardian, agent, proxy or relative: The person's specific wishes are unknown, but resuscitation measures are, in reasonable medical judgment, considered ineffective or are otherwise not in the best interests of the person. I direct health care professionals acting in out-of-hospital settings, including a hospital emergency department, not to initiate or continue for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Attending physician's
signature _____

Date _____

Printed
name _____

Lic# _____

Signature of second physician _____

Date _____

Printed
name _____

Lic# _____

Physician's electronic or digital signature must meet criteria listed in Health and Safety Code §166.082(c).

All persons who have signed above must sign below, acknowledging that this document has been properly completed.

Person's signature _____

Guardian/Agent/Proxy/Relative signature _____

Attending physician's
signature _____

Second physician's signature _____

Witness 1
signature _____Witness 2
signature _____Notary's
signature _____

This document or a copy thereof must accompany the person during his/her medical transport.

INSTRUCTIONS FOR ISSUING AN OOH-DNR ORDER

PURPOSE: The Out-of-Hospital Do-Not-Resuscitate (OOH-DNR) Order on reverse side complies with Health and Safety Code (HSC), Chapter 166 for use by qualified persons or their authorized representatives to direct health care professionals to forgo resuscitation attempts and to permit the person to have a natural death with peace and dignity. This Order does NOT affect the provision of other emergency care, including comfort care.

APPLICABILITY: This OOH-DNR Order applies to health care professionals in out-of-hospital settings, including physicians' offices, hospital clinics and emergency departments.

IMPLEMENTATION: A competent adult person, at least 18 years of age, or the person's authorized representative or qualified relative may execute or issue an OOH-DNR Order. The person's attending physician will document existence of the Order in the person's permanent medical record. The OOH-DNR Order may be executed as follows:

Section A - If an adult person is competent and at least 18 years of age, he/she will sign and date the Order in Section A.

Section B - If an adult person is incompetent or otherwise mentally or physically incapable of communication and has either a legal guardian, agent in a medical power of attorney, or proxy in a directive to physicians, the guardian, agent, or proxy may execute the OOH-DNR Order by signing and dating it in Section B.

Section C - If the adult person is incompetent or otherwise mentally or physically incapable of communication and does not have a guardian, agent, or proxy, then a qualified relative may execute the OOH-DNR Order by signing and dating it in Section C.

Section D - If the person is incompetent and his/her attending physician has seen evidence of the person's previously issued proper directive to physicians or observed the person competently issue an OOH-DNR Order in a nonwritten manner, the physician may execute the Order on behalf of the person by signing and dating it in Section D.

Section E - If the person is a **minor** (less than 18 years of age), who has been diagnosed by a physician as suffering from a **terminal or irreversible condition**, then the minor's parents, legal guardian, or managing conservator may execute the OOH-DNR Order by signing and dating it in Section E.

Section F - If an adult person is incompetent or otherwise mentally or physically incapable of communication and does not have a guardian, agent, proxy, or available qualified relative to act on his/her behalf, then the attending physician may execute the OOH-DNR Order by signing and dating it in Section F with concurrence of a second physician (signing it in Section F) who is not involved in the treatment of the person or who is not a representative of the ethics or medical committee of the health care facility in which the person is a patient.

In addition, the OOH-DNR Order must be signed and dated by two competent adult witnesses, who have witnessed either the competent adult person making his/her signature in section A, or authorized declarant making his/her signature in either sections B, C, or E, and if applicable, have witnessed a competent adult person making an OOH-DNR Order by nonwritten communication to the attending physician, who must sign in Section D and also the physician's statement section.

Optionally, a competent adult person or authorized declarant may sign the OOH-DNR Order in the presence of a notary public. However, a notary cannot acknowledge witnessing the issuance of an OOH-DNR in a nonwritten manner, which must be observed and only can be acknowledged by two qualified witnesses. Witness or notary signatures are not required when two physicians execute the OOH-DNR Order in section F. The original or a copy of a fully and properly completed OOH-DNR Order or the presence of an OOH-DNR device on a person is sufficient evidence of the existence of the original OOH-DNR Order and either one shall be honored by responding health care professionals.

REVOCACTION: An OOH-DNR Order may be revoked at ANY time by the person, person's authorized representative, or physician who executed the order.

Revocation can be by verbal communication to responding health care professionals, destruction of the OOH-DNR Order, or removal of all OOH-DNR identification devices from the person.

AUTOMATIC REVOCACTION: An OOH-DNR Order is automatically revoked for a person known to be pregnant or in the case of unnatural or suspicious circumstances.

DEFINITIONS

Attending Physician: A physician, selected by or assigned to a person, with primary responsibility for the person's treatment and care and is licensed by the Texas Medical Board, or is properly credentialed and holds a commission in the uniformed services of the United States and is serving on active duty in this state. [HSC §166.002(12)].

Health Care Professional: Means physicians, nurses, physician assistants and emergency medical services personnel, and, unless the context requires otherwise, includes hospital emergency department personnel. [HSC §166.081(5)]

Qualified Relative: A person meeting requirements of HSC §166.088. It states that an adult relative may execute an OOH-DNR Order on behalf of an adult person who has not executed or issued an OOH-DNR Order and is incompetent or otherwise mentally or physically incapable of communication and is without a legal guardian, agent in a medical power of attorney, or proxy in a directive to physicians, and the relative is available from one of the categories in the following priority: 1) person's spouse; 2) person's reasonably available adult children; 3) the person's parents; or, 4) the person's nearest living relative. Such qualified relative may execute an OOH-DNR Order on such described person's behalf.

Qualified Witnesses: Both witnesses must be competent adults, who have witnessed the competent adult person making his/her signature in section A, or person's authorized representatives making his/her signature in either Sections B, C, or E on the OOH-DNR Order, or if applicable, have witnessed the competent adult person making an OOH-DNR by nonwritten communication to the attending physician, who signs in Section D. Optionally, a competent adult person, guardian, agent, proxy, or qualified relative may sign the OOH-DNR Order in the presence of a notary instead of two qualified witnesses. Witness or notary signatures are not required when two physicians execute the order by signing Section F. One of the witnesses must meet the qualifications in HSC §166.003(2), which requires that at least one of the witnesses not: (1) be designated by the person to make a treatment decision; (2) be related to the person by blood or marriage; (3) be entitled to any part of the person's estate after the person's death either under a will or by law; (4) have a claim at the time of the issuance of the OOH-DNR against any part of the person's estate after the person's death; or, (5) be the attending physician; (6) be an employee of the attending physician or (7) an employee of a health care facility in which the person is a patient if the employee is providing direct patient care to the patient or is an officer, director, partner, or business office employee of the health care facility or any parent organization of the health care facility.

Report problems with this form to the Texas Department of State Health Services (DSHS) or order OOH-DNR Order/forms or identification devices at (512) 834-6700.

Declarant's, Witness', Notary's, or Physician's electronic or digital signature must meet criteria outlined in HSC §166.011

Washington County EMS	ETCO2
Clinical Practice - Standing Protocols	GP 08
General Protocols	

Introduction: Capnography is the **VENTILATION VITAL SIGN**. Capnography is a non-invasive method for monitoring the level of carbon dioxide in exhaled breath (EtCO2), to assess a patient's ventilatory status. A true capnograph will produce both an EtCO2 value as well as a waveform (capnogram). EtCO2 is a predictable source and relates directly to the PaCO2 (arterial partial pressure of CO2) of the patient. However the PaCO2 is not exactly replicated by the EtCO2 there is typically a 2-5mm/Hg difference between the two readings.

Indications:

Washington County EMS does not want to restrict the use of this equipment nor do we advocate the use on every call, to limit confusion this will be used as a guideline for EMS crews. The use of the EtCO2 monitors are indicated in several circumstances. The use of these monitors will be used (*when possible and at the paramedics discretion*) during the following circumstances.

1. Airway Vigilance

- a. For ETT placement and ongoing placement assessment
- b. During Rapid Sequence Intubation procedures
- c. Safety during transport of intubated patients (monitoring extubation)

2. Assessment of CPR/ACLS efficiency and predictive outcomes

3. Evaluation of Respiratory Compromised Patients – ASTHMA/ COPD/CHF

- a. Due to the cost involved in the equipment. If the equipment is to be utilized in patients that are not intubated, there should be ***supporting signs and symptoms prior to the use of this*** (disposable) ***equipment.*** (i.e. low O2 saturations, excessive tachypnea, poor lung sounds, excessive edema, etc...)
- b. The need for more aggressive treatments/medications and assessment post-treatments

4. Assessment of Head Injury Patients

- a. Management of CO2 level through changes in ventilation support.

5. Assessment of respiratory depression due to sedation, analgesia, or overdose.

Contraindications: None

Attention: Capnography is extremely useful in warning you of an adverse event. We have been taught that ECG's will and can provide you with early warning of hypoxia or poor ventilation and it does. However, it provides you with approximately 5-10 seconds of warning time. Oximeters will provide you with 30-60 seconds of warning time. Capnography can provide you with 2-4 minutes of warning time of an adverse event. Keep this in mind when treating your patients to prevent misinterpretation, confusion, and accidental damage of this equipment. **This equipment should be utilized only after completing the in-service provided by WCEMS and viewing the video.**

Washington County EMS	External Jugular Access
Clinical Practice - Standing Protocols	GP 09
General Protocols	

Introduction: External Jugular Vein Cannulation should be attempted only by paramedic and EMT-I who have been trained in its use. Cannulation of this vein may be used as a primary site in the cardiac arrest situation. EJ access may also be utilized on any patient requiring access if the paramedic determines other peripheral attempts not indicated due to poor peripheral access, small veins and large bore being necessary, etc...The paramedic's judgment is utilized to decide if external jugular access is indicated, however, the paramedic should have justifiable reasons for not initially attempting other peripheral sites. If proven unsuccessful on first attempt the caregiver may perform a second attempt in the same EJ vein. If access is emergent the IO access should be attempted when EJ Cannulation is unsuccessful.

EMT - Intermediate & Paramedic

- Establish the need for External Jugular Cannulation.
- Obtain proper materials.
- Lay patient flat and head down to help prevent air embolism (practice C-spine protection in trauma) when practical.
- Pick a side of the patient's neck as an IV site.
- In the medical Cannulation roll the patient's head to the side and find a landmark, this will help you find the external jugular vein. In traumatic cannulation this will be done without turning the head and maintaining C-spine alignment.
- Prep the IV site using aseptic technique.
- Obtain a 14 or 16 gauge IV catheter and in the upper half of the external jugular vein proceed to stick the vein at a 45-degree angle, the angle is because the EJ vein rolls up and down instead of side to side.
- Once a flashback is obtained advance as usual, go inline with the vein, and thread the IV catheter.
- Once the IV catheter is threaded be sure to occlude your IV and connect the IV tubing as quickly as possible to prevent an air embolism.
- Confirm placement by fluid administration, and secure the catheter/tubing as any other IV.
- In Traumatic cannulation you can apply a C-collar over your IV site.
- If the external jugular cannulation proves unsuccessful then you proceed to Intraosseous.

Washington County EMS	Geographical Area
Clinical Practice - Standing Protocols	GP 10
General Protocols	

Introduction: This protocol is designed to assist EMS crews as to what the Washington County EMS response area is.

Geographical Area:

These protocols shall only be utilized under medical direction in Washington County EMS 911 service area, mutual aid areas, any mutual aid assistance request, and when on transfers.

Duty Status:

The Washington County EMS personnel shall utilize these protocols under medical direction only when acting in their official capacity when representing the Washington County EMS Standards Operating Procedures. Employees who drive up on an accident scene in our response area and begin rendering aid are allowed to follow these protocols.

Washington County EMS	Glucometer
Clinical Practice - Standing Protocols	GP 11
General Protocols	

Introduction: When used properly, this device is very useful in detecting the blood glucose level of the Diabetic patient. It may be used by all certification levels (EMT-B to EMT-P) who have been properly trained in its use.

1. Preparation:
 - A. Use universal precautions.
 - B. Alcohol prep for sterile technique.
 - C. Load the Glucometer and the Lancet device.
 - D. If not already done calibrate the Glucometer using the code strip.
2. Stick the patient's finger with the Lancet device and gently squeeze the patient's finger to form a drop of blood.
3. Touch and hold the EMD of the Test strip to the drop of blood until the Glucometer beeps. The blood will automatically be drawn into the test strip.
4. Record the results and this result will register in the glucometer until the next glucotest is performed.

Washington County EMS	I.O. and E.Z I.O.
Clinical Practice - Standing Protocols	GP 12
General Protocols	

Introduction: For administration of fluids and medications where quick peripheral venous access is not possible (2 unsuccessful attempts in 90 seconds). Intraosseous infusion may be used in pediatric and adults patients in cardiac arrest, hypovolemic pediatric patients, or patients deemed “critical” and venous access is required. Other indications may include a respiratory compromised patient, hemodynamically unstable, or altered level of consciousness where IV access is needed.

Manual IO insertion:

Paramedic

1. Select a site of two finger breath below the tibial tuberosity either midline or slightly lateral to the midline. May consider malleolus of the ankle of adult patient.
2. Use 15 gauge for adult, 18 gauge for pediatric bone intraosseous needle.
3. Place rolled towels or sandbag under the knee. Insert needled into the proximal tibia using a slow, boring, twisting **straight** motion until you have penetrated the bone (you will feel a sudden decrease in resistance as the needle enters the marrow cavity). Aspiration of blood/marrow confirms proper placement of the needle.
4. Attach IV tubing for infusion of fluid.
5. Secure the needle and tubing to the patient’s leg. Splint involved limb for protection.

NOTE: For pediatric patient the initial dosage of fluid in hypovolemic shock should be 20 ml/kg. Reassess, if perfusion is still diminished, then a second bolus 20 ml/kg should be administered. Continue to reassess the patient and bolus if needed.

MISCELLANEOUS INFORMATION:

- a. If infiltration occurs, do not use the same bone, as fluid will leak out of the original penetration site.
- b. Potential complications are very rare but may include:

- Osteomyelitis
- Sepsis
- Fat embolism
- Marrow damage

IF COMPLICATION SHOULD OCCUR TREAT AS YOU WOULD A CONVENTIONAL IV.

E.Z. IO

The EZ-IO infusion system is designed to assist the paramedic in situations when intravenous access is necessary but difficult or unobtainable. This device is preferred over manual insertion due to its ease of use and higher statistical success rates among adult patients. The EZ-IO device can be used on both adults and pediatric patients. The provider may opt to use manual insertion with pediatric patients if he/she feels with manual insertion on these patients. As mentioned in the manual IO protocol the indications are the same. This device is indicated for patients who necessitate IV access but has two unsuccessful attempts (90 seconds or less) and in certain situations is acceptable as the primary method of access (cardiac arrest, respiratory arrest, unconscious hemodynamically unstable patient).

Other examples of when the EZ IO is acceptable to be utilized as an alternate access device (when normal IV access is unsuccessful) are:

- AMI
- Closed Head Injury
- Arrhythmias
- Burns
- CHF
- All shock states
- Renal failure patients

Contraindications:

This procedure is contraindicated in the following situations:

- Fracture of the tibia or femur
- Previous orthopedic procedures (knee replacement)
- Extremity that is compromised due to disease process (such as PVD)
- Infection over the site
- Inability to locate anatomical landmarks
- Excessive tissue over the site

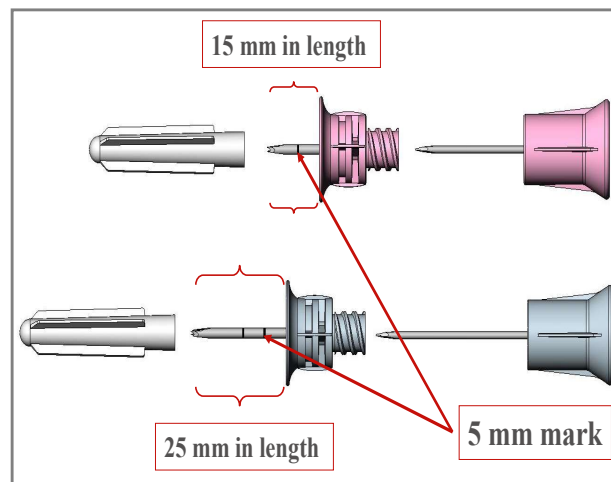
When a contraindication is found the paramedic should assess the other extremity or the described alternative site (humerus).

Procedure:

1. BSI precautions
2. Determine indications as described in the introduction of this protocol.
3. Assess for contraindications
4. Locate proper anatomical landmarks and EZ-IO site of insertion.
5. Clean site using aseptic technique

6. Prepare the EZ-IO driver set
 - a. open case and prepare driver
 - b. open EZ-IO cartridge, select appropriate needle (adult or pedi), and attach appropriately
 - c. remove safety cap from needle
7. Using one hand to stabilize the driver and the other hand to stabilize the site begin insertion at a 90 degree angle to selected site.
8. Continue to insert needle allowing the driver to do the work. Do not push hard.
9. Stop when you feel the sudden decrease in resistance.
10. Remove driver from needle set.
11. Remove stylet from needle catheter.
12. Insertion of the EZ-IO in the conscious patient causes mild to moderate discomfort but is usually no more painful than a large bore IV but can cause severe discomfort for conscious patients. For pain in the conscious, alert adult patients administer **40 mg Slow IVP Lidocaine 2%** through the EZ IO hub.
13. Flush catheter with 10-20cc syringe of IV fluid.
14. Attach appropriate tubing to IO catheter.
15. Stabilize the catheter if needed utilizing Kerlex or appropriate technique.
16. Begin infusion and attach wristband.

EZ-IO PD & EZ-IO AD needle sets



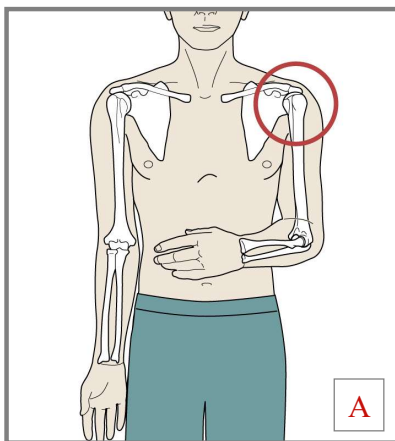
Length is the only difference between PD & AD needle sets

Alternate EZ-IO Site Technique:

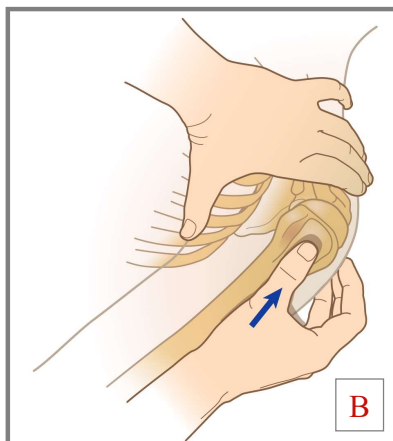
Humeral Head Access



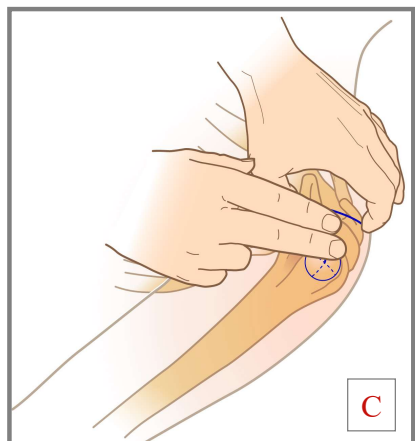
Insertion site identification summary



Orient Arm



Preferred Approach



Alternate Approach

EZ-IO Quick Reference Information



EZ-IO

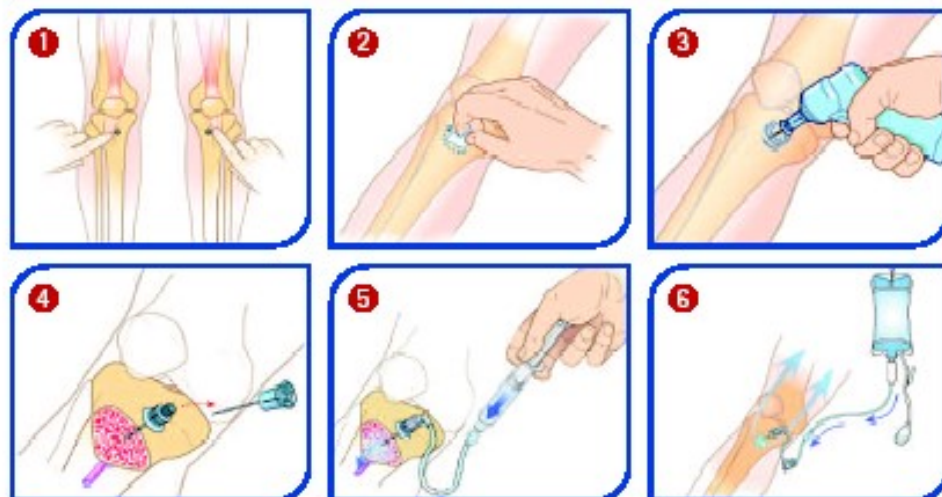
Insertion Steps

To Insert Needle Set:

1. Protect yourself (BSI)
2. Identify indication
3. Check for contraindication
4. Locate landmarks **1***
5. Clean site **2**
6. Prepare driver and needle set
7. Stabilize leg
8. Insert EZ-IO® needle set **3**
9. Remove driver from needle set
10. Remove stylet from catheter **4**
11. Confirm placement
12. Attach EZ-Connect®
13. Inject IO 20-40 mg of 2% Lidocaine in alert patients
14. Syringe bolus (flush) IO with 10 ml NS **5**
15. Start infusion under pressure **6**
16. Secure tubing and catheter

*additional sites available

Do Not Leave the EZ-IO catheter in for more than 24 hours.



Washington County EMS	Medication List - Adult
Clinical Practice - Standing Protocols	GP 14
General Protocols	

Medication:	Protocol:	Dosing:
Activated Charcoal	AM14 - Toxicological/Emergencies/OD	15 grams followed by 8 oz H2O
Adenosine	AC07 - Paroxysmal Supraventricular Tachycardia	6 mg, 12 mg, 12 mg Rapid IV Push
Adenosine	AC10 - Ventricular Tachycardia w/ Pulse	6 mg, 12 mg, 12 mg Rapid IV Push
Albuterol	AC05 - CHF	2.5 mg Nebulizer, repeat as needed
Albuterol	AM02 - Allergic Reaction/Anaphylaxis	2.5 mg Nebulizer, repeat as needed
Albuterol	AM03 - Asthma	2.5 mg Nebulizer, repeat as needed
Albuterol	AM04 - COPD	2.5 mg Nebulizer, repeat as needed
Amiodarone	AC07 - Paroxysmal Supraventricular Tachycardia	150 mg IVP over 10 min. repeat as VF Reoccurs.
Amiodarone	AC09 - V-Fibrillation / Pulseless V-Tach	consider 150 mg IV if no conversion
Amiodarone	AC10 - Ventricular Tachycardia w/ Pulse	150 mg IVP , may repeat
Amiodarone	AC09 - V-Fibrillation / Pulseless V-Tach	150 mg additional dose w/ ROSC patients
Amiodarone	AC11 - Ventricular Ectopy (Symptomatic PVC, HR > 60)	150 mg IVP Slow
Amiodarone	AC09 - V-Fibrillation / Pulseless V-Tach	300 mg IV prior to 4th Shock
Amiodarone Drip	AC06 - General Care for SCA	1 mg/min
Amiodarone Drip	AC09 - V-Fibrillation / Pulseless V-Tach	1 mg/min
Amiodarone Drip	AC10 - Ventricular Tachycardia w/ Pulse	1 mg/min
Amiodarone Drip	AC11 - Ventricular Ectopy (Symptomatic PVC, HR > 60)	1 mg/min
Aspirin	AC02 - Acute Coronary Syndrome	324 mg PO
Atropine	AC04 - Bradycardia	0.5 - 1.0 mg IV, repeat 1 mg Q 3-5 min. Max 3.0mg
Atropine	AM14 - Toxicological/Emergencies/OD	1 mg IVP for Symptomatic Bradycardia
Atropine	AM14 - Toxicological/Emergencies/OD	2 mg IV for Organophosphate Poison Q 5-15 min until desired effect.
Atropine	SP05 - Special Operations (Nerve Agent Poisoning)	2 mg IVP
Clopidogrel	AC02 - Acute Coronary Syndrome	300 mg IVP for patients less than 75 years of age.
D50 (50% Dextrose)	AM01 - Alcohol Emergency	25 grams IVP if BS 50 mg/dL or below, may repeat

D50 (50% Dextrose)	AM07 - Diabetic Glucose Emergencies	25 grams IVP if BS 50 mg/dL or below, may repeat
Diphenhydramine	AC08 - Shock (Anaphylactic)	50 mg IV / IM
Diphenhydramine	AM02 - Allergic Reaction/Anaphylaxis	50 mg IV / IM
Diphenhydramine	AM12 - Psychiatric Emergencies - EPS	50 mg IV / IM
Dopamine Drip	AC04 - Bradycardia	2 - 10 mcg/kg/min
Dopamine Drip	AC08 - Shock (Cardiogenic)	2 - 10 mcg/kg/min
Dopamine Drip	AC08 - Shock (Septic)	2 - 10 mcg/kg/min
Dopamine Drip	AC08 - Shock (unknown)	2 - 10 mcg/kg/min
Dopamine Drip	AC12 - Induced Hypothermia	2 - 10 mcg/kg/min
Epi 1:10,000	AC03 - Asystole/PEA	1 mg IV/IO Q 3-5 minutes.
Epi 1:10,000	AC08 - Shock (Anaphylactic)	1 mg IV
Epi 1:10,000	AC09 - V-Fibrillation / Pulseless V-Tach	1 mg IV/IO repeat 1mg Q 3-5 min.
Epi 1:10,000	AM02 - Allergic Reaction/Anaphylaxis	1 mg IV
Epi 1:1000	AM02 - Allergic Reaction/Anaphylaxis	0.3 mg SQ
Epi 1:1000	AM03 - Asthma	0.3 mg SQ
Epi Drip	AC04 - Bradycardia	2 - 10 mcg/min
Etomidate	GP19 - Rapid Sequence Intubation (Premedicate)	0.3 mg / kg IV
Fentanyl	AC02 - Acute Coronary Syndrome	25-50 mcg IV / IM / IN - Q 2-5 min.
Fentanyl	AC12 - Induced Hypothermia	1-3 mcg/kg IVP
Fentanyl	AM11 - Pain Management	25-50 mcg IV / IM / IN - Q 2-5 min.
Fentanyl	AM11 - Pain Mgmt (Lg Burns,Pelvic Fx, Long Bone)	1 mcg / kg IV / IM / IN - Q 2-5 min.
Fentanyl	GP19 - Rapid Sequence Intubation (Pre-Sedation)	1 - 3 mcg / kg IVP
Fentanyl	GP19 - Rapid Sequence Intubation (Re-Sedation)	1 - 3 mcg / kg IVP
Fentanyl	GP20 – Transport Ventilator	1 – 3 mcg / kg IVP
Furosemide	AC05 - CHF	40 mg IVP Slow
Ketamine	AC04 - Bradycardia	0.25 mg/kg SIVP/IO
Ketamine	AC07 - Paroxysmal Supraventricular Tachycardia	0.25 mg/kg SIVP/IO
Ketamine	AC10 - V-Tach w/ Pulse	0.25 mg/kg SIVP/IO
Ketamine	AM11 - Pain Management	0.25 mg/kg SIVP/IO
Ketamine	GP16 - Patient Restraint	2 mg/kg SIVP/IO or 4 mg/kg IM
Ketamine	GP19 - Rapid Sequence Intubation (Induction)	2 mg/kg SIVP/IO
Ketamine	GP19 - Rapid Sequence Intubation (Post Management)	1 mg/kg SIVP/IO
Ketamine	GP20 – Transport Ventilator	1 mg/kg SIVP
Labetalol	AC02 - Acute Coronary Syndrome	10 mg IVP may be considered. Consult Med Control.
Labetalol	AM05 - CVA/Stroke	10 mg Slow IVP Q 10 minutes until desired effect

Labetalol	AM09 - Hypertensive Crisis	10 mg Slow IVP Q 10 minutes until desired effect
Lidocaine 2%	GP12 - EZIO Infusion	40 mg IVP Slow
Lidocaine 2%	GP19 - Rapid Sequence Intubation (Premedicate)	100 mg IVP
Magnesium Sulfate	AC09 - V-Fibrillation / Pulseless V-Tach	1 - 2 grams IVP over 1-2 min for Torsades or Refrac VF
Magnesium Sulfate	AC10 - Ventricular Tachycardia w/ Pulse (Torsades)	1 - 2 grams IV
Magnesium Sulfate	AM03 - Asthma	1 - 2 grams IVP over 10-20 minutes
Magnesium Sulfate	SP02 - Obstetrical Emergencies	1 - 2 grams IVP -Contact Med Control
Midazolam	AC04 - Bradycardia	2 mg Q 5 minutes w/ Max of 10 mg
Midazolam	AC07 - Paroxysmal Supraventricular Tachycardia	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	AC10 - Ventricular Tachycardia w/ Pulse	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	AC12 - Induced Hypothermia	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	AM13 - Seizure & Status Epilepticus	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	AT02 - Burns - Large Burn	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	AT09 - Penetrating Injuries : General Guidelines	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	GP16 - Patient Restraint	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	GP19 - Rapid Sequence Intubation (Pre-Sedation)	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	GP19 - Rapid Sequence Intubation (Re-Sedation)	2 mg @ 5 minutes w/ Max of 10 mg
Midazolam	GP20 – Transport Ventilator	2 mg @ 5 minutes w/ Max of 10 mg
Morphine	AM11 - Pain Management	2 - 10 mg IVP, 2 mg increments Q 5 minutes.
Morphine	AT02 - Burns - Small Burn	2 - 10 mg IVP, 2 mg increments Q 5 minutes.
Morphine	AT02 - Burns -Large Burn	0.1 mg/kg IV initial dose
Morphine	AT02 - Burns -Large Burn	0.05 mg/kg subsequent dosing, repeat Q 5 min until relieved.
Morphine	GP19 - Rapid Sequence Intubation (Re-Sedation)	2 - 10 mg IVP, 2 mg increments Q 5 minutes.
Naloxone	AM01 - Alcohol Emergency	1 - 2 mg IV / IM / IN
Naloxone	AM14 - Toxicological/Emergencies/OD	1 - 2 mg IV / IM / IN
Nitroglycerin Drip	AC02 - Acute Coronary Syndrome	12.5 - 25 mcg - Loading Dose if no SL done given
Nitroglycerin Drip	AC02 - Acute Coronary Syndrome	5 mcg / min Initial
Nitroglycerin Drip	AC05 - CHF	12.5 - 25 mcg - Loading Dose if no SL done given
Nitroglycerin Drip	AC05 - CHF	5 mcg / min Initial
Nitroglycerin Tablet	AC02 - Acute Coronary Syndrome	0.4 mg Tablet SL, may repeat @ 5 min as needed w/ BP over 100
Nitroglycerin Tablet	AC05 - CHF	0.4 mg Tablet SL, may repeat Q 5 min as needed w/ BP over 100
Ondansetron	AC02 - Acute Coronary Syndrome	4 mg IV / IM

Ondansetron	AM06 - Dehydration	4 mg IV / IM
Ondansetron	AM10 - N/V or Motion Sickness Episodes	4 mg IV / IM
Ondansetron	AM11 - Pain Management	4 mg IV / IM
Oral Glucose	AM07 - Diabetic Glucose Emergencies	15 grams PO, may repeat once in 15 min.
Promethazine	AC02 - Acute Coronary Syndrome	6.25 - 25 mg IVP Slow (Dilute w/ 10cc NS) 25mg Max in 60 min.
Promethazine	AM06 - Dehydration	6.25 - 25 mg IVP Slow (Dilute w / 10 cc NS) 25mg Max in 60 min.
Promethazine	AM10 - N/V or Motion Sickness Episodes	6.25 - 25 mg IV Slow (Dilute w / 10 cc NS) 25 mg Max in 60 min.
Promethazine	AM11 - Pain Management	6.25 - 25 mg IVP Slow (Dilute w/ 10cc NS) 25mg Max in 60 min.
Rocuronium	GP19 - Rapid Sequence Intubation (Defasciculating)	0.05 - 0.1 mg / kg IVP
Rocuronium	GP19 - Rapid Sequence Intubation (Fasciculating)	1 mg / kg IVP
Sodium Bicarbonate	AC03 - Asystole/PEA	1 mEq/kg IV Initial Dose, 0.5 mEq/kg Q 10 min for spec. situations.
Sodium Bicarbonate	AC09 - V-Fibrillation / Pulseless V-Tach	1 mEq/kg IV Initial Dose, 0.5 mEq/kg Q 10 min for spec. situations.
Sodium Bicarbonate	AM14 - Toxicological/Emergencies/OD	1 mEq/kg Slow IVP for Tric Antidep OD over 2 min.
Sodium Bicarbonate	AT09 - Penetrating Injuries : General Guidelines	50 mEq per liter NS
Succinylcholine	GP19 - Rapid Sequence Intubation (Paralyze)	1.5 mg / kg IVP
Thiamine	AM01 - Alcohol Emergency	100 mg IVP
Thiamine	AM05 - CVA/Stroke	100 mg IVP
Thiamine	AM14 - Toxicological/Emergencies/OD	100 mg IVP
TNKase	AC02 - Acute Coronary Syndrome	1 cc / 10 kg max of 50 mg IV
Vecuronium	AC12 - Induced Hypothermia	0.1 mg/kg IVP
Vecuronium	GP19 - Rapid Sequence Intubation	0.1 mg / kg IVP
Vecuronium	GP19 - Rapid Sequence Intubation (defasciculating)	0.01 mg / kg IVP

Washington County EMS	Non-Certified / Licensed
Clinical Practice - Standing Protocols	GP 15
General Protocols	

ON SCENE- Allied Health Personnel (i.e. nurse) are not necessarily trained in pre-hospital care and in-addition may not be state (TDH) certified/licensed to deliver pre-hospital care. **The on-scene Washington County crew will solely determine the participation of patient care administered by any allied health personnel. Before allowing these personnel to assist with patient care, verify that they are certified or licensed in an allied profession and regardless of the certification/license of the individuals, scene control will remain with the primary crew. Participation should only consist of assisting in basic life support procedures, lifting, and gathering equipment/supplies (safety techniques should be followed).** In the instance where a physician who is not the patient's personnel physician appears on scene and elects to direct the care of the patient, thus assuming medical control of the scene, the following guidelines should be used:

- The physician should identify him/herself and their specialty to the on-scene EMS crew.
- After identification, contact should be made with the hospital physician to secure the approval of using the on-scene physician's orders.
- If approval by Medical Control, the on-scene physician **MUST** accompany the patient to the hospital and fill the necessary documents, including the back of the BLS run form and sign/date witnessed.
- Nothing in this policy shall be construed so as to be in conflict with Rule 197.1-197.6 of the Texas State Board of Medical Examiners and EMS Directors Rules.

Inter-facility Transfers-On rare occasions the local hospital will request transport allowing one of their nurses to attend to the patient. These patients are usually obstetric type emergencies and the attending nurse is under the order of the patients attending physician and any specialized equipment and/or medication shall be provided by the transferring facility (accompanied with the nurse). Should any other facility department request a nurse to attend the patient, they will work directly under the order of the patients attending physician and provide any specialized equipment and/or medication.

Washington County EMS	Patient Restraint
Clinical Practice - Standing Protocols	GP 16
General Protocols	

Introduction: The paramedic must use both clinical knowledge and sound judgment when deciding to restrain patients who require treatment and transport to definitive care facilities. The paramedic and his/her crew safety should remain the highest priority. Law enforcement officers should be requested anytime this situation presents itself to EMS crews. Anytime handcuffs are utilized to restrain patients during transport by EMS an officer with a key must be present in the patient compartment of the Medic unit. EMS Supervisor(s) or command staff should be notified and when possible arrive on scene to assist.

Indications:

This protocol is intended to be utilized for patients who are required to be treated and transported to a definitive care facility by EMS crews. This patient may be in custody of law enforcement or simply not of sound judgment and can not legally refuse EMS treatment but is unwilling to cooperate (i.e. conscious and combative adult under the influence of illegal substances who is not alert / oriented to person – place and event). This protocol may be used when:

- patient is combative
- hallucinating
- offensive posture
- is threat to oneself or rescuers

EMT – Basic

1. Initiate Assessment accordingly and reassure patient.
2. Assess ABC's
3. Provide supplemental O₂ and SpO₂ monitoring as indicated.
4. Perform blood glucose check when safe.
5. Secure patient using soft restraints.
 - a. Secure one hand above patients head and one below waist when possible.
 - b. Utilize only **triangular bandages** for restraining wrist and ankles (use slip-knot technique)
 - c. Do NOT restrain patient that would promote difficult respirations (i.e. using soft restraints, towels, blankets across chest or diaphragm)
 - d. Utilize backboard and spider straps as indicated for spinal precautions or to assist with immobilization.

EMT – Intermediate

1. Continue with Assessment
2. Initiate IV access
3. Assist with Advanced Airway Control as indicated.

Paramedic

1. Monitor ECG.
2. Monitor EtCO₂ and SpO₂ when possible (especially if chemically sedating).
3. Initiate IV access if not already performed or when safe to do so.
4. If soft restraints are not functioning adequately then provide “chemical restraints” as needed utilizing:
 - a. **Versed 2mg IV/IN Q 5 minutes w/ a Max of 10mg.**
 - i. Obviously IV Versed will provide faster results, however, it will not always be possible to perform IV access on these patients prior to sedation. In these situations the paramedic may utilize the IM route but 5-15 minutes should be anticipated for results.
 - b. **Ketamine 2mg/kg SIVP/IO or 4mg/kg IM (Must have a P3 present for administration of Ketamine)**
 - i. At this dosage range, ketamine will provide a complete dissociative “trance” like state. Patient will be awake but will not respond to providers. Excessive drooling is possible. When given IM, ketamine will take approximately 5 minutes to act. Also, IM injections are limited for each muscle and may require two injections at this dosing range. Provider safety is paramount.

Washington County EMS	Patient Status
Clinical Practice - Standing Protocols	GP 17
General Protocols	

Introduction: Patient status updates allows for the prioritization of the patient's clinical status. Crews should update communications with the patient status as **soon as feasible**. This signifies that the crew has recognized and determined the urgency of the patient. This announcement allows additional responding medic units, supervisors, command staff, and receiving facilities to react accordingly. Patient status should be given on all calls (medical and trauma). Patient status categories may not be utilized during mass casualties if triage officer utilizes START Triage methodology.

Critical: *Critically ill or injured patient (immediate life threatening illness or injury) needing immediate (advanced – paramedic) intervention.*

a. Examples might include:

- Cardiac arrest or post cardiac arrest
- Respiratory distress/failure or impending failure medical or trauma
- Unstable Vital Signs/or signs of shock
- Unstable Cardiac Arrhythmias (V-Tach, V-Fib, SVT, Symptomatic Bradycardia)
- Stroke Like Symptoms With Positive Cincinnati Stroke Scale
- Acute Coronary Syndrome Event
- Unresponsive with Unstable vital signs.

Urgent: *Potential life threatening injury or illness.*

b. Examples might include:

- GCS 8-12
- Altered level of consciousness(excludes Alzheimer's)
- Status Epilepticus
- Unresponsive patient with Stable Vital Signs

Stable: *Stable patient who may require medical attention but advanced life support measures are probably not indicated and if indicated are not time sensitive.*

- Minor injuries occurring during low speed MVC
- GCS15
- Hemodynamically stable chest pain not felt to be an ACS event or ischemia.
- Fall patient with only minor injuries who requires spinal immobilization
- Vital Signs in Normal Range.

Refusal *(or possible refusal): A patient who is initially refusing assessment, treatment, and transport by EMS and is legally able to do so. These patient may (frequently do) change their minds and will require re-triage.*

Washington County EMS	Resource Allocation
Clinical Practice - Standing Protocols	GP 18
General Protocols	

Introduction: This protocol serves as a guide for paramedics and EMT's working for WCEMS in trying to determine when more resources (clinical resources) are required or indicated. The EMS crew should be prepared to manage any call without assistance (in case there is no resources available) however, when resources are available the EMS crews should request assistance in the following circumstances:

- Once the EMS Crew determines the patient status (according to the patient status protocol) and the patient is deemed "critical". It will be our policy to have specialized trained personnel on any critical patients when resources are available. The department has a fully functional special operations division with one specialized rescue technician on duty 24/7. These SRT Paramedics are trained in special rescue situations that include but are not limited to land search rescues, water rescues, and vehicle extrications. They will respond as needed and when possible to any request. The SRT response includes a SRT Rescue Vehicle and all equipment. These paramedics along with our EMS Lts and command staff also function as P3 paramedics bringing the highest level of clinical experience and medicine to the scene of high acuity patients.
- When there are more patients than can be adequately taken care of by the EMS crew.
 - Multiple critical patients
 - Multiple urgent patients
 - 1 critical patient with numerous stable/refusals may constitute more resources
 - Any scene in which heavy rescue is dispatched should result in a command staff response / or back up unit (if command staff is unavailable).

The in-charge Paramedic should also notify supervisor(s) in certain situations as well. The supervisor may or may not decide to arrive on location depending on the scenario. The following scenarios should result in supervisor notifications:

- Any time patient restraints are anticipated in the care of a patient
- When confronting any combative patients
- Any unusual circumstances that could potentially be harmful to the rescuer or the patient
- Inability to gain access to the patient (due to locked doors or other situations)
- Any patient potentially requiring special operations divisional response.
- "Urgent" Pediatric patients (if resources are available)

As soon as it is determined that special or unusual situations exist that may require specialized training from a clinical perspective should result in supervisor notification (Lieutenant, Captain, or Director) who will then notify the special operations division appropriately. Examples may include:

- Vehicle Extrication
- Confined Space Rescue situations
- Technical Rescue situations
- Water Rescue situations
- Special Immobilization Techniques

Other situation may also constitute more EMS resources, such as outlined in the TIC/Hazardous Response Protocols. Please familiarize yourself with these other protocols as well.

Washington County EMS	Rapid Sequence Intubation (RSI)
Clinical Practice - Standing Protocols	GP 19
General Protocols	

In situations where oral intubation or nasal intubation is not possible or not recommended (ex. nasal intubation vs basilar skull fx.) Drug overdoses status Epilepticus, severe edematous from burns of the upper airway, and specifically indicated for the head injury patient, so hypoxia can be avoided and hyperventilation provided (when indicated). When normal means of intubation (i.e. Nasal or oral tracheal intubation) cannot be carried out due to the following:

- Presence of gag reflexes when airway management is indicated (i.e. overdose, GCS<8, etc.)
- Clenched teeth,
- General combativeness
- When Nasal Intubations are contraindicated or “not suggested” due to adverse effects such as sympathetic responses

Paramedic

The 6 P's of RSI:

Preparation, Pre-Oxygenate, Pre-Medicate, Paralyze, Pass ETT, Post Intubation Sedation

1. Must have two rescuers to perform RSI safely and correctly.
2. **Prepare:** Assemble the required equipment. Try to get accurate Mallampati Score (see diagram) to anticipate difficult airway it should be documented whenever possible.
3. Assure that the IV line is functioning and secure. (If resources available and time allowed 2nd IV should also be established)
4. Apply cardiac monitor and pulse oximeter.
5. **Pre-oxygenate** using High Flow O₂ via NRB-mask for 2-4minutes. Do not use BVM unless O₂ sat below 85%. Oxygen (reference oxygenation below).-DENYTROGENATION!!
6. **Pre-medicate-** If indications are present (i.e. conscious or semiconscious) for sedation then patient should be sedated. The primary drug of choice shall be Etomidate (when available) due to the ultra-short onset (<30 sec), with less than 10% of patients experiencing CV effects, and cerebral protection, not to mention the short duration. Dosing for **Etomidate** shall be **0.3mg/kg IV or 20mg straight IV**. The decision should be made by an estimated weight based calculation (i.e. 100kg pt would need 30mg; 20 mg may not prove effective with this patient). Utilizing Etomidate does not eliminate the need for us to be cognitive of the possibility of ICP in patients who will be receiving Succinylcholine. If the paramedic believes the patient may be at risk for adverse effect of ICP associate with fasciculations or sympathetic stimulations then the patient should be premedicated appropriately. This may include a defasciculating dose of **0.05 – 0.1 mg/kg Rocuronium OR 0.01 mg/kg Vecuronium (when available)** or a cerebral protective dose of **100 mg Lidocaine IVP** from increased pressures shown (by studies) during laryngoscopy. Some patients may require a combination of these medications.

If Etomidate is contraindicated for RSI there are several other options for pre-sedation:

- A. Fentanyl 1-3 mcg/kg.** Fentanyl proves beneficial as an opiate narcotic with much less CV affect thereby has little change on patient's blood pressure and heart rate which makes it very useful on undiagnosed multi-system trauma patients. Although does not provide the cerebral protection of Etomidate nor as quick onset and durations. Fentanyl doses for RSI should be at the higher spectrum to ensure appropriate sedative effects.
- B. Midazolam 2 mg IV Q 5 minutes with a maximum of 10mg.** Has hypnotics/amnesia affects that makes is particularly useful in conscious 'medical' scenarios. However, Versed (as most benzodiazepines) may have a profound effect on the patient's blood pressure.
- C. Ketamine 2mg/kg SIVP/IO.** Ketamine provides several advantages for induction. It provides analgesia and sedation simultaneously with little CV effect. Ketamine can cause laryngospasm (typically if given to fast) but responds well to BVM ventilation and is transient. Use caution in profoundly hypertensive patients as ketamine often provides CV support and increase in BP. **(Must have a P3 present for administration of Ketamine)**

Prior to Paralyzation have another rescuer apply the Sellick's maneuver to occlude the esophagus and maintain pressure until the ET tube is in place and the cuff is inflated (should the use of a BVM become necessary due to hypoxia before intubation or with attempts, cricoid pressure must be maintained)

- 7. **Paralyze:** Administer **1.5 mg/kg IVP Succinylcholine** and continue ventilations. Apnea and jaw relaxation is indications that the patient is sufficiently relaxed to precede with endotracheal intubation.
- 8. **Pass the Tube:** Perform endotracheal intubation. If you are unable to place the tube in 20 seconds, stop. Then ventilate the patient with 100% oxygen using the BVM for 30 – 60 seconds before attempting the procedure again. Once the tube is in place confirm with auscultation, fogging of endotracheal tube, and increased oxygen saturation, release cricoid pressure and properly secure the tube.
- 9. **Post Intubation Management-** This selection of Post Intubation Sedation shall be indicated for ALL intubated patient's whether performed by EMS or other (i.e. post cardiac arrest and inter-facility transfers). The Paramedic should select medication based on patient's clinical conditions.
- 10. Patients initially sedated prior to paralyzation should be re-sedated after confirming intubation with all 3 methods:
 - Capnography
 - Direct visualization (optional if intubation not performed by EMS)
 - Lung & Epigastric sounds auscultation

Fentanyl 1-3 mcg/kg

Midazolam 2 mg Q 5 minutes w/ Max 10 mg

Morphine 2 mg Q 5 minutes w/ Max of 10 mg

Ketamine 1mg/kg SIVP/IO (Must have a P3 present for administration of Ketamine)

Post Intubation Sedation should be judged by return of mental status while intubated.

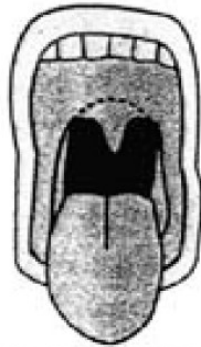
Indications for returning mental status include combativeness, increased heart rate, increased spontaneous respiratory rate, curare cleft visible on Etco2 waveforms (Capnography). If patient has none of the above signs or symptoms and is intubated further sedation may not be needed. Ensure patient is not under effects of paralytics before choosing to not sedate. Most RSI candidates will need re-paralyzation (Succinylcholine is not indicated for multiple doses unless absolutely necessary). If need to subdue the patient and/or there is an extended transport time, then administer **1 mg/kg Rocuronium OR 0.1 mg/kg of Vecuronium.**

Vecuronium and Rocuronium should never be used as an initial front line paralytic. It should only be utilized after successful intubation and there is need for continued paralysis of the patient.

ABSOLUTE CONTRAINDICATIONS: Spontaneous breathing with adequate ventilation without need for airway protection.

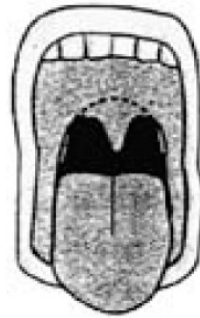
OXYGENATION: In head injury without s/s of herniation syndrome maintain an expired CO2 of 30-35 mmHg (the patient is ventilated approximately 14 breaths/minutes). An onset of decorticate (contractual) posturing with unequal pupils (herniation syndrome) the patient should be hyperventilated at 24 breaths per minute, to decrease the monitored end-tidal CO2 to approximately 25-28 mmHg.

Mallampati Signs as Indicators of Difficult Intubation



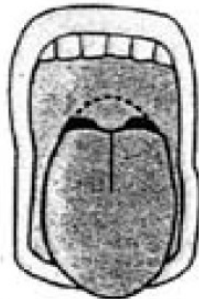
**Class I: soft palate, uvula,
fauces, pillars visible**

No difficulty



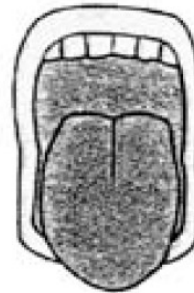
**Class II: soft palate,
uvula, fauces visible**

No difficulty



**Class III: soft palate, base
of uvula visible**

Moderate difficulty



**Class IV: hard palate
only visible**

Severe difficulty

Washington County EMS	Transport Ventilator
Clinical Practice - Standing Protocols	GP 20
General Protocols	

Introduction: These devices accurately and safely perform ventilations to both intubated and non-intubated patients. The choice of which device to be used is determined by paramedic discretion and training and may not be the best ventilation mode for every patient (i.e. patient with restricted ventilations, who may require forceful ventilations. With asthma and /or burns). It is imperative that routine maintenance, calibration and inspection is performed on the equipment. Both devices may not be available on every WCEMS unit due to repairs and cost of this equipment. This protocol should be utilized when the devices are available.

EMT - Basic, EMT – Intermediate & Paramedic

Autovent 3000 (parameters):

- Gas driven (non-electrical) ventilator (must have 50psi source).
- Not suggested on multi-system (field) trauma patients.
- May be used on any patient who weighs >20kgs.
- Tidal Volume should be calculated by the patients ideal body weight- Preferred Body Weight (kg) multiplied by 6-8 cc. (i.e. 6cc X 80kg => a TV of 560cc)
- Any Medical device is subject to mechanical failure – so every patient should be closely monitored for proper oxygenation and ventilation during the use of this device.

Application:

1. Determine need for assisting patient's ventilations.
2. Assure ventilator is attached to a 50 psi source.
3. Set Tidal Volume (TV) to proper setting using above formula or PBW and TV charts (see notes)
4. Determine which inspiration time will be utilized (child or adult) and set appropriately.
5. Set rate of ventilations (Initial Rate of 15, then titrate based on EtCO₂ and ventilatory needs).
6. Quickly test pressure alarm feature by placing your hand over the end of the standard 15 mm adapter and listening for high pitched noise.
7. Apply to the patient either by attaching directly to ET tube or by using a face mask. EtCO₂ and SpO₂ monitoring must be used when using any ventilator
8. Monitor the patient for proper ventilation:
SpO₂, Lung Sounds, Chest wall expansion, Presence of cyanosis, EtCO₂

Contraindications:

- Patient <20kgs
- No other contraindications present unless inadequate oxygenation is present.

Impact EMV+ Ventilator:

Introduction: This device is an advanced ventilator that replicates the type used in the hospital. Use of this device requires P2 or P3 status along with being checked off on vent specific training. This will be the recommended first line ventilator for both in hospital and OOH patients. It should be utilized whenever possible on patients that have been intubated at the hospital prior to transfer. Do not delay patient transport if AEV+ is not available. There are two vent settings strategies that should be followed to ensure the best outcome for the patient. The *Injury Approach* (lung injury/prone to lung injury) and *Obstruction Approach* (Asthma/COPD exacerbation). If the patient is already on a ventilator use hospital settings and confirm they are within “normal” limits. Confirm settings with RT or Physician. With all patients, evaluate effectiveness of settings and make adjustments as necessary.

Parameters:

- Electrical driven ventilator with O2 connection. (O2 connection recommended for all applications)
- May be used on any patients who weigh > 5 kg.
- Tidal Volume should be calculated by the patients preferred weight (kg) multiplied by 6-8 cc.
(i.e. 6cc X 80kg => a TV of 560cc) *** Lung capacity doesn't change with patient weight!***
- Patient sedation level will determine vent mode that is best for any particular patient.

Injury Mode Settings:

- Mode: Assist Control Volume (AC-V) or SIMV
- Tidal Volume (Vt) : 6-8 cc/kg IBW
- Rate: 18 then titrate based on CO2 and ventilatory needs
- FiO2/PEEP: 100%, 5 cmH2O
- Target SpO2 : 88-95%

Obstruction Approach Settings:

- Mode: Assist Control Volume (AC-V) or SIMV
- Tidal Volume (Vt) : 8 cc/kg IBW
- Rate: Start at 10, Adjust Rate to achieve I:E of 1:4 or 1:5
- FiO2/PEEP: 60% or 100%, 5 cmH2O
- Target SpO2 : 88-95%

Sedation /Pain Management

- Intubation and being mechanically ventilated is incredibly painful. Proper analgesia is ESSENTIAL with proper sedation. Sedation should be titrated to maintain Rikers Agitation Score of <4. Choose the most appropriate sedation/analgesic for your specific patient.

Fentanyl: 1-3 mcg/kg IVP

Versed: 2 mg Q 5 minutes w/ maximum of 10mg IVP

Ketamine: 1 mg/kg SIVP

(Must have a P3 present for administration of Ketamine)

Notes PBW= Preferred Body Weight ***Lung capacity doesn't change with patient's weight!*** Males: $50 + 2.3 [\text{height (inches)} - 60]$ Females $45.5 + 2.3 [\text{height (inches)} - 60]$ Pplat = Plateau Pressure Direct indication of alveolar function High Pplat >30 is associated with VLI (ventilator lung injury) If Pplat >30: decrease TV by 1ml/kg Min: 4ml/kg If Pplat <25 and TV <6ml/kg : increase TV 1ml/kg until >25 or TV=6ml/Kg If Pplat <30 and breath stacking or dys-synchrony occurs: may increase TV by 1ml/k to 7-8ml/kg

HEIGHT	PBW	4 ml	5 ml	6 ml	7 ml	8 ml
4' 0" (48)	17.9	72	90	107	125	143
4' 1" (49)	20.2	81	101	121	141	162
4' 2" (50)	22.5	90	113	135	158	180
4' 3" (51)	24.8	99	124	149	174	198
4' 4" (52)	27.1	108	136	163	190	217
4' 5" (53)	29.4	118	147	176	208	235
4' 6" (54)	31.7	127	159	190	222	254
4' 7" (55)	34	136	170	204	238	272
4' 8" (56)	36.3	145	182	218	254	290
4' 9" (57)	38.6	154	193	232	270	309
4' 10" (58)	40.9	164	205	245	286	327
4' 11" (59)	43.2	173	216	259	302	346
5' 0" (60)	45.5	182	228	273	319	364
5' 1" (61)	47.8	191	239	287	335	382
5' 2" (62)	50.1	200	251	301	351	401
5' 3" (63)	52.4	210	262	314	367	419
5' 4" (64)	54.7	219	274	328	383	438
5' 5" (65)	57	228	285	342	399	456
5' 6" (66)	59.3	237	297	356	415	474
5' 7" (67)	61.6	246	308	370	431	493
5' 8" (68)	63.9	256	320	383	447	511
5' 9" (69)	66.2	265	331	397	463	530
5' 10" (70)	68.5	274	343	411	480	548
5' 11" (71)	70.8	283	354	425	496	566
6' 0" (72)	73.1	292	366	439	512	585
6' 1" (73)	75.4	302	377	452	528	603
6' 2" (74)	77.7	311	389	466	544	622
6' 3" (75)	80	320	400	480	560	640
6' 4" (76)	82.3	329	412	494	576	658
6' 5" (77)	84.6	338	423	508	592	677
6' 6" (78)	86.9	348	435	521	608	695
6' 7" (79)	89.2	357	446	535	624	714
6' 8" (80)	91.5	366	458	549	641	732
6' 9" (81)	93.8	375	469	563	657	750
6' 10" (82)	96.1	384	481	577	673	769
6' 11" (83)	98.4	394	492	590	689	787
7' 0" (84)	100.7	403	504	604	705	806

PBW and Tidal
Volume for Females

HEIGHT	PBW	4 ml	5 ml	6 ml	7 ml	8 ml
4' 0" (48)	22.4	90	112	134	157	179
4' 1" (49)	24.7	99	124	148	173	198
4' 2" (50)	27	108	135	162	189	218
4' 3" (51)	29.3	117	147	176	205	234
4' 4" (52)	31.6	126	158	190	221	253
4' 5" (53)	33.9	136	170	203	237	271
4' 6" (54)	36.2	145	181	217	253	290
4' 7" (55)	38.5	154	193	231	270	308
4' 8" (56)	40.8	163	204	245	286	326
4' 9" (57)	43.1	172	216	259	302	345
4' 10" (58)	45.4	182	227	272	318	363
4' 11" (59)	47.7	191	239	286	334	382
5' 0" (60)	50	200	250	300	350	400
5' 1" (61)	52.3	209	262	314	366	418
5' 2" (62)	54.6	218	273	328	382	437
5' 3" (63)	56.9	228	285	341	398	455
5' 4" (64)	59.2	237	296	355	414	474
5' 5" (65)	61.5	246	308	369	431	492
5' 6" (66)	63.8	255	319	383	447	510
5' 7" (67)	66.1	264	331	397	463	529
5' 8" (68)	68.4	274	342	410	479	547
5' 9" (69)	70.7	283	354	424	495	566
5' 10" (70)	73	292	365	438	511	584
5' 11" (71)	75.3	301	377	452	527	602
6' 0" (72)	77.6	310	388	466	543	621
6' 1" (73)	79.9	320	400	479	559	639
6' 2" (74)	82.2	329	411	493	575	658
6' 3" (75)	84.5	338	423	507	592	676
6' 4" (76)	86.8	347	434	521	608	694
6' 5" (77)	89.1	356	446	535	624	713
6' 6" (78)	91.4	366	457	548	640	731
6' 7" (79)	93.7	375	469	562	656	750
6' 8" (80)	96	384	480	576	672	768
6' 9" (81)	98.3	393	492	590	688	786
6' 10" (82)	100.6	402	503	604	704	805
6' 11" (83)	102.9	412	515	617	720	823
7' 0" (84)	105.2	421	526	631	736	842

PBW and Tidal
Volume for Males

Washington County EMS	CPAP
Clinical Practice - Standing Protocols	GP 21
General Protocols	

CPAP defined as Continuous Positive Airway Pressure has been utilized for years in the hospital with widespread success on patients experiencing respiratory distress. Due to recent advances in technology it is now a standard of care for pre-hospital medicine. The goals of CPAP are to improve ventilation and oxygenation, decrease the need for endotracheal intubation, and decrease mortality from respiratory failure. CPAP is not a stand-alone treatment modality. It should be utilized on patients experiencing acute decompensated heart failure (pulmonary edema), COPD and even in some cases asthma in conjunction with aggressive medical therapy in order to provide the best results.

The normal respiratory drive creates a negative pressure on inspiration thereby pulling air and blood flow into the chest. Noninvasive Positive Pressure Ventilation (NPPV) **pushes** air into the chest which overcomes airway resistance. The continuous positive pressure (as exerted during CPAP) throughout the respiratory cycle helps keep the alveoli open and improves gas exchange thereby increasing the functional residual capacity of the alveoli. CPAP also decrease blood return to the heart and may lower blood pressure.

CPAP will **not eliminate the need for intubation** in every patient and close vigilant observation of the patient's airway is essential. All other appropriate (nebulizers, nitrostat, morphine, etc...) treatment modalities should be rendered as the CPAP machine is being prepared and during its utilization. It may in fact act as a bridge device until preparation can be made to intubate the patient safely using rapid sequence protocols or blind nasal intubation.

Indications:

- Pulmonary Edema/Acute Decompensated Heart Failure (ADHF)
- COPD
- Near Drowning
- Other Special Circumstances Approved by Medical Control

Contraindications:

- Respiratory Arrest
- Agonal Respirations
- Unconsciousness / or decreased LOC (unable to follow simple commands)
- Cardiogenic Shock
- Hypotension
- Pneumothorax

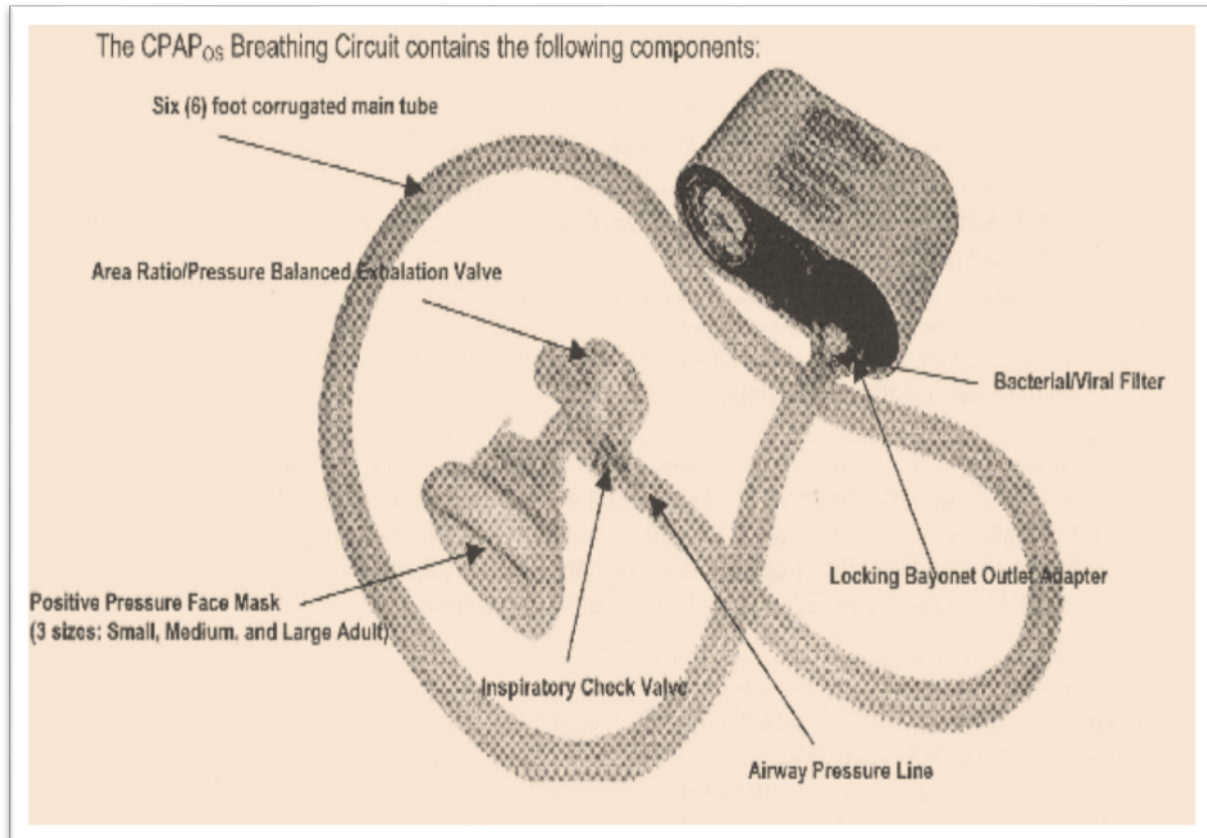
Relative Contraindications:

- Claustrophobia
- Patient Intolerance
- Tracheostomy

CPAP Procedure:

1. Place the patient in a seated position with legs dependent (if possible)
2. Pre CPAP Assessment: Monitor ECG and vital signs—B/P, heart rate, respiratory rate, SpO₂, and ETCO₂. (Administer high flow oxygen to the patient during equipment setup)
3. Verify that the CPAP Adjustment knob is turned all the way to the left (off)
4. Attach CPAP unit to an Oxygen source
 - a) Ensure the tank valve is fully open
 - b) Verify that the liter flow to Oxygen barb is set to zero
5. Connect Locking Bayonet Outlet Adapter to CPAP unit
 - a) Both Bayonet tabs should disappear once adapter is turned clockwise
6. Size Mask for patient (**Medium** will accommodate most patients)
7. Attach Mask to Exhalation Valve
8. Attach head strap to one side of the Face Mask
9. Inform patient of procedure
10. Open Adjustment Knob slowly to begin a slight flow of oxygen
11. Gently apply Face Mask to the patient
 - a) **Instruct patient to breath in through their nose slowly and exhale through their mouth as long as possible (count slowly and aloud to four (4) then instruct to inhale slowly)**
12. Completely attach the head strap to the other side of the CPAP Mask
 - a) Ensure a tight seal and adjust as necessary
 - b) **Explain to the patient that you will begin to slowly increase the pressure and to continue exhaling out against the pressure as long as possible before inhaling**
13. Increase CPAP by turning the Adjustment Knob to the right
14. Increase CPAP to achieve an initial CPAP of (approximate) 5 cmH₂O
15. Once the patient is compliant with the procedure, slowly increase CPAP to desired patient affect and a max of 10 cmH₂O (approximately)

CPAP Components:



Washington County EMS	RAD 57 Pulse Oximeter
Clinical Practice - Standing Protocols	GP 22
General Protocols	

Introduction: Carbon Monoxide is the most common exposure in the United States as well as the rest of the world. It is an odorless, colorless gas that can cause sudden illness and even death. CO can most commonly be found in fumes from combustion and is produced from a variety of sources such as vehicles, gasoline engines, camp stoves, lanterns, burning charcoal and wood, heating systems and even poorly ventilated chimneys. CO has a much greater affinity to blood cell than oxygen in fact CO binds to hemoglobin 200 times stronger than that of oxygen. As a person is exposed to more CO, the level of CO attached to the hemoglobin (carboxyhemoglobin) increases. This makes the hemoglobin incapable of transporting oxygen throughout the body. Currently the NAEMT, IAFF, and most all national recognized experts are advocating the use of CO monitoring on scene of medical rehabilitation. The particular device that WCEMS utilizes performs both SpO2 and CO monitoring as well as giving you a perfusion index measurement. All can be extremely useful in treating possible CO poisoning.

Indications for use:

The RAD 57 device is designed to measure and identify CO levels. Paramedics at WCEMS should monitor CO levels anytime there is suspicion of carbon monoxide poisoning and the device is available. The RAD 57 device will routinely be kept in the medical rehab unit (trailer) as well as one unit readily available for crew use for general use. However, the primary purpose of the device is to be utilized as a component of the medical rehab unit on fire operations and other large scenes. Otherwise the paramedics employed at WCEMS should use the device at their discretion. Due to its limited availability it will not be kept on every EMS unit nor will it be a required TDSHS piece of equipment.

Signs & Symptoms of CO poisoning include:

Flu-like illness	Lethargy
Fatigue	Depression
Chest Pain	Nausea
Headaches	Drowsiness
Coma	

Understanding the CO-Oximeter during treatment modalities is a must. The paramedics employed at WCEMS should become very familiar with the device and are inserviced during the initial NEOP process. Washington County Paramedics and EMT's will utilize the following as a treatment modality guideline when using the CO-Oximeter.

- Non Smokers with a carboxyhemoglobin level exceeding 5% and 10% for smokers should be considered as having CO poisoning.

- These patients should be removed from the exposed environment and placed on oxygen. Continuously monitoring should take place until normal levels are obtained. When on rehab fire operation scenes and proper medical rehab does not decrease CO levels patients should be transported to the local ED for further evaluation.
- Patients with 10% or greater of carboxyhemoglobin levels absolutely require treatment and transport to the ED is strongly recommended. These patients should be treated with high flow oxygen. Patients with respiratory depression may be a candidate for CPAP and non-converted patients may in-fact require advanced airway management with intubation for positive pressure ventilation. Due to the effects of CO on other body systems the paramedic should utilize other diagnostic tools such as 12-Lead, EtCO2 monitoring, and continuous NIBP monitoring.
 - These patients should also be considered victims of cyanide poisoning until proven otherwise.

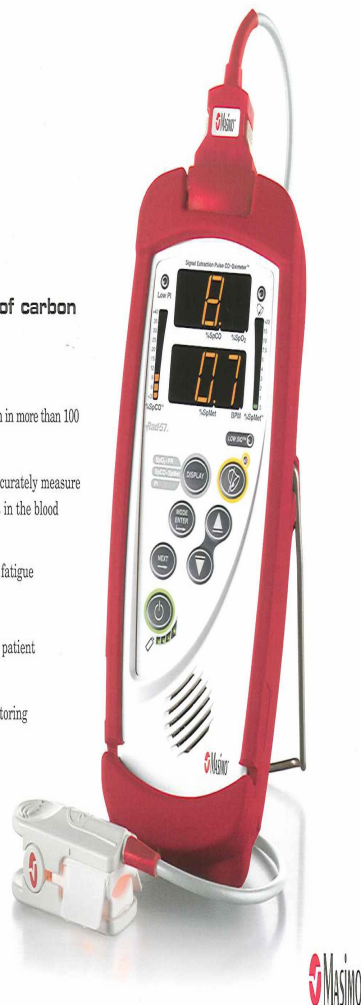
Anytime you find patients with CO poisoning you should routinely check yourself and partner utilizing the RAD 57 device to ensure YOU are not exposed.

Rad-57™
signal extraction pulse CO-Oximeter®

A medical first – noninvasive measurement of carbon monoxide and methemoglobin in the blood

- Masimo SET® pulse oximetry: proven accurate during motion and low perfusion in more than 100 independent clinical studies
- Masimo Rainbow SET® technology analyzes 7+ wavelengths of light to accurately measure carboxyhemoglobin (SpCO®) and methemoglobin (SpMet™) percent levels in the blood noninvasively and continuously
- Eliminates the risk of misdiagnosing unsuspected CO poisoning as flu or fatigue
- Detects potentially life-threatening acquired methemoglobinemia
- Quick and easy to use - requires no user calibration and does not require patient cooperation or consciousness
- Complete replacement for existing pulse oximeters with continuous monitoring of SpCO®, SpMet™, SpO₂, Pulse Rate, Perfusion Index, and SIQ®
- Rugged and lightweight - ideal for any field or hospital setting

*References available upon request



Masimo

Washington County EMS	Taser Removal / Treatment
Clinical Practice - Standing Protocols	GP 23
General Protocols	

Introduction: Washington County Sheriff Office and Brenham Police Department Officers both have Taser capabilities. The Taser fires 2 probes that are connected to the weapon by high voltage insulated wire. Upon contact, the Taser transmits powerful electrical pulses along the wires and into the target. The pulses send 26 Watt electrical signals to temporarily override the central nervous system and directly control the skeletal muscles. This causes an uncontrollable contraction of the muscle tissue, allowing the Taser to cause temporary physical debilitation to a person regardless of pain tolerance or mental focus. The Taser may also be discharged in a touch or drive stun mode using a spent cartridge or no cartridge by making physical contact with the subject and delivering the energy.

Removal of Probes

1. Treat the probes that have penetrated the skin as contaminated needles
2. Proper PPE should be used
3. Place one hand on area where the probe is embedded and stabilize the skin surrounding the puncture site. With the other hand, hold the probe firmly and in one quick, fluid motion, pull the probe straight out from the puncture site. Swab the affected area with alcohol prep.
4. Carefully place used probes, sharp tip first, into the cartridge side wire pocket container. Hold the cartridge in the center of your hand and roll your glove off in a manner to maintain the cartridge inside the glove. This should be done so that your exposed skin never touches the used probes or cartridge.
5. Sheriff Office or Police Department Officers will place the glove and cartridge in an evidence bag that is labeled Biohazard and secure for evidence. Do not throw away.

Assessment

Paramedics should be aware of secondary injuries caused from falling from a standing position.

Thorough examination should be performed with possible transport to Scott and White Hospital, Brenham should the Patient experience chest pain, shortness of breath, extensive secondary injuries, head/neck/back pain post fall from a height, or if the probes strike the patient's face, eyes, head, genitals or breast tissue.

Paramedics should always perform a thorough physical assessment.

A complete set of Vital Signs should be obtained including a 3 lead EKG. Should the Patient complain of Chest Pain, refer to your Chest Pain protocol and consider transport.

Washington County EMS	ET Inducer Device (Bougie)
Clinical Practice - Standing Protocols	GP 24
General Protocols	

Indication:

Difficult intubation with a restricted view of the glottic opening or at the discretion of the Paramedic

Contraindications:

Pediatric patients under the age of 13

Equipment Needed:

ET introducer device

Laryngoscope handle and blade of choice

ET tube (no stylet)

Suction

Procedure:

1. Ensure patient is well oxygenated prior to the procedure
2. Use proper PPE (eye protection, mask, gloves)
3. Have suction readily available
4. Prepare ET tube for insertion without stylet
5. Prepare ET introducer device for insertion by curving the bougie and ensuring the distal tip is formed into a J shape
6. Perform laryngoscopy
7. Advance the bougie, continually observing its distal tip, with the concavity facing anteriorly
8. Visualize the tip of the bougie passing posteriorly to the epiglottis where possible, and anterior to the arytenoids cartilages. As the tip of the bougie enters the glottic opening you should either feel "clicks" as it passes over the tracheal rings or the tip will arrest against the wall of the airway (hold-up). This is a good indicator of correct insertion, but it is not 100% accurate. Failure to elicit clicks or hold-up is indicative of esophageal placement. If hold-up is felt, the bougie should be withdrawn approximately 5cm to avoid the ET tube impacting against the carina.
9. Pass the ET tube over the proximal end of the bougie and through the glottic opening, limiting the movement of the bougie as much as possible.
10. Hold the ET tube securely in place and remove the bougie.
11. Secure and verify tube placement according (i.e. fogging of the tube, positive lung sounds over all lung fields, negative sounds over the epigastria, ETCO₂)

Washington County EMS	ResQPod (Impedence Threshold Device)
Clinical Practice - Standing Protocols	GP 25
General Protocols	

Introduction: Conventional CPR provides 15% of normal blood flow to the heart and blood flow to the brain is 25% of normal. Current survival rates average only 5%. The ResQPod is an impedance threshold device that prevents unnecessary air from entering the chest during the decompression phase (upstroke) of CPR. When air is prevented from rushing into the lungs as the chest wall recoils, the vacuum (negative pressure) in the thorax pulls more blood back to the heart resulting in...

1. Doubling of blood flow to the heart.
2. 50% increase in blood flow to the brain.
3. Doubling of systolic blood pressure.

Indication:

Non Traumatic Cardiopulmonary arrest of a 25 kg (utilizing size 6.0 ETT or larger) and greater Patient

Contraindications:

Patients under 25 kg
Patients with a pulse
Flail Chest
Uncontrolled hemorrhage
Cardiopulmonary arrest related to trauma

Procedure:

1. Begin CPR ensuring proper rate and depth, and allowing for complete chest recoil during the decompression phase of chest compressions.
2. Select the airway adjunct (BVM, endotracheal tube, Combitube).
3. Attach Impedance Threshold Device (ResQPOD) to the airway adjunct used above.
4. Attach the EtCO₂ detector between the ITD and the ventilation source
5. If ventilating with a BVM (Patient is not intubated):
 - Do not use the timing assist light
 - CPR continues at 30 compressions: 2 breaths **ESTABLISH AND MAINTAIN A TIGHT FACE SEAL WITH MASK THROUGHOUT CHEST COMPRESSIONS. USE ATWO HANDED TECHNIQUE**
 - Pause compressions to deliver the ventilations (standard BLS CPR per AHA guidelines)
 - Prepare for endotracheal intubation

6. If patient is intubated endotracheally or with a Combitube:
 - Deliver a single one-second ventilation with each flash of the timing assist light (average 10-12 breaths per minute).
 - Do not pause compressions to deliver ventilations. Ventilations may be asynchronous to compressions.
7. Use of this device must be discontinued once ROSC has been achieved, or when CPR is no longer necessary.

Washington County EMS	Treat and Release
Clinical Practice - Standing Protocols	GP 26
General Protocols	

Introduction: The treat and release protocol is intended for standby situations with mass gatherings (i.e. fair, football games, festivals, etc.) where simple, non-emergent, medical procedures may be requested by a patient, or guardian of a minor patient, without need for transport to a hospital. At any time the patient condition becomes emergent, treatment and transport to the appropriate facility should begin according to the appropriate protocol/policy.

Indications:

- Bug bites (localized itching to area of bite)
- Seasonal Allergies symptoms (sneezing, itching of nose and throat, runny nose, watery eyes)
- Minor scrapes and cuts
- Headache
- Muscle pain
- Minor sun burns or prevention of sun burns
- Bandaging of scrapes and cuts (dressings, bandaids, butterfly closure, etc.)

Contraindications:

- Employee not Para II status (must consult with a Para II by phone or Command Staff prior to treat and release protocol being utilized)
- Systemic or all over localized allergic reaction
- Significant lacerations that require stitches
- Headaches suspected to be of stroke, HTN, or other significant medical problems
- Muscle or bone pain suspected to be fracture

Equipment In Medication Kit:

- Adult Oral Allergy medication
- Pediatric Oral Allergy medication
- Itch Relief Spray or Cream
- Adult Oral Pain Reliever medication
- Pediatric Oral Pain Reliever medication
- Hydrogen Peroxide
- Antibiotic Spray or Cream
- Sun Screen
- Band-Aid

- Non sterile 4x4
- Small dosage cups for liquid medication administration
- Elastic Bandage Wrap (when available)
- Butterfly Closures (when available)

Procedure:

- EMT/Paramedic will assist in administration of medications only while utilizing the treat and release protocol under the circumstances stated in the Introduction
- All medications will be administered as directed on the packaging for that particular medication
- Only medications that fit particular signs/symptoms according to uses printed on the packaging will be administered
- If at any time the patient's condition becomes emergent, treatment and transport according to the appropriate policy/protocol will begin

Washington County EMS	Saline Locks
Clinical Practice - Standing Protocols	GP 27
General Protocols	

Introduction: At times, it is desirable to have rapid vascular access available although there may be no immediate indication for either fluid or medication administration. Those patients may have a saline lock placed, should the need arise, the saline lock may subsequently be used for immediate medication or fluid administration. This saves time should medication or fluid administration become necessary. It eliminates the need for unnecessary fluid administration, and it significantly decreases the likelihood of an IV being inadvertently pulled out during patient movement and transport. This protocol can be used when “Start IV” is listed. The following patients are examples of individuals in whom a saline lock may be warranted.

- A “stable” trauma patient (e.g. patient with an ankle fracture)
- A patient in CHF
- A Post-ictal patient
- A hemodynamically stable patient with cardiac chest pain

EMT - Paramedic

- A saline lock IV may be placed, using standard IV techniques, whenever it is desirable to have rapid vascular access available but there is no immediate indication for the administration of IV medications or fluids.
- If a medication is administered via a saline lock, it must either be flushed with a normal saline flush or have tubing attached to it, to ensure delivery of the medication. When more than one drug administration is administered, IV tubing should be utilized instead of multiple saline flushes.
- All saline locks have mini-extension tubing attached (e.g. a “J” loop).
- Saline locks may be placed, when appropriate, in any age patient.
- The saline lock must be flushed with 5-10 cc’s of Normal Saline for injection after initial attachment and each blood draw. If used properly, the saline lock will not require additional flushing during the pre-hospital phase of care to maintain patency. Current standard of care for flushing of a saline lock to prevent clot blockage is once every eight (8) hours.

Washington County EMS	Cricothyrotomy
Clinical Practice - Standing Protocols	GP 28
General Protocols	

Introduction: This protocol is intended to be used only by Paramedics that have received proper training in this skill from Washington County EMS. This skill involves critical thinking and precise location of anatomy landmarks. In the event that this skill is to be used it should be in an absolute life or death scenario.

EMT - Paramedic

Indications:

- Obstruction of the upper airway
- Unsuccessful attempts at establishing all other forms of airway
- Determined to be the method of last resort at establishing an airway
- As deemed necessary by the Credentialed Paramedic

Contraindications:

- An airway obtainable by any other means
- Unable to identify Landmarks

Procedure:

- Select site. The cricothyroid membrane is the soft aspect just inferior to the larynx, midline, anterior trachea
- Cleanse site with iodine prep
- Stabilize larynx between thumb and index finger of non-dominant hand
- Palpate cricothyroid membrane
- Make a transverse skin incision over the cricothyroid membrane, and carefully incise through the skin and membrane
- Insert tracheal hook into the cricothyroid membrane. Hook the cricoid cartilage and apply anterior displacement
- Insert a tube through the midline of the membrane and direct the tube distally into the trachea
- Inflate the cuff with 10cc of air and ventilate the patient
- Secure the tube to the patient to prevent dislodging
- Confirm proper tube placement using ETCO2 (may not be available in SOD situation), auscultate breath sounds, monitor SPO2, chest rise.

Washington County EMS	Spinal Motion Restriction
Clinical Practice - Standing Protocols	GP 29
General Protocols	

Introduction: Protecting a patient with a potential spinal injury is an important component of pre-hospital trauma care. The use of spinal motion restriction is necessary in any patient with the potential for spinal compromise. This potential is based on mechanism of injury AND patient presentation. A cervical collar and SMR device should be used on all patients that are not cleared using [AT 13 C-Spine Clearance Protocol](#). Spinal Motion Restriction devices include: rigid backboards, scoop stretcher, vacuum mattress, and KED. The vacuum mattress may be used alone or in conjunction with stated SMR devices. The SMR device should be chosen in accordance with the most appropriate treatment for the patient.

General Procedure

- Scene safe, BSI, Treat Immediate life threats
- Directs assistant to place/maintain head in the neutral, in-line position
- Directs assistant to maintain manual immobilization of the head
- Assess motor, sensory and circulatory function in each extremity
- Applies appropriately sized extrication cervical collar *as applicable*
- Positions the immobilization device appropriately
- Directs movement of the patient onto the SMR device without compromising the integrity of the spine
- Applies padding to voids between the torso and the device *as necessary*
- Immobilizes the patient's torso to the device
- Evaluates and pads behind the patients head *as necessary*
- Secures patients head and arms to device
- Immobilizes the patients head to the device
- Reassesses motor, sensory and circulatory function in each extremity

Washington County EMS	Full Body Vacuum Splint
Clinical Practice - Standing Protocols	GP 30
General Protocols	

Introduction: The full body vacuum splint may be used in conjunction with a rigid backboard or used alone for **Spinal Motion Restriction**. In both cases, C-spine precautions must be maintained and the patient must be appropriately secured to the SMR device appropriately and the stretcher using the five point harness system. SMR is the responsibility of the EMT-Basic(s) and Paramedic(s) on-scene. The device used to achieve SMR is left to the Paramedics discretion. The use of the full body vacuum splint is recommended for all patients applicable.

Guidance on when to use the full body vacuum splint while omitting a rigid backboard:

1. Paramedic discretion
2. Comfort
3. Excessive curvature of the spine (kyphosis in elderly)
4. Contractures, unable to lay flat
5. Will not appropriately fit on a rigid backboard
6. Respiratory compromise caused or strongly predicted from the use of a rigid backboard
7. Extended transport

GUIDELINES FOR USE

(by manufacturer)

1. Form the EMS IMMOBILE-VAC around the affected area and secure the splint with the straps. Care must be given to ensure that the affected area is manually stabilized until it is completely immobilized.
2. Ensure valve is completely closed. Attach vacuum pump hose to valve and evacuate splint until the splint is rigid enough to provide proper immobilization of the affected area.
3. Remove the vacuum pump hose and cover valve with attached cap. Recheck straps to ensure that they are snug yet not too tight to interfere with the victim's circulation.
4. Periodically inspect the splint for proper vacuum and immobilization.

Washington County EMS	FAST Exam
Clinical Practice - Standing Protocols	GP31
General Protocols	

Introduction:

Focused assessment with sonography for trauma (commonly abbreviated as **FAST**) is a rapid ultrasound examination performed by Washington County paramedics as a screening test for blood around the heart (pericardial effusion) or abdominal organs (hemoperitoneum) after trauma.

The four classic areas that are examined for free fluid are the perihepatic space (also called Morison's pouch or the hepatorenal recess), perisplenic space, pericardium, and the pelvis. With this technique it is possible to identify the presence of intraperitoneal or pericardial free fluid. In the context of traumatic injury, this fluid will usually be due to bleeding.

Indications:

- Penetrating Trauma
- Traumatic Injury
- Blunt Force Trauma to Abdomen
- Suspected AAA
- Unexplained Hypovolemia

Contraindications:

- Delay in transport for EXAM

Equipment for Exam:

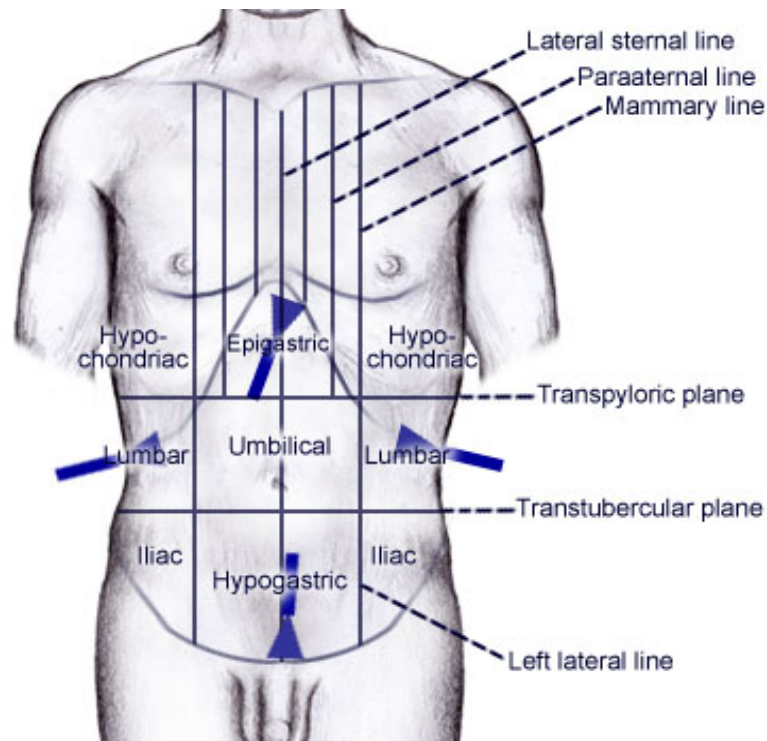
- TEMPUS Pro
- Ultrasound Wand
- Ultrasound Gel

Procedure:

- Paramedic will perform FAST Exam either on-scene, if patient is stable, or while en route to destination
- Focus: To find free fluid (Blood) around heart (Pericardiac eff.) or abdominal organs (Hemoperitoneum) after trauma

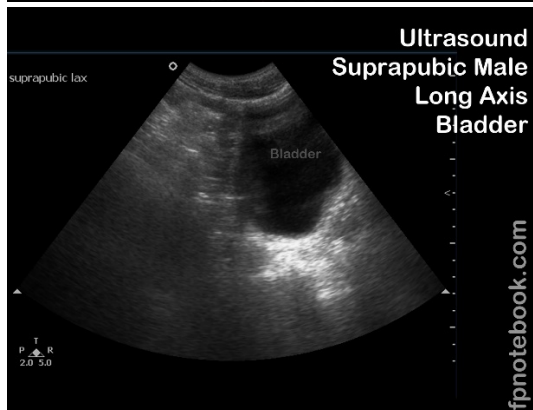
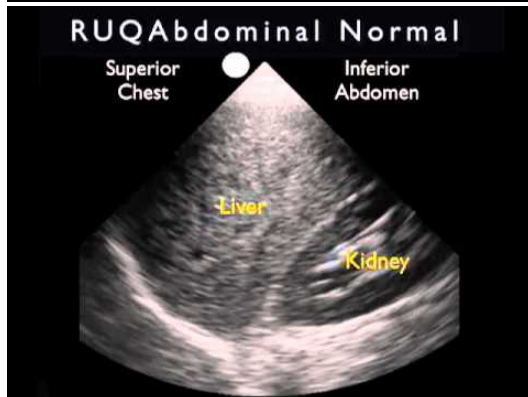
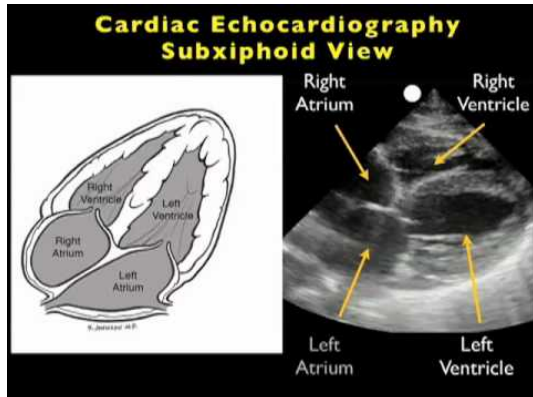
- 4 views:
 - Cardiac
 - RUQ (Morison's Pouch)
 - LUQ (Perisplenic Space)
 - Pelvic (Pouch of Douglas)

Illustration of Wand Placement



- Free fluid will show as BLACK spaces with cavities, where there should not be free fluid. Pictures will be taken with TEMPUS to provide information for receiving Physician and/or educational purposes.

Examples of Views



Washington County EMS	ISTAT
Clinical Practice - Standing Protocols	GP 32
General Protocols	

Introduction:

The iStat System incorporates comprehensive components needed to perform blood chemistry analysis at the Point of Care. The iStat CHEM8+ is the cartridge that we use and it will yield a variety of lab values that will assist the paramedic in the 911 and ACP setting to provide optimal care. As with all of our protocols, these values are only one component of the clinical picture and we must remain vigilant to treat the patient, not the numbers. Use of the iStat will require P2/P3 status and clinical checkoff on its operation and use. The unit will be housed primarily on S1 or the SRT unit and patient care should NEVER be delayed waiting for its arrival or on results.

Indications (911): *As with all tests, the values provided by the iStat are just one part of the clinical picture and cannot be used as the sole determinant of a differential diagnosis.*

- GI Bleeding - Lab values (Hb/Hct) values along with clinical presentation to help determine need for RBC transfusion and transport destination.
- Renal Failure - Analysis of Electrolytes (Na⁺, K⁺) along with kidney function to help determine risk for cardiac rhythm abnormalities and transport destination (need for dialysis)
- Diabetic - Assist in diagnosis of DKA and need for fluid therapy (cellular rehydration)
- Sepsis – Assist in rapid diagnosis of septicemia (elevated TCO₂)
- Traumatic Injuries – Baseline Hb/Hct, electrolyte, Kidney Function values to assist in definitive care at destination.

Indications (ACP Patients): The iStat can be used to along with patient examination to help determine the need for emergent care vs. PCP follow up for several chronic illnesses. Care should always be used to ensure that a false sense of security is not provided by “normal” lab values in the face of contrasting clinical information (no urine output/normal BUN... etc) Conditions that may be monitored by iStat are (But not limited to):

- Renal Failure
- Dialysis (Traditional and Peritoneal)
- CHF
- Diabetes Mellitus
- Anemia

Below is a list of normal lab values along with what values are considered “Critical” levels for the CHEM8+ cartridge. Any patient with values in the Critical range (ACP or 911) should be transported to hospital for further evaluation.

CHEM8+ Lab Values

Analyte	Normal	Critical
Na ⁺	138 - 146	< 120 or >158
K ⁺	3.5 - 3.9	< 2.8 or >6.2
Ca ⁺	98 - 109	< 75 or >126
iCa ⁺	1.12 - 1.32	< 0.78 or >1.58
Glu	70 - 105	< 46 or > 484
BUN	8 - 26	> 104
Cre	0.6 - 1.3	> 7.4
Hct	38 - 51	> 18 or < 61
Hb	12 - 17	
TCO2	24 - 29	
Anion Gap	10 - 20	

Operation of the Unit

Criteria for Specimen Rejection

- Evidence of clotting
- Specimens collected in vacuum tubes with anticoagulant other than lithium or sodium heparin
- Other sample types such as urine, CSF, and pleural fluid

Avoid the following circumstances

- Drawing a specimen from an arm with an I.V.
- Stasis (tourniquet left on longer than one minute before venipuncture)
- Extra muscle activity (fist pumping)
- Hemolysis (alcohol left over puncture site, or a traumatic draw)
- Icing before filling cartridge

PROCEDURE FOR ANALYSIS

Preparation for Use

A single-use disposable cartridge contains microfabricated sensors, a calibrant solution, fluidics system, and a waste chamber. A whole blood sample of approximately 1 to 3 drops is dispensed into the cartridge sample well, and the sample well is sealed before inserting into the analyzer.

An individual cartridge may be used after standing 5 minutes, in its pouch, at room temperature.

An entire box should stand at room temperature for one hour before cartridges are used.

Cartridges may be stored at room temperature (18 to 30°C or 64 to 86°F) for 14 days.

Cartridges should not be returned to the refrigerator once they have been at room temperature, and should not be exposed to temperatures above 30 C (86F). Cartridges should remain in pouches until time of use.

Testing:

Press the Power button to turn on the Handheld. DO Not insert the cartridge to start the test.

Press the “2” button to start a new test. Follow the handheld prompts. For “Operator ID”, enter your WCEMS Badge number. For “Patient ID, enter the last 5 digits of the run number for the call.

Procedure for Cartridge Testing

- DO NOT insert cartridge to start test.
 - DO NOT open cartridge pouch before scanning the barcode (if applicable).
 - If Quality Check Code 69, 140, or 147 appears, see Analyzer Coded Messages Technical Bulletin for troubleshooting Information.
1. Press onto turn on handheld.
 2. Press 2for iSTAT.
 3. Follow the handheld prompts.
 4. Scan the lot number on the cartridge pouch.
 - a. Position barcode 3-9 inches from scanner window on handheld.
 - b. Press and hold scan to activate the scanner.
 - c. Align the red laser light so it covers the entire barcode.
 - d. The handheld will beep when it reads the barcode successfully.

Note: If cartridge pouch does not have a barcode, enter the lot number manually using the numbered keys or press ent to bypass the prompt. You may ignore any letters in the lot number.

Preparing the cartridge:

1. Remove cartridge from pouch. Handle the cartridge by its edges. Avoid touching the contact pads or exerting pressure over the center of the cartridge.
2. Mix blood and collection tube additives by inverting the tubes at least ten times. Following thorough mixing of the sample, use a blunt and syringe to transfer sample from a blood tube to a cartridge. Direct the dispensing tip containing the blood into the sample well.
3. Dispense the sample until it reaches the fill mark on the cartridge and the well is about half full.

4. Close the cover over the sample well until it snaps into place (Do not press over the sample well.)

Testing

1. Insert the cartridge into the cartridge port on the analyzer until it clicks into place. The analyzer must remain horizontal during the testing cycle. Never attempt to remove a cartridge while the LCK or “Cartridge Locked” message is displayed.
2. Wait until testing cycle is complete. Results are displayed numerically with their units.
3. Press print key to print results. *Note* : Results printed on thermal paper will fade with time and are therefore not acceptable as a permanent chartable record.

Suppressed Results

There are three conditions under which the iSTAT System will not display results:

1. Results outside the System’s reportable ranges are flagged with a < or >, indicating that the result is below the lower limit or above the upper limit of the reportable range respectively. (See the table of Reportable Ranges.) The < > flag indicates that the results for this test were dependent on the result of a test flagged as either > or <.

Action: Send specimen(s) to the laboratory for analysis, if necessary.

2. Cartridge results which are not reportable based on internal QC rejection criteria are flagged with ***.

Action: Analyze the specimen again using a fresh sample and another cartridge. If the specimen integrity is not in question, the results that are not suppressed should be reported in the usual manner. If the result is suppressed again, send specimen(s) to the laboratory for analysis in accordance with the Laboratory Procedure Manual.

3. A Quality Check message will be reported instead of results if the handheld detects a problem with the sample, calibrant solution, sensors, or mechanical or electrical functions of the handheld during the test cycle.

Washington County EMS	ResQCPR System
Clinical Practice - Standing Protocols	GP 33
General Protocols	

- The ResQCPR System is a combination of two medical devices that are used together during CPR: the ResQPUMP ACD-CPR Device and the ResQPOD ITD 16. The ResQPUMP is a hand-held pumping device with a suction cup that is placed on the chest during CPR to perform active compression-decompression CPR (ACD-CPR). It is the only CPR device that allows the rescuer to deliver up to 10 kg of lifting force. The ResQPOD ITD 16 is an impedance threshold device (ITD) that prevents the influx of unnecessary air through the open airway during CPR to enhance negative pressure.
- ResQPump is ineffective without the use of the ResQPOD to control the return of air into the lungs. If a ResQPOD is not available, the ResQPUMP may be used as an adjunct for traditional CPR, but the metronome should not be used, and compressions should be performed at the AHA standard 100/min.
- If the ResQPUMP is not available, the ResQPOD should be used and still effective with normal CPR. Use of the ResQPOD does not change in the absence of the ResQPUMP.

CONTRAINDICATIONS:

- Patients under 12 years of age.
- Cardiopulmonary arrest due to major chest trauma.
- The ResQPUMP should not be used in patients who have had a recent sternectomy (within the past 6 months).

Washington County EMS	Blood Product Administration
Clinical Practice - Standing Protocols	GP 34
General Protocols	

Introduction: The purpose of this protocol is to describe proper administration of ONEG packed red blood cells (PRBCs). TXA administration in conjunction with PRBCs will be described in this protocol.

Clinical Signs and Symptoms: Clinical assessment of significant blood loss based on findings such as: unstable pelvic fracture/evidence of abdominal or chest trauma on exam/significant external blood loss/femur fractures/positive FAST Exam findings. Hypotension/tachycardia.

Indications for treatment: If patient is believed to be suffering from clinical hemorrhagic shock manifested by hypotension, marked tachycardia, diminished peripheral pulses, pallor, tachypnea, or agitation then the P3 Paramedic should consider administration of PRBC's (0 NEG) to the patient. For obvious hemorrhagic shock, the P3 paramedic can administer the blood products, if available, on standing delegated order. One unit of PRBCs should be initially infused after patient reassessment should signs and symptoms not improve, a second unit may be administered. However, if there is question or concern then the P3 should contact Dr. Loesch / Stark for direct orders. A consultation with the receiving physician should also occur when convenient.

Procedure:

1. IV access should be started with a minimum of 18g catheter.
2. While one provider prepares PRBCs for administration, administer TXA (Adults: 1GM IVP over 1 minute/Pedi: 15mg/kg over 1 minute), flush line after administration.
 - a. ****Consider administration of TXA IVP early in rescue environment or delayed transport due to required patient management on scene (extended extrication, RSI, etc.) TXA is contraindicated if >3 hours since injury.**
 - b. **Do not withhold TXA if blood product is unavailable.**
3. Ensure blood Y tubing with filters are utilized during an infusion.
4. Prime blood tubing with normal saline and then administer blood products at a wide-open rate.
5. Observe the patient closely for chilling, nausea, vomiting, skin rashes, or tachycardia as are early indications of reactions and check vital signs every 10 minutes (include temperature) post transfusion.
6. Report sign and symptoms of reaction immediately to physician to minimize consequences. Acute reaction may occur at any-time during the transfusion. If any reactions, close clamp & run normal saline, report to doctor, save urine and observe.
7. Procedure may be repeated with second unit of packed RBC's if required.
8. If signs and symptoms are present, immediately stop infusion and refer to Allergic Reaction Protocol.

Washington County EMS	COVID-19
Clinical Practice – Standing Protocols	GP 35
General Protocols	

Due to the COVID-19 outbreak, EMS personnel may be asked to perform nasal swab testing on certain patients that have been classified as a person under investigation (PUI). Personnel performing the SWAB will be trained on this procedure. Only those trained on this procedure will perform this test.

Once the nasal swab sample is acquired, using aseptic technique, the swab will be placed into the provided tube, to avoid contamination, and keep cool during transport. The tube will then be transported to the designated area/department at Baylor Scott and White Hospital in Brenham for collection. The lab will then be responsible for transport to a testing site.

Detailed information regarding the procedure is below:

Preparation for Specimen Collection:

1. Don all PPE (gown, N95 respirator, face shield/eye protection, and gloves).
2. Explain procedure to patient.
3. Verify patient name and DOB.
4. Position the patient for comfort and safe specimen collection.
5. Offer tissue to patient to blow nose.
6. Inspect nostrils to ensure no obstructions.
7. Prepare equipment area: Disinfect the bedside table with an EPA approved disinfectant wipe. Lay out all supplies on the table in a manner that will help facilitate specimen collection.

Nasopharyngeal Specimen Collection Procedure:

1. Perform hand hygiene over gloves.
2. Hold swab between your thumb and forefinger with the shaft resting on your middle finger.
3. Patient tilts head back, and you place your hand on the patient's forehead.
4. Insert swab into nostril, gently rotating inward until resistance is met at the level of the turbinates.
5. Rotate the swab a few times.
6. Withdraw the swab, remove hand from patient forehead, and place single swab in container with transport medium.
7. Break off the end of broken swab so cap will close.
8. Dispose of broken tip into sharps container.
9. Tighten cap.

Post Specimen Collection Procedure:

1. Disinfect specimen tube with disinfectant wipe.
2. Place tube in their respective specimen bag and seal.
3. Disinfect each specimen bag with disinfectant wipe.
4. Place the two specimen bags into the second specimen bag with a patient label stating the contents (NP/OP).

5. Perform hand hygiene.
6. Disinfect outer specimen bag.
7. Pass clean bag to HCW outside of room, or doff PPE and exit room with specimen bag.
8. Verify outer bag is labeled with NP & OP prior to taking the specimen to the lab.
9. All specimens must be hand-delivered while keeping cool prior to delivery.

There is an attachment on the following 3 pages to assist regarding the Specimen Collection: A Specimen Collection for COVID-19 Information Document and a Human Infection with 2019 Novel Coronavirus Person Under Investigation (PUI) and Care Report Form that will be completed and turned into the lab with each patient tested. An EPCR will also be completed.



Specimen Collection for COVID-19

Appropriate specimen collection of the upper respiratory tract for patients with or under investigation for COVID-19 is essential. This resource includes both nasopharyngeal and oropharyngeal specimen collection procedures.

Preparation for Specimen Collection

Supplies Required to Test for COVID-19

- Two specimen collection swab kits
- 3 small specimen biohazard bags
- 3 patient labels
- Sharpie (fine tip)
- EPA approved disinfectant wipes
- Hand sanitizer
- Sharps container
- Flashlight
- Tongue Depressor
- Three (3) prepared labels
 - Prepared label must contain name, DOB, MRN, time/date of collection, specimen source, and initials of specimen collector.
- One label for each tube and one for the outer bag

1. Don all PPE (gown, N95 respirator, face shield/eye protection, and gloves).
2. Explain procedure to patient.
3. Verify patient name and DOB.
4. Position the patient for comfort and safe specimen collection.
5. Offer tissue to patient to blow nose.
6. Inspect nostrils to ensure no obstructions.
7. Prepare equipment area:
 - Disinfect the bedside table with an EPA approved disinfectant wipe.
 - Lay out all supplies on the table in a manner that will help facilitate specimen collection.

Oropharyngeal Specimen Collection

Nasopharyngeal Specimen Collection

1. Perform hand hygiene over gloves.
2. Hold swab between your thumb and forefinger with the shaft resting on your middle finger.
3. Patient tilts head back, and you place your hand on the patient's forehead.
4. Insert swab into nostril, gently rotating inward until resistance is met at the level of the turbinates.
5. Rotate the swab a few times.
6. Withdraw the swab, remove hand from patient forehead, and place single swab in container with transport medium.
7. Break off the end of broken swab so cap will close.
8. Dispose of broken tip into sharps container.
9. Tighten cap.

1. Perform hand hygiene over gloves.
2. Hold swab between your thumb and forefinger with the shaft resting on your middle finger.
3. Have the patient open their mouth (may need to use tongue depressor).
4. Insert swab into posterior pharynx and tonsillar area.
5. Rotate the swab a few times.
6. Withdraw the swab and place in container with transport medium.
7. Break off the end of broken swab so cap will close.
8. Dispose of broken tip into sharps container.
9. Tighten cap.

Post Specimen Collection Procedure

1. Disinfect specimen tube with disinfectant wipe.
2. Place tube in their respective specimen bag and seal.
3. Disinfect each specimen bag with disinfectant wipe.
4. Place the two specimen bags into the second specimen bag with a patient label stating the contents (NP/OP).
5. Perform hand hygiene.
6. Disinfect outer specimen bag.
7. Pass clean bag to HCW outside of room, or doff PPE and exit room with specimen bag.
8. Verify outer bag is labeled with NP & OP prior to taking the specimen to the lab.
9. All specimens must be hand-delivered.

PATIENT IDENTIFIER INFORMATION IS NOT TRANSMITTED TO CDC

Patient first name _____ Patient last name _____ Date of birth (MM/DD/YYYY): ____/____/____

PATIENT IDENTIFIER INFORMATION IS NOT TRANSMITTED TO CDC



Human Infection with 2019 Novel Coronavirus Person Under Investigation (PUI) and Case Report Form

Reporting jurisdiction: _____

Case state/local ID: _____

Reporting health department: _____

CDC 2019-nCoV ID: _____

Contact ID ^a: _____NNDSS loc. rec. ID/Case ID ^b: _____

^a Only complete if case-patient is a known contact of prior source case-patient. Assign Contact ID using CDC 2019-nCoV ID and sequential contact ID, e.g., Confirmed case CA102034567 has contacts CA102034567-01 and CA102034567-02. ^b For NNDSS reporters, use GenV2 or NETSS patient identifier.

Interviewer information

Name of interviewer: Last _____ First _____

Affiliation/Organization: _____ Telephone _____ Email _____

Basic information

<p>What is the current status of this person?</p> <p><input type="checkbox"/> PUI, testing pending*</p> <p><input type="checkbox"/> PUI, tested negative*</p> <p><input type="checkbox"/> Presumptive case (positive local test), confirmatory testing pending*</p> <p><input type="checkbox"/> Presumptive case (positive local test), confirmatory tested negative*</p> <p><input type="checkbox"/> Laboratory-confirmed case*</p> <p>*Testing performed by state, local, or CDC lab.</p> <p>*At this time, all confirmatory testing occurs at CDC</p> <p>Report date of PUI to CDC (MM/DD/YYYY): ____/____/____</p> <p>Report date of case to CDC (MM/DD/YYYY): ____/____/____</p> <p>County of residence: _____</p> <p>State of residence: _____</p>	<p>Ethnicity:</p> <p><input type="checkbox"/> Hispanic/Latino</p> <p><input type="checkbox"/> Non-Hispanic/Latino</p> <p><input type="checkbox"/> Not specified</p> <p>Sex:</p> <p><input type="checkbox"/> Male</p> <p><input type="checkbox"/> Female</p> <p><input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Other</p>	<p>Date of first positive specimen collection (MM/DD/YYYY): ____/____/____</p> <p><input type="checkbox"/> Unknown <input type="checkbox"/> N/A</p> <p>Did the patient develop pneumonia?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> No</p> <p>Did the patient have acute respiratory distress syndrome?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> No</p> <p>Did the patient have another diagnosis/etiology for their illness?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> No</p> <p>Did the patient have an abnormal chest X-ray?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> No</p>	<p>Was the patient hospitalized?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>If yes, admission date 1 ____/____/____ (MM/DD/YYYY)</p> <p>If yes, discharge date 1 ____/____/____ (MM/DD/YYYY)</p> <p>Was the patient admitted to an intensive care unit (ICU)?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Did the patient receive mechanical ventilation (MV)/intubation?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>If yes, total days with MV (days) _____</p> <p>Did the patient receive ECMO?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Did the patient die as a result of this illness?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Date of death (MM/DD/YYYY): ____/____/____</p> <p><input type="checkbox"/> Unknown date of death</p>
<p>Race (check all that apply):</p> <p><input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaska Native</p> <p><input type="checkbox"/> Black <input type="checkbox"/> Native Hawaiian/Other Pacific Islander</p> <p><input type="checkbox"/> White <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Other, specify: _____</p>			
<p>Date of birth (MM/DD/YYYY): ____/____/____</p> <p>Age: _____</p> <p>Age units (yr/mo/day): _____</p>			
<p>Symptoms present during course of illness:</p> <p><input type="checkbox"/> Symptomatic</p> <p><input type="checkbox"/> Asymptomatic</p> <p><input type="checkbox"/> Unknown</p>	<p>If symptomatic, onset date (MM/DD/YYYY): ____/____/____</p> <p><input type="checkbox"/> Unknown</p>	<p>If symptomatic, date of symptom resolution (MM/DD/YYYY): ____/____/____</p> <p><input type="checkbox"/> Still symptomatic <input type="checkbox"/> Unknown symptom status</p> <p><input type="checkbox"/> Symptoms resolved, unknown date</p>	
<p>Is the patient a health care worker in the United States? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Does the patient have a history of being in a healthcare facility (as a patient, worker or visitor) in China? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>In the 14 days prior to illness onset, did the patient have any of the following exposures (check all that apply):</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <p><input type="checkbox"/> Travel to Wuhan</p> <p><input type="checkbox"/> Travel to Hubei</p> <p><input type="checkbox"/> Travel to mainland China</p> <p><input type="checkbox"/> Travel to other non-US country</p> <p>specify: _____</p> <p><input type="checkbox"/> Household contact with another lab-confirmed COVID-19 case-patient</p> </div> <div style="width: 33%;"> <p><input type="checkbox"/> Community contact with another lab-confirmed COVID-19 case-patient</p> <p><input type="checkbox"/> Any healthcare contact with another lab-confirmed COVID-19 case-patient</p> <p><input type="checkbox"/> Patient <input type="checkbox"/> Visitor <input type="checkbox"/> HCW</p> <p><input type="checkbox"/> Animal exposure</p> </div> <div style="width: 33%;"> <p><input type="checkbox"/> Exposure to a cluster of patients with severe acute lower respiratory distress of unknown etiology</p> <p><input type="checkbox"/> Other, specify: _____</p> <p><input type="checkbox"/> Unknown</p> </div> </div>			
<p>If the patient had contact with another COVID-19 case, was this person a U.S. case? <input type="checkbox"/> Yes, nCoV ID of source case: _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A</p>			
<p>Under what process was the PUI or case first identified? (check all that apply): <input type="checkbox"/> Clinical evaluation leading to PUI determination</p> <p><input type="checkbox"/> Contact tracing of case patient <input type="checkbox"/> Routine surveillance <input type="checkbox"/> EpiX notification of travelers; if checked, DGMQID _____</p> <p><input type="checkbox"/> Unknown <input type="checkbox"/> Other, specify: _____</p>			



CDC 2019-nCoV ID: _____

Form Approved: OMB: 0720-0111 Exp. 4/14/2023

Human Infection with 2019 Novel Coronavirus Person Under Investigation (PUI) and Case Report Form

Symptoms, clinical course, past medical history and social history

Collected from (check all that apply): ☐ Patient interview ☐ Medical record review

During this illness, did the patient experience any of the following symptoms?	Symptom Present?		
Fever >100.4F (38C)*	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Subjective fever (felt feverish)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Chills	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Muscle aches (myalgia)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Runny nose (rhinorrhea)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Sore throat	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Cough (new onset or worsening of chronic cough)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Shortness of breath (dyspnea)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Nausea or vomiting	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Headache	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Abdominal pain	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Diarrhea (>3 loose/larger than normal stools/24 hr period)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unk
Other, specify: _____			

Pre-existing medical conditions*

☐ Yes ☐ No ☐ Unknown

Chronic Lung Disease (asthma/emphysema/COPD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Diabetes Mellitus	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Cardiovascular disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Chronic Renal disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Chronic Liver disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Immunocompromised Condition	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Neurologic/neurodevelopmental/Intellectual disability	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	(if YES, specify) _____
Other chronic diseases	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	(if YES, specify) _____
If female, currently pregnant	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Current smoker	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	
Former smoker	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown	

Respiratory Diagnostic Testing

Test	Pos	Neg	Pend.	Not done
Influenza rapid Ag <input type="checkbox"/> A <input type="checkbox"/> B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza PCR <input type="checkbox"/> A <input type="checkbox"/> B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RSV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. influenzae	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parainfluenza (1-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adenovirus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rh. virus/enterovirus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coronavirus (OC43, 229E, HKU1, NL63)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. pneumoniae	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. pneumoniae	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, Specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specimens for COVID-19 Testing

Specimen Type	Specimen ID	Date Collected	State Lab Tested	State Lab Result	Sent to CDC	CDC Lab Result
NP Swab			<input type="checkbox"/>		<input type="checkbox"/>	
OP Swab			<input type="checkbox"/>		<input type="checkbox"/>	
Sputum			<input type="checkbox"/>		<input type="checkbox"/>	
Other, Specify: _____			<input type="checkbox"/>		<input type="checkbox"/>	

Additional State/Local Specimen IDs: _____

Standard Operating Procedures



Washington County EMS	Aeromedical Policies
Standard Operating Procedures	SOP 01

Introduction: This policy is to serve as a guideline for Aeromedical provider activation. This policy does not decide when to launch a provider but who to launch. The purpose of the policy is to decrease confusion during an actual incident. Thoughtful consideration should be given as to the necessity of Aeromedical transport, such as what interventions can the Aeromedical provider give that is not available from ground transport. Destination should be determinant of which provider is requested. If our crews suspect that there may be a need for aeromedical activation, then notify communications of which provider is being requested and they will launch the appropriate provider. Once the EMS Crew assesses the scene they may decide to cancel the provider if so then the EMS Crew will notify communications to do so.

Policy # Aero -1 (Title: Aeromedical Provider Activation)

Due to our unique geographical location we at Washington County EMS have several Aeromedical providers that service our area. Over the last few years we have seen a rash of provider growth in our area. Due to this we have decided to provide a list of providers to call from. After an in-depth study, we decided that the nature of the call, location of the call, and destination should determine which Aeromedical provider.

PHI-Sky Med

PHI's closest aircraft is based in Bryan and in Tomball which is approximately (estimated) 20 minutes from Brenham. PHI should be used in cases of resource management or a pt. destination of Temple.

Starflight

Starflight's closest aircraft is based in Austin which is approximately (estimated) 26 minutes from Brenham. Starflight should be used when transporting to Austin. Starflight also has the capability to transport bariatric patients and multiple patients as well as administer blood product. Rendezvous point should be Giddings Airport, (979)-254-2710, whenever possible.

Life Flight (Hermann)

Life Flight is based in Houston which is approximately (estimated) 26 minutes from Brenham. Life Flight should be used when transporting to Houston. Life Flight also has the capability to transport bariatric patients and multiple patients as well as administer blood product. Rendezvous point should be the Legendary Oaks Golf Course, 1025 Urban Rd., Hempstead, (979)826-4001, whenever possible.

Washington County EMS	Accidents
Standard Operating Procedures	SOP 02

Accidents witnessed by but not involving an EMS vehicle:

An EMS vehicle not responding to an emergency call:

Minor accidents with no injuries will be reported to communications. Advise them of the number of vehicles, hazards, and any other information you or they deem necessary.

Major accidents, or accidents with injuries, will be reported to communications. Again, advise them of the number of vehicles, hazards, and any other information you or they deem necessary. The crew will stop and assess the patients, treat, and transport if necessary.

An EMS vehicle responding to an emergency call:

Using EMD acuity call features, the crew must determine what call is more life/death and respond appropriately sending the reserves to the lower acuity call.

Minor accidents with no injuries will be reported to communications. Supply the information listed above.

Major accidents, or accidents with injuries, will be reported to communications. The crew must continue their response to the initial call, but should attempt to perform a scene size up as they pass the scene. If possible, they should alert communications if more than one EMS unit is needed or if Fire/Rescue is needed.

Accidents involving EMS vehicles not responding to an emergency call:

General guidelines:

All accidents involving EMS vehicles will be reported immediately to communications as a fleet accident and the EMS Director notified immediately. The situation should be assessed and law enforcement and back up requested as needed.

At the first opportunity, a written report from the driver of the vehicle involved will be submitted to the EMS Director. A separate written report from each crew member telling what they saw and heard will also be submitted.

All EMS personnel will notify the EMS Director of any and all injuries to them or anyone else.

EMS personnel involved in a collision while on duty will not make any statements to anyone at the scene regarding the CAUSE until you have spoken to the EMS Director (except; the investigating law enforcement officer).

Accidents occurring en-route to an emergency call:

Immediately stop and assess the damage to the vehicle and check for injuries.

If there are injuries, or if unable to continue on call due to damage, notify communications so they can notify the appropriate units and send them to the accident location and to the initial call. Remain on scene until the arrival of law enforcement and a supervisor. If there are no injuries and damage to the unit is minimal and the unit can be operated safely, have communications dispatch another unit to the call and wait for law enforcement. If no other unit is available, call law enforcement on the radio to release you from the scene so you can respond to the call. Advise all other parties to remain on scene, and once call is completed, contact law enforcement to determine if you need to return to the scene of the accident.

Accident occurring while enroute to the hospital with a patient:

If patient is stable and no injuries are incurred, advise the other parties involved that law enforcement is enroute and continue to the hospital. If the patient is unstable and no serious injuries are incurred, advise the other parties involved that law enforcement and another unit (if needed) are enroute, then proceed to the hospital.

In situations where the patient is stable and serious injuries are incurred, advise communications to send another ambulance as needed, remain on scene until the other unit arrives, then proceed to the hospital. In situations where there is an unstable patient and serious injuries are incurred, the crew should exercise their best judgment and request the appropriate assistance from communications, other unit(s) and their supervisor.

IN ALL ACCIDENTS THE DRIVER AND OTHER CREW MEMBER(S) ARE SUBJECT TO DRUG AND ALCOHOL TESTING: ACCIDENTS, REVIEWS, AND ACTIONS

This policy establishes guidelines for review of all EMS vehicle accidents by the EMS Review Board. Collisions will be reviewed in order to determine the preventability of the accident and to prevent future accidents. The board shall consist of and not to be limited to the EMS Director and EMS Captain, unless one of them is involved.

The EMS Review Board will review all EMS accidents, even minor accidents that cause vehicle damage. The employee involved in an accident will be invited to attend the meeting in order to present the facts of the case.

The EMS Review Board will make a ruling based on the preventability of the accident. The employee will be notified of the ruling of the board no later than 10 calendar days later. All preventable accidents will subject the employee to the following:

Non preventable accident with no drug abuse involved:

- No disciplinary action

First preventable accident with no drug abuse involved:

- Written reprimand.
- Up to 24 hours suspension.
- Employee may be held responsible for the cost of repair and associated time or expense, defensive driving course, if deemed necessary or beneficial by the Board.
- Second preventable accident with no drug abuse involved.
- Up to three (3) shifts suspension.
- Employee may be held responsible for the cost of repair and associated time or expense, defensive driving course, if deemed necessary or beneficial by the Board.

ALL ACCIDENTS, DEPENDING ON SEVERITY, MAY RESULT IN TERMINATION!

Washington County EMS	Ambulance Run Report
Standard Operating Procedures	SOP 3

Documentation is one of the most important tasks that we perform as pre-hospital providers. While there are many reasons to document, the main purpose of documentation is to provide an accurate, comprehensive, permanent record of each patient's condition and the treatment rendered, as well as a data collection tool.

WHY DOCUMENT

There are 5 main reasons to document EMS calls: Clinical, Legal, Operational, Financial, and Compliance.

Clinical: As pre-hospitals providers our first and most important job is to provide patient care. It is essential that all patient care and assessments be accurately recorded. This includes the patient's primary complaint; the patient's presenting signs and symptoms (assessment), and all treatments and interventions, both attempted and successful. Because the patient care report is first and foremost a clinical document, it provides a clinical picture for subsequent care providers such as ER doctors, trauma or cardiac services, and or admitting physicians.

Legal: As well as being a clinical document, the patient care report is also an important **legal** document. In the case of a malpractice suit, the PCR will be one of the primary items reviewed to determine if the standard of care was met. Because the patient care report is a record of the patient's condition and all treatment, it will be closely examined when legal issues in patient care are raised. In addition to malpractice the PCR can be used in criminal and other civil cases, such as injury liability. These cases do not occur at the time of the incident, but often months, even years later. A well written patient care report serves as a substitute memory for the EMS provider after the patient was transported. It is important that the patient care report be completed as close to the time of the call as possible. When a call report is completed hours or days after a patient encounter details are forgotten and important information can be left out. It is these details that can make a difference when legal questions are raised down the road. If information about care and treatment of a patient is not documented, it is considered that it did not happen.

Operational: One of the least thought about reasons for documentation is that of operational issues and data collection. EMS operations are driven by data; response times, call-to-intervention times, interventions performed, or success rates to name just a few. The evaluation of key data points ensures that performance of high risk procedures are successful on a consistent basis, and can help identify issues with patient care before adverse events happen. Additionally the collection of patient care data can help measure if care being rendered is having a positive effect on patient outcome. This helps drive future patient care, insuring that interventions that actually work are being done. But, in order for this data to be of any value it is important that the data be entered in the first place. This means that pertinent data fields should be entered as completely as possible on every call.

Financial: Financial reasons are probably the most reinforced reason for documentation. Proper documentation is directly related to reimbursement from Medicare/Medicaid and Private Insurance. Reimbursement rates are based on the level of care provided; an ALS transport will receive a higher reimbursement rate than a BLS transport. This means that every aspect of patient care must be accurately and completely documented, this includes assessments and all interventions. Also needed for financial documentation is the patient's signature, or an authorized signer on the patient's behalf, to assign the patient's benefits to the provider of healthcare services.

This gives Washington County EMS the ability to bill directly to the patient's insurance provider. If the patient's signature is not obtained at the time of transport, the billing company must contact the patient in order to get permission to obtain needed information. By having the patient sign at the time of transport is not only more convenient, it also saves time and decreases the time it takes to receive reimbursement. Also with changes that have been passed through legislature, patients are now able to request that their insurance not be billed, therefore paying for services rendered out of pocket.

Compliance: The final reason for proper documentation is that of compliance. EMS is regulated by federal, state, and local rules. Compliance is verified through documentation. Things such as HIPAA notices and medical necessities must be properly documented to meet federal requirements. Also, if the EMS system is receiving grant related funds, it often is tied to performance improvement. Compliance with the terms of the grant and showing improvement is tracked thru proper documentation.

WHAT HAS TO BE DOCUMENTED

Now that we know why we need to provide good documentation, what needs to be documented? Good documentation tells a story of why EMS was requested and what EMS did for the patient.

There are several ways to tell this story; SOAP (Subjective, Objective, Assessment, Plan) or CHART (Chief Complaint, History, Assessment, Rx or Treatment, Transport) Method. No matter how the story is told; there are key components that must be documented. Include pertinent negatives.

Below are listed items that are typically either not documented correctly and/or missing completely in the EPCR.

1. **Times and Dates.** Make sure that all times and dates are recorded and correct. The use of CAD data makes this easy, but computers are only as reliable as the people using them. Times do not always get entered in to CAD. Any missing times must be entered.
2. **Addresses of scene and destination.** Confirm addresses, is the call a City call or County?
3. **Reason for dispatch and mode of response.** What was the dispatch complaint?
4. **The patient's complaint on arrival.** What was the patient's primary complaint upon EMS arrival? Use the patient's own words to describe the complaint when possible. "Patient describes pain as "crushing sensation in center of chest"".
5. **Department Specifics.** See Patient Status Protocol for Critical, Urgent and Stable Status.
6. **Patient assessment.** A primary assessment, including vital signs, must be completed on every patient transport. This includes transports and refusals that are against medical

advice (AMA). Document a minimum of 2 complete (BP, Pulse, Respirations) sets in the narrative.

7. **Patient demographics.** Accurately record the patient's name, mailing address, DOB, SSN, and telephone number as completely as possible. Verify that all information is correct and spelled correctly, especially the patient's name (Green vs. Greene, or Cathy vs. Kathy). ***Do not rely on hospital information as your sole source of information, ASK THE PATIENT!*** Ask specifically for the patient's MAILING ADDRESS.
8. **Patient History, Medications, and Allergies.** Obtain a list of the patient's past medical history, all medications taken by the patient, include non-prescription medications if possible; and a list of any allergies the patient may have.
9. **Treatments.** A complete listing of all interventions and medications must be entered. It is important that the time of all treatments be entered, as well as dosages and routes for medications. The patient's response and any complications should also be recorded. Be sure to include both successful and unsuccessful attempts.
10. **Billing information.** Every attempt should be made to obtain the patient's insurance information. This includes the insurance company name and policy number. Copies of the cards can also be scanned attached to the patient care report. If the patient is covered by another person's insurance (such as a child), the name and demographic information of the responsible party should be obtained. If the incident involves a work related illness or injury, this should be noted also.
11. **Mileage.** The total loaded transport mileage must be documented on every transport. This mileage should be to the nearest tenth of a mile. **"Starting: 10.2, Ending 11.4 total is: 1.2 miles"**. Mileage can also be calculated via www.mapquest.com
12. **Signatures.** There are several signatures that should be included on the call report: **the signature of the person completing the report, the receiving facility signature, and the patient's authorization signature.** Whenever care is transferred, the receiving provider should sign confirming that they have received report and are taking responsibility for patient care. The name of the person should also be recorded in the patient care report. The patient should sign the authorization statement on **every call**, this includes transports and treat/no transports. This statement authorizes EMS to bill directly to the patient's insurance and to release information about the patient in order to collect. If the patient is unable to sign, the patient's authorized representative should sign in his/her place. If there is not an authorized representative for the patient, then the transporting crew should document why the patient was unable to sign and have that witnessed by the receiving facility staff. EMS is not able to a "Authorized Representative because we have a vested interest in getting the bill paid."

An electronic patient care report must be completed on every dispatched call. This includes cancelled calls, not needed, blood draws, transfers, etc. If you are dispatched on a call, you must complete an ePCR. By doing this, we will be able to better track all calls, not just the ones that we check on scene for.

All electronic patient care reports must be completed at that time of transport and a copy of the report left at or sent to the receiving facility ASAP. This should be done for every patient transported. If you are called out of the hospital before completing a call report, it must be completed as soon as possible. All call reports are to be **completed by the end of the shift**; this includes refusals and cancelled calls.

BENCHMARKS

Washington County EMS has several areas of documentation that require specific benchmarks to adequately monitor patient care situations and overall improve the care that patients are given. Please refer to the specific benchmark guidelines for further assistance.

SPECIAL SITUATIONS

REFUSALS: Whenever a patient refuses to be transported, this opens us up to increased risk. Documentation provides a level of protection if a complaint is made or an adverse outcome happens after a refusal. In cases where the patient refuses treatment or transport; there is important information that should be documented. A complete assessment should be documented on every refusal. This includes the patient's chief complaint, vital signs, and a complaint specific physical assessment. You should also consider obtaining an ECG/12 lead, if applicable.

These assessments could be a key piece of information for the patient to help persuade them to agree to be treated and/or transported when necessary. By documenting that this information was obtained, it shows an effort of EMS's part to give the patient this information. You as the provider should also document any additional efforts performed to inform the patient, such as talking with family members, the patient's personal doctor, or online medical control in certain situations where you may have an AMA refusal.

Another KEY piece of documentation is the patient's signature on a refusal form. The patient must understand the refusal form prior to signing. Reading the ALL key points of the refusal to the patient is the easiest way to make sure that the patient understands the refusal form. The patient must be alert and oriented, and not under the influence of drugs or ETOH in order to be able to refuse care. Law enforcement can also serve as a witness if there are additional signatures needed.

As a last resort, the second EMS crew member can serve as a witness to the refusal. If the patient is a minor, the patient's parent or legal guardian must sign the refusal. If the patient's parent is not on scene, they may consent to a refusal over the phone. If a phone refusal is given, it must be verified by both crew members, make sure to document everything that was said in the narrative. If no contact with a parent or guardian can be made, consult with law enforcement. If in doubt, transport the patient to the hospital and have the Emergency Department attempt and contact parents.

MEDICAL NECESSITY: One of the most confusing things pre-hospital providers must deal with is when must a medical necessity form be completed. The Centers for Medicare & Medicaid Services (CMS) sets the standards for when ambulance transportation is covered. CMS requires a certificate of medical necessity (PCS) for non-emergent transports when a patient meets a bed confined status. So, the big question is what is a non-emergency transport?

First, let's look at what an emergency transport is. CMS defines an emergency transport as responding immediately to a 911 call; this means that EMS resources are dispatched as quickly as possible to respond to the call or emergency transfer, not necessarily that lights and sirens where used. The patient's chief complaint is considered when determining the need for medical necessity. Documenting the response mode, the patient's chief complaint and your assessment are critical for meeting CMS standards. CMS defines a non-emergency transport as transports for non-life threatening conditions when transportation by other means may result in injury or would otherwise endanger the patient's health. CMS requires that the patient be bed-confined to establish medical necessity. To meet the requirements to be considered bed confined, the patient must **meet ALL 3 of the following requirements:**

1. Be unable to get up from bed without assistance, **and**
2. Be unable to ambulate, **and**
3. Be unable to sit in a chair or wheelchair.

This should not be confused with non-ambulatory. Non-ambulatory means that the patient is not able to ambulate without assistance. It is important to document the patient's condition, including past medical history, in order to support if the patient is bed-confined or non-ambulatory. A medical necessity form (**Physician Certification Statement, PCS**) is required for all non-emergency transports where the patient meets the bed confined status. Anytime that the responding crew feels the transport may need a medical necessity form, the crew should obtain the medical necessity form prior to transporting the patient. Medical necessity forms must be scanned and attached to all electronic patient care reports.

If a medical necessity form is not obtained for a non-emergency transport, the transporting crew should try and return to the sending facility to obtain the form within the current shift. It is the transporting crew's responsibility to have the form completed if it is thought to be needed. If you are in doubt if the form is required, have it filled out. This will save time in the long run. Be sure to do your own assessment of the patient; do not just write what is on the PCS you obtained.

For Medicaid Primary patients, if medical necessity is established a **Prior Authorization Number (PAN) is required prior** to ambulance transport. The sending facility is required to submit the required information for obtaining this number. This number is requested prior to ambulance transport **ALTHOUGH** the number is not always received immediately, then EMS is required to obtain a copy of the request. The ambulance transport can begin at that point. The paperwork is then attached to the report.

STANDBY EVENTS

WCEMS provides medical standbys for a variety of events. All standbys should have a run report completed with a CAD report attached for verification of the time at the event. These standbys include Fire standbys, Washington County Fair, Bluebonnet Festival, Blue Bell Fun Run, Scarecrow Festival, etc... If a patient is seen at an event, then a separate report should be done on the patient whether it is a no patient transport or the patient is transported.

CONCLUSION

Proper documentation is just as important as the procedures done. If you cannot tell someone what you did, it is as if it never happened. That is one thing that hasn't changed. We have seen that there are many reasons to provide documentation, what has to be entered in order to properly document each patient contact and cover several special situations. As the care provider it is ultimately your responsibility to provide proper documentation.

Washington County EMS	Back Up Units and Third Person
Standard Operating Procedures	SOP 4

There will be occasions when the on-scene crew shall have to determine if a back-up crew is needed for the welfare of the patient(s).

THE FOLLOWING MUST BE CONSIDERED:

- Are other crews available?
- Condition of the patient?
- Time for second unit to arrive verses the needs and conditions of the patient?
- Available help at the scene? (First responders may help and assist crews in the back of the unit if the condition of the patient out ways the risk, and the primary attendant also decides on life and death situations only, and if no other crews or personnel are available.)
- If other than Washington County EMS personnel are on board, advise communications and document on your run form the name, address, and certification of first responders helping at the scene or in back of the unit.
- Backup support for critical patients will be available through EMS Lieutenant(s) and EMS Command Staff. When these resources are not available a second EMS Unit should be requested or at times a third attendant taken directly from the station.

Washington County EMS	Camera Phones
Standard Operating Procedures	SOP 5

Recent technology has brought about the use of camera phones in the workplace. Utilizing camera phones in Patient Care areas can violate Patient confidentiality. The following policy is put in place to help the employees of Washington County EMS understand the parameters to which it is acceptable/not acceptable to utilize camera phones.

Training

There will be instances where a situation may arise which could help train the employees of Washington County EMS using real world scenarios. **In no way should Patient care suffer to acquire photos for training.** Should you come across a scenario which could be utilized for training purposes the employee should:

1. When possible obtain authorization from the Patient
2. Never obtain photographs including minors without parental consent
3. Minimize scene time
4. Make every attempt not to show the Patient's face

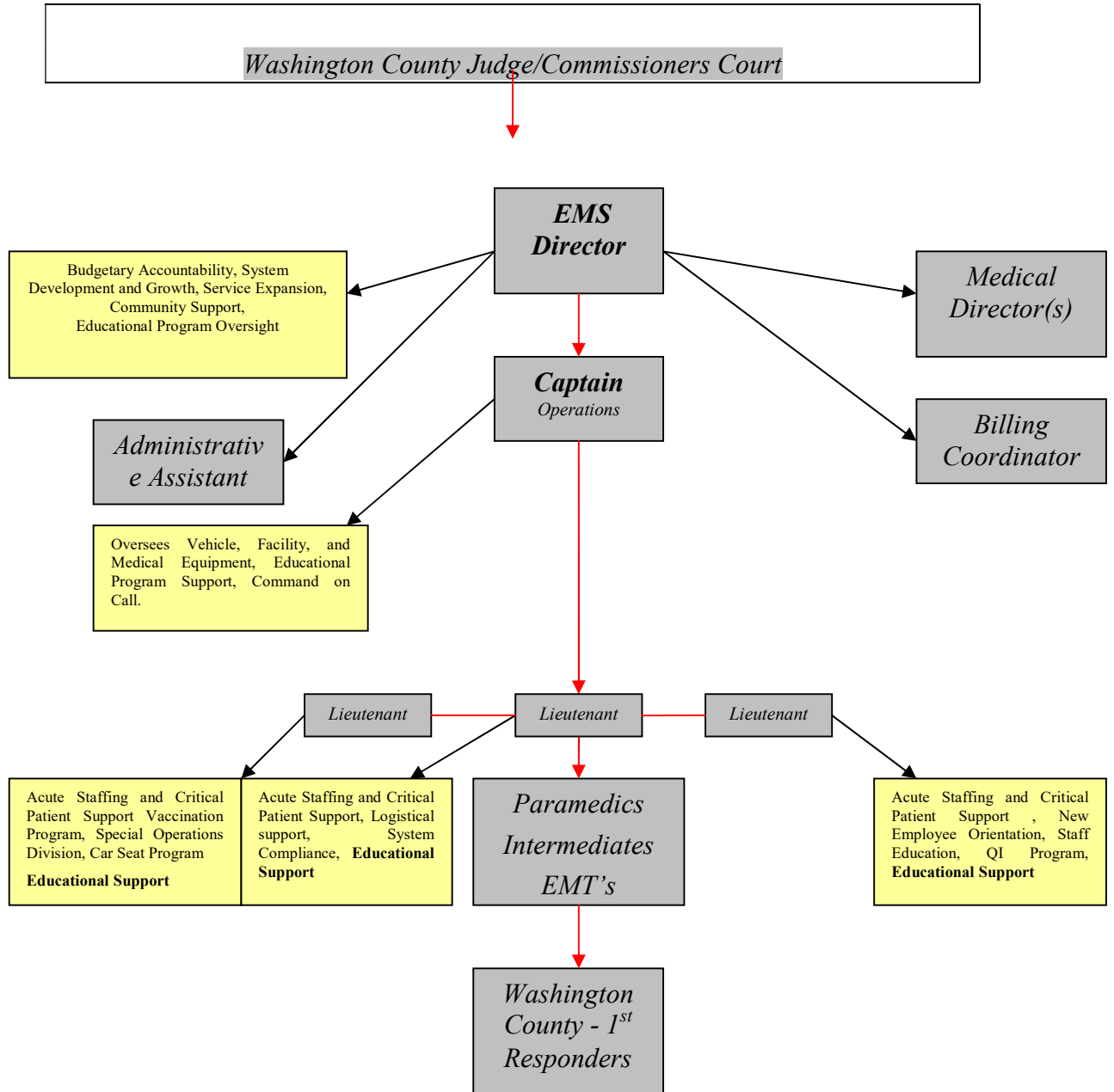
Patient Care

At times (i.e. vehicle accident) the EMS crew may feel it necessary to photograph scenarios to help with Patient Care. These photos should only be utilized to provide Mechanism of Injury to the receiving facility. **In no way should Patient care suffer to acquire photos to provide to the receiving facility.** Should you come across a scenario which could be utilized for better Patient care the employee should:

1. When possible obtain authorization from the Patient
2. Never obtain photographs including minors without parental consent
3. Minimize scene time
4. Keep EMS crew, Patients and bystanders safe from hazards (i.e. high flow traffic during a vehicle accident)
5. Do not interfere with law enforcements investigations, etc. to obtain pictures of any accident, crime, trauma or medical scene.
6. Make every attempt not to show the Patient's face

Note: Refer to "sexual harassment" section of the Supplement to the County Manual (Policy Number SCM-05) for details on procedure(s) to follow should you experience sexual harassment by use of a camera phone.

Washington County EMS	Chain of Command
Standard Operating Procedures	SOP 6



Washington County EMS	Confidentiality / Release of Pt. Information
Standard Operating Procedures	SOP 7

Employees of this EMS service shall not publicize or release any confidential information obtained by this service. Requests for such information shall be referred to the records office, in particular the HIPAA Compliance Officer. EMS personnel should refrain from speculating on a patient's diagnosis and/or prognosis. Whatever speculations, the crew should not discuss around the patient, family, bystanders, and/or media.

The following is considered confidential information and should be handled with all due caution, being careful not to disclose information:

- Information concerning the patient, including assessment of injuries and treatment given. The patient's name is considered confidential if DOS and/or minor.
- Information of prejudicial nature to law enforcement investigators.
- Information not based on fact.
- Information which might be an invasion of privacy, such as suicide, overdose, psychiatric case, etc. In case of death, the medical staff of a higher level of care will have to give the exact cause.
- A diagnosis of HIV/AIDS has CIVIL and CRIMINAL penalties for disclosure.

According to the Texas Senate Bill 975, Section 1, the DIRECTORY INFORMATION may be released to the media. (See underlined documentation below listing information that may be released at the media)

Any requests for more detailed information should be referred to a supervisor. Please be aware of the entire Senate Bill 975, as it also pertains to all Health Care Providers.

NOTE: The patient's right to confidentiality may be violated in situations where information to the receiving facility is given over radio frequencies monitored by others. Generally, specific information (such as the patient's name) should not be put on the air. Only air what is pertinent to assessing data vital for immediate patient care.

<p>Texas Senate Bill 975 relating to the Disclosure of Health Care Information by Certain Health Care Providers.</p>

According to SECTION 1 to the Section 241.151, Health and Safety Code, is Amended to read as follows:

Definitions: In this Subchapter:

(5) (1) “Directory Information” means information disclosing the presence of a person who is receiving inpatient, outpatient, or emergency services from a licensed hospital, the nature of the person’s injury, the person’s municipality of the residence, sex, and age, and the general health status of the person as described in terms of “critical”, “poor”, “fair”, “good”, “excellent”, or similar terms.

(5) (4) “Legally Authorized Representative” means a parent or legal guardian if the patient is a minor, a legal guardian if the patient is a minor, a legal guardian if the patient has been adjudicated incapitated [incompetent] to manage the patient’s personal affairs, an agent of the patient’s authorized under a durable power of attorney for health care, an attorney ad litem appointed for the patient, a guardian ad litem appointed for the patient, a personal representative or statutory beneficiary if the patient is deceased, [or] an attorney retained by the patient or by the patient’s legally authorized representative, or an attorney-in-fact of the patient.

SECTION 2 Subsections (a) and (c), Section 241.153, Health and Safety Code, are amended to read as follows:

(A) Except as authorized by Section 241.153, a hospital or an agent or employee of a hospital may not disclose health care information about a patient to any person other than the patient or the patient’s legally authorized representative without the written authorization of the patient or the patient’s legally authorized representative.

(B) A disclosure authorized is valid until the 180th day after the date it is revoked.

SECTION 3 Section 241.153, Health and Safety Code, is amended to read as follows:

Section 241.153 DISCLOSURE WITHOUT WRITTEN AUTHORIZATION.

(1) Directory information, unless the patient has instructed the hospital not to make the disclosure or the directory information is otherwise protected by state and federal law;

(2) To a health care provider who is rendering health care to the patient when the request for the disclosure is made;

(3) To a transporting emergency medical services provider for the sole purpose of determining the patient’s diagnosis and the outcome of the patient’s hospital admission;

(4) To a member of the clergy specifically designated by the patient;

(5) To a qualified organ or tissue procurement organization as defined in Section 692.002 for the purpose of making inquiries relating to donations according to the protocol referred to in Section 692.013 (d);

(6) To a prospective health care provider for the purpose of securing the services of that health care provider as part of the patient’s continuum of care, as determined by the patient’s attending physician;

(7) To a person authorized to consent to medical treatment under Chapter 313 or to a person in a circumstance exempted from Chapter 313 to facilitate the adequate provision of treatment;

(8) To an employer or agent of the hospital who requires health care information for health care education, quality assurance, or peer review or for assisting the hospital in

- delivery of health care or in complying with statutory, licensing, accreditation, or certification requirements and if the hospital takes appropriate action to ensure that the employee of agent will not use or disclose the health care information for any other purpose and will take appropriate steps to protect the health care information;
- (9) To a federal, state, or local government agency or authority to the extent authorized or required by law;
 - (10) To a Hospital that is the successor in interest to the hospital maintaining the health care information;
 - (11) To the American Red Cross for the specific purpose of fulfilling the duties specified under its charter granted as an instrumentality of the United States government;
 - (12) To a regional poison control center, the extent necessary to enable the center to provide information and education to health professionals involved in the management of poison and overdose victims, including regarding appropriate therapeutic use of medications, their compatibility and stability, and adverse drug reactions and interactions;
 - (13) To a health care utilization review agent who requires the health care information for utilization review for health care;
 - (14) For use in a research project authorized by an institution review board under federal law;
 - (15) To health care personnel of a panel or other custodial institution in which the patient is detained if the disclosure is for the sole purpose of providing healthcare to the patient;
 - (16) To facilitate reimbursement [by a health benefit plan] to a hospital, other health care provider, or the patient for medical services or supplies;
 - (17) To a HMO (Health Maintenance Organization) for purposes of maintaining a statistical reporting system as required by a rule adopted by a state agency or regulations adopted under the Federal Health Maintenance Organization Act of 1973, as amended;
 - (18) To satisfy a request for medical records of deceased or incompetent person pursuant to Section 4.01 Medical Liability and Insurance Improvement Act of Texas; or
 - (19) To comply with a court order except as provided by Subdivision (20); or
 - (20) Related to a judicial proceeding in which the patient is a party and the disclosure is requested under a subpoena issued under the Texas Rules of Civil Procedure of Code of Criminal Procedure or Chapter 121, Civil Practice and Remedies Code;
 - (21) To a Court pursuant to a court order to court subpoena.

SECTION 4. Section 241.154, Health and Safety Code, is amended to read as follows:

Section 241.154 REQUEST. (1) On receipt of a written authorization from a patient or legally authorized representative to examine or copy all or part of the patient's recorded health care information, or for disclosures under Section 241.153 not requiring written authorization, a hospital or its agent as promptly required under the circumstances but not later than the 15th day after the date the request and payment authorized under Subsection are/is received, shall:

- (A) Make the information available for examination during regular business hours and provide a copy to the requestor if requested;
- (B) Inform the authorized requestor if the information does not exist or cannot be found.

Washington County EMS	Complaints with Hospital Personnel
Standard Operating Procedures	SOP 8

Any complaint from EMS personnel concerning patient care delivered by the nursing or medical staff of any hospital emergency department, or any other incident involving hospital staff, will be handled in a tactful, professional manner away from patient and/or family. Procedure will be as follows:

1. All complaints or incident reports concerning hospital personnel will be turned in to your supervisor. The complaint will be investigated and this information will be forwarded to the EMS Director.
2. All complaints will be in writing. Incidents will be followed with a written or verbal report, depending on the seriousness of the complaint. Any incident concerning patient care should be reported immediately. If an employee has difficulty determining the seriousness of an incident he/she should report it to a supervisor immediately for assistance.
3. Complaints that do not warrant a written report should be brought to your supervisor's attention verbally.

Under no circumstance will EMS personnel argue or raise their voice to the hospital personnel. Politely state your view regarding the situation and then leave management to handle the rest.

Washington County EMS	Consent to Treatment and Transport
Standard Operating Procedures	SOP 9

EMS personnel must obtain informed, legal consent to treatment and/or transportation. All adult patients who are in possession of their faculties (conscious and alert to person, place, and date) have the legal right to refuse treatment or transportation, even if that refusal will result in serious harm or death.

It shall be our policy to encourage all persons needing medical help or transportation to make use of the services offered. However, if they chose to refuse service after having been informed of possible consequences of their refusal, they should be allowed to do so.

Through documentation of the patient's refusal and the crew's efforts to persuade them to seek help is necessary. Any time patient contact is made, the refusal of service portion of the run form must be signed by the patient and witnessed. If the patient refuses to sign the refusal, make the offer again and have a family member, law enforcement officer, or other crew member witness the fact that the patient refused to sign. A narrative will be written on each NPT indicating that treatment and transport was offered, the patient was informed of possible consequences and to seek medical attention should any signs and/or symptoms occur.

Adult patients who are in possession of their mental faculties (conscious and alert to person, place, and date) must give EMS personnel permission for treatment and transport (verbal consent is sufficient). Adult patients who are unconscious may be treated under the implied consent laws. Minors (persons under the age of 18 who are not and have not been married) are unable to give consent or refuse treatment and therefore present special legal problems. Every effort will be made to obtain legal consent for the treatment of minors. Under circumstances of serious medical conditions that are life-threatening, or have the potential for permanent disability, the rules of implied consent apply.

In situations to which EMS is called that involve a minor with no life-threatening injuries, every reasonable effort to contact the minor's parent(s) or legal guardian should be made.

If consent cannot be obtained because of lack of contact, the Texas Family Code, Sections 35.01 and 35.02, provides limited consent powers to certain others in particular circumstances; certain relatives of the child can give consent. They are:

- A grandparent
- An adult brother or sister
- An adult aunt or uncle

Additionally, the parent or guardian may leave written consent to treatment with an educational institution or daycare center in which the minor is enrolled. The parent or guardian may also leave written consent to treatment with an individual.

The minor may consent to their own treatment under the following circumstances:

1. The minor is on active duty with the Armed Services of the United States of America.
2. Is 16 years of age or older and resides separate and apart from their parents or guardians (regardless of the duration of such residence) and is managing their own financial affairs, regardless of source of income.
3. Is unmarried and pregnant and consents to hospital, medical, or surgical treatment related to the pregnancy.
4. The consent to examination and treatment is for drug addiction, dependency, or any other medical condition directly related to drug use.
5. Consent is to the diagnosis and treatment of an infectious, contagious, or communicable disease, which is required by law or regulation to be reported by the licensed physician to a local health officer.

Family Consent Form:

- For situations that present when the legal guardian is on scene and there are more than one child.

Washington County EMS	Crew Quarters Care and Up-Keep
Standard Operating Procedures	SOP 10

All EMS Personnel are to wake up no later than 0545 unless pre-approved by their LT.

Daily Chores: Most of the chores have for years been on the weekly chore list and Most of the time are overlooked. Most really need to be done on the daily instead of weekly or monthly. Chores should be done first thing after truck check as you are cleaning the station for **YOUR** shift. This should eliminate a lot of the talk of accepting a dirty station.

- Trucks should be swept and mopped after truck check. Quick cleanup and inspection of the back and front of unit before your day starts.
- Sweep and mop floors throughout the station daily.
- Clean Kitchen daily along with frig as crew sees necessary (Appliances need to be periodically wiped down along with Cabinets being cleaned out and re organized.
- Clean bathrooms daily. (counters and toilets, shower as needed)
- Trash emptied throughout the station daily along with new bag replaced. Periodically trash cans need to be washed out.
- Dorm rooms and day room should be inspected daily and cleaned as needed.
- Admin Side should be inspected daily as well. Floors should be kept clean and mopped as needed. Bathrooms need daily inspection as these are used for the public.
- Bays should be inspected daily and cleaned as needed. Using the blower for maintenance and actually washing the floor when needed

Monday: Medic 1 should be detailed from top to bottom both stations clean side rooms that are overlooked in the daily list. Storerooms, Immunization room, O2 room, Utility rooms, upstairs room.

Tuesday: Medic 2 should be detailed from top to bottom. Wash Windows at both stations first and third Tuesday of the month. Second and fourth Tuesday clean the inside windows. Also clean any trash that has blown from the streets/Hwy and into the EMS yard. Make sure both station Porches are cleaned and washed or blown off as well.

Wednesday: Medic 3 should be detailed from Top to Bottom. Station 2 should inspect the Tower and clean what needs cleaning and check for wasp.

Thursday: Medic 4 should be detailed from Top to Bottom.. Station 2 should inspect the barn and clean as needed. Boats should be inspected for cleanliness as well as fuel and air pressures. ATV 1 should be inspected for cleanliness, supplies, and fuel.

Friday: Medic 5 should be detailed from Top to Bottom. Mattresses should be deconned and flipped PRN.

Saturday: Medic 6 should be detailed from Top to Bottom. Pour water with a cleaner in it down floor drains throughout station. (Admin side, crew bathrooms)

Sunday: Daily chores only.

Any Day that A truck is scheduled for a Decon and is either in the shop or parked in the barn (And not previously deconned prior to being placed out of service) is a good time to catch up on Squad 1, EMS 1, EMS 2 and EMS 3 vehicles.

Any Satellite Stations must follow daily choir list as well. Decon Squad vehicles as needed and washed PRN.

Cleaning Supplies:

Dish soap should be used for dishes and not on trucks. This strips the wax layer off that has been applied periodically throughout the year.

Cavacide should be used for deconing only and not used throughout the station as a daily cleaner. It is expensive and shouldn't be used in mops or wastefully.

Vinegar is a great cleaning tool. We will start to use the vinegar for moping the station. Only small amounts are needed. This helps to keep from putting a dull film on floors and strip any waxes that may have been applied throughout the year.

Glass cleaner can be used throughout the station windows and can also be used to clean outside windows. Mix 5 gallon bucket and use scrub brushes. Use squeegee to clear water off after washing.

Truck soap only needs small amounts to wash units daily. Truck brushes should be washed out after every use to avoid quick deterioration.

Separate mop bucket will be provided for deconing trucks. Remove mop from water after use as this quickly deteriorates the mop head and handle. Bleach will be provided to put in water.

Station Mop and bucket should be used for station only and not used on trucks.

Washington County EMS	Crime Scene
Standard Operating Procedures	SOP 11

The first priority of EMS personnel is treatment of the patient. It is emphasized that while care is to be taken in minimizing patient and/or object movement, this is a secondary consideration and is not to hinder resuscitative efforts in a life and death situation.

Injured Patient:

If resuscitative measures are begun, the following guidelines apply:

1. Utilize the same route in and out of the crime scene, disturbing as little of the surroundings as possible.
2. Note the position of the body and other pertinent objects: i.e. weapons, medications, furniture, etc. Avoid cutting clothing through or tearing apparent bullet or knife holes in clothing. Clothing should be cut along seams or in areas which would not compromise entrance and/or exit wound markings on clothing.
3. Place any clothing or materials in the patient's possession in paper bags and do not discard but give to the investigator, if time permits.
4. Give the law enforcement officer on the scene a detailed, accurate description of body position, location of weapons, and objects touched or left by EMS.
5. If the scene or patient is disturbed in any fashion in order to perform patient care, document the "pre-disturbed" state of the things on the reporting form, if at all possible, and report it to the investigator. If needed write an extended report.

Dead on Scene:

If the patient is obviously dead and the death appears to be due to other than natural causes the following procedures are to be used:

1. Do not touch the body, except to apply electrodes.
2. Immediately request the appropriate law enforcement agency, if not already on the scene.
3. Do not touch or move any weapons, medication containers, suicide notes, or any other items that may be pertinent to the investigation.
4. Avoid touching doors, windows, light switches, etc.
5. Use of telephone should be only with clearance of senior law enforcement officer.

Crime Scene Preservation Considerations:

1. Approach no crime scene until it has been secured for your safety.
2. Park your vehicle as far as away as conveniently possible to preserve skid marks, tire prints, or other evidence.
3. Survey and assess the scene before proceeding to the victim.
4. Try to approach the victim from a route different from the assailant's probable route.
5. Follow the same path to and from the victim.
6. Avoid stepping on blood stains or spatter if possible.
7. Disturb the victim and the victim's clothing as little as possible while performing your assessment and during treatment.
8. Keep all unnecessary people away from the victim.
9. Do not smoke or eat at the crime scene.
10. Do not touch any evidence if at all possible.
11. Make no comments to bystanders about the situation.
12. Be aware of any dying declarations made by your patient.
13. Keep accurate, detailed records.
14. Law enforcement personnel are in charge of the crime scene. You are in charge of the patient.

Other Types of Crime Scenes:

A gang is any group of people who engage in socially disruptive or criminal behavior. Some gangs are involved in violent criminal activities. Because EMS personnel often look like law enforcement officers, they should be extremely cautious about personal safety when working in gang areas. Clandestine lab activities can produce explosive and toxic gases. Other risks include booby traps that can maim or kill an intruder, and armed or violent occupants. EMS personnel who respond to a scene of domestic violence should be aware that acts of violence may be directed toward them by the perpetrator; they should take all safety precautions.

- Tactics for safety include avoidance, tactical retreat, cover and concealment, and distraction and evasive maneuvers.
- Tactical patient care refers to patient-care activities that occur inside the scene perimeter or "hot zone". Providing care in this area may require special training and authorization, body armor.

Washington County EMS	Dead on Scene
Standard Operating Procedures	SOP 12

In the case of a clinically dead patient (absence of pulse and respiration), it is the responsibility of the on-scene EMS crew to determine whether or not resuscitative efforts should be started. That determination should be based on the extent of the injury and the length of down time. If there is any doubt, resuscitate and transport the patient. In NO case should treatment be delayed to reach a decision.

EMS personnel will use sound judgment in providing for their personal safety, preserving the scene as needed, and providing aid to survivors. Careless statements and/or actions, which may be misinterpreted, should not be made.

Absence of vital signs does not “automatically” authorize EMS personnel to assume that the patient is dead. Only a licensed physician may legally pronounce death. However, in certain circumstances, death is obvious. Therefore, a patient may be considered DOS if any of the following is present:

- Decapitation
- Decomposition
- Hemi section
- Rigor mortis
- Lividity
- Documented prolonged (>20 minutes) down time (except in cold temperature deaths).
- Extenuating circumstances
- If there is any question of whether or not to initiate resuscitation efforts, contact Medical Control

In the above circumstances, the following procedures will be followed:

1. Document the absence of vital signs (pulse, respiration, and blood pressure)
2. EKG strip in two leads
3. Contact communications and request appropriate law enforcement. EMS is to remain on scene until appropriate law enforcement agency arrives. This will not be necessary at a nursing home, if the crew receives an emergency call.
4. The body should not be disturbed or removed without authorization by law enforcement.
5. All requests for funeral homes to remove the body will be handled through communications. If a family member or responsible party is present and requests a specific funeral home, communications should be so notified and told by what relative the request was made.
6. Removal of the deceased generally will be the responsibility of the funeral home contacted. EMS vehicles are NOT to be used to transport the known dead from the scene unless it is determined that removal of the body will alleviate a dangerous, hostile crowd situation. If a need arises for moving the body for any other reason, the Director or a supervisor shall be contacted.

EMS units and personnel should clear from the scene as soon as possible and return to service, but attempt to gather information for your run report and relay it to the Justice of the Peace and law enforcement officials prior to leaving if possible.

NOTE: In Texas, only physicians can “pronounce” death. Justice of the Peace may request into cause of death and sign the death certificate.

1. If a physician is on scene and says you may stop resuscitative efforts and he/she is willing to sign the death certificate, the following procedures are to be performed, with his/her permission.
Remove IV, but circle the site of the puncture wound with a ballpoint pen for the purpose of identification by the autopsy pathologist. Cover the wound with a Band-Aid if necessary to prevent leakage of blood from site.
2. EKG electrodes should be left in place.
3. Advanced airway devices may be removed with the physician’s permission.
4. Document in writing the physician’s order and the have the physician sign it, after advising him it is part of your paper work. Print the physician’s name and mailing address under his/her signature.

For additional information reference DEAD-ON-SCENE/DNR protocol.

Washington County EMS	Dispatching and Communication Issues
Standard Operating Procedures	SOP 13

Introduction: This policy shall serve as the complete dispatching / communications policy for Washington County EMS. With the staffing enhancements and creation of the ACP Program in 2011 and the SRT (special response technician) in 2016, these policies were updated to reflect current guidelines. While this policy has few changes to the previous interim documents, we hope this simplifies the process for both departments and serves as an easier reference when needed. Currently the department is able to staff 5 ambulances 24/7 using the rural district squad, SRT and on duty shift Lts. The on shift Lt. and the ACP (Advanced Community Paramedicine) Provider will both be able to provide high acuity support, manpower assistance, or cover the 4th out ambulance when necessary. The 4th unit will be dispatched only when both south district units and the north district unit are on a call and is ultimately the responsibility of the shift lieutenant to ensure response readiness from the personnel on duty. (See attached CBD Flow Chart)

General Benchmarking/Expectations

Call Received to Dispatch – 30 seconds for all sentinel events (high acuity calls)

Call Received to Dispatch – 60 seconds for non-sentinel events (lower acuity calls)

Dispatched to ‘Hands on Chest’ – 60 seconds

Critical Calls – Dispatch will notify crews of on 10 minute intervals of scene time

Policy: c-01 Posting Call

Every morning no later than 0630 a.m. the EMS Lieutenant will be expected to post call with Washington County 911. This “posting” is communicated via radio and initiated by communications at approximately 0630 each morning. Posting call will include the following information:

- Personnel (10)
 - North District Medic Unit
 - South District Primary and Secondary Medic Unit
- On duty Lieutenant – Squad 1 is EMS#__
- On duty rural district ACP’s-Squad 3 & Squad 4
- On duty SRT – EMS #__
- Monday – Friday a Command Staff Supervisor will also be on duty for any major incidents. This will be EMS1 or EMS2. After hours, on weekends, holidays, etc...a Command Staff employee will also be on call for any emergent notifications. If dispatch does not have a record of who is on call the EMS Lieutenant on duty will advise whom to notify in these situations.

If for any reason the staffing that has originally been posted to communications changes then they will be notified of the changes. (Example: If the Lieutenant gets sick and is relieved by another employee or if the primary unit changes due to maintenance etc...) This is to ensure dispatchers has the appropriate contact listings for personnel on duty.

Policy: c-02 Expectancies of Dispatch

Pre-Alert: Upon receiving information of an emergency call, either by 911 or non-emergency phones, dispatch will send a pre-alert to the EMS station prior to toning out the call when possible. This will only be done when time permits. Its importance is greater during evening hours to allow EMS crews time to ready themselves and their unit for the call.

Toning EMS: When toning EMS, dispatch will tone the assigned Medic unit given in the Morning Post called in by EMS. It is the responsibility of the EMS Personnel to ensure the closest appropriate unit goes enroute if a medic unit is closer than the original unit dispatched. If the assigned Medic unit goes out of service for any reason, EMS will call and appropriately notify dispatch of the changes.

Squad 1 will automatically be toned during any of the following scenarios:

- Priority C (Charlie) calls or higher
- All Vehicle Accidents and or Rescues of any type
 - To provide support or even gather NPT's (No Patient Transports)
- All pediatric emergencies (less than 13 years old)

SRT and SQ1 will be toned to all vehicle rescues and or all potential rescues. This includes technical rescue, water rescue, etc... The SRT Paramedics is responsible for swift water rescue operations within the county and should be the first toned personnel to any flood or swift water event. The on duty SRT will determine if additional support will be necessary from local fire department personnel. The SRT Paramedics have performed hundreds of water rescues within the county and within the state of Texas and will determine the needs of the scenario.

Toning Washington County First Responders: Dispatch will only tone first responders to calls with an **acuity level of Charlie (C) or higher** that are located outside the city limits of Brenham or outside of the pre-designated areas set by WCEMS. WC-First Responders will not be toned to un-secure scenes. The purpose of a first responder organization is to arrive "first" or prior to the advanced EMS unit and be able to provide life-saving procedures. During un-secure scenes all medical / rescue personnel are required to stage until cleared by law enforcement so there is no need for toning WCFRO. This includes any standby alarms (such as Fire Standby's) WCFRO will not be toned to Fire Standby's or any standby events unless requested to do so by the responding EMS unit. The only time first responders will be toned to inside the city limits of Brenham is if ALL medic units and "EMS Command Staff" are unavailable or at the request of Washington County EMS.

Information given during tones: Dispatch will give the following information during the tones to EMS:

- Dispatch will tone appropriate Medic unit (1-6).
 - *Dispatch will tone call as the following: "District 1, M2 have a medical at xxxx" or "District 1, M2, & Squad 1....."*

- If during the initial tone out the determinant, code is unknown then dispatch can simply say Medical or Trauma until the determinant is interpreted by the software.

Mobile Data Explained:

Due to recent enhancements and utilization of MDT's, Communications will only repeat the information twice. This is due to the information being readily available on the MDT. The Counties EMS Department had three primary goals when venturing out into the MDT world. Utilizing closest unit recommendations by AVL technology, having all of the call information at our paramedics' fingertips, as well as having mobile mapping and turn by turn instructions were all part of our goals. The goals all surrounded public safety and decreasing response times as well as "radio chatter". While radio communication is of vital importance during certain times of any incident, there is a lot of "chatter" that takes up time as well as resources simply to communicate one word. Medic units will no longer call communications on the radio and wait for a response from communications. Communications should be sent blind over the radio. For example previously for a medic unit to go enroute to a call the unit must first call communications "Medic 4 to Brenham"....then wait on an acknowledgement "Brenham to Medic 4 go ahead"....the Medic unit will then state their information "M4 is responding to 400 E. Sayles"....communications must then acknowledge... "Received M4". **The new process would be simply "M4 is responding to 400 E. Sayles" communications would then answer "received"**

Non-Emergency or Walk-Ins:

When EMS is making non-emergency or even some emergency transfers that the information is taken over a non-emergency phone at the station the responding crew may opt to utilize the MDT to "drop their own call". When dropping their own call they must enter a "verifiable/valid address" into the "rapid call screen". For any emergency calls that come in by non-emergency phones at our office should be performed via radio traffic in order to assure proper validation of address can be performed by communications. Should the responding unit make an error in the address field the dispatchers have the ability to correct this and will make the correction as required. Communications will confirm the "MDT Response" via the radio as always "Clear M2 show you enroute to SW Brenham for an emergency transfer to SJRHC".

Call Received / Enroute:

The crew will immediately notify communications that they have "received" the call information. Once the unit actually goes enroute the crew will utilize the radio to go enroute. While more accurate times can be logged using the MDT due to inconsistencies in "echoing" this communication it provides inconsistent situational awareness for the department. Communications will echo any information received by MDT via radio. (example: "clear showing M4 responding") Once the medic unit receives EMS tones or goes enroute dispatch will give any additional call/patient information, hazards, or instructions, when available by utilizing the MDT. However, hazards that are of vital importance may need to be relayed by radio to assure the message is received.

Arrival @ Initial Location:

Upon arriving to the scene of the call the medic unit will blindly broadcast “M4 on scene 400 E. Sayles” If dispatch does not broadcast “received” immediately then the medic unit will repair the traffic.

Patient Contact-Status / Scene Size-up:

The Medic Unit (crew) will then perform “patient contact” and or status or scene size up via radio. The radio is utilized in this circumstance simply out of logistics and for proper resource management. The paramedics are actually at the side of the patient during this necessary communication and not in front of the MDT so a radio report is required.

Enroute to Secondary Location:

After patient treatment modalities are employed the medic unit will then go enroute to the closest appropriate receiving facility. This will routinely be done by radio due to the detailed information being given. However, during high radio times it is possible for the crew to utilize the MDT for this as well. If for some reason this is performed via MDT it will be confirmed by communications via radio.

Arrival @ Secondary Location:

This will routinely be done by utilizing the Radio but either method is acceptable. Using the MDT does eliminate some radio traffic. Communications will acknowledge the traffic via radio.

Returning to Back in Service:

This will be done by using the MDT but again acknowledged by communications via the radio, so that other EMS resources are aware of the crew’s status.

Policy: c-03 Acknowledging Tones

Acknowledging Tones: In order to follow compliance guidelines concerning response time enforced by the Texas Department of State Health Services and local policies the 1st Responders will not utilize radio traffic until the WCEMS unit acknowledges/responds to the tone. When WCEMS crews are in service they will acknowledge that they received the tone within 30 seconds. The only exception is when all units are unavailable for calls and the tone is for additional WCEMS units. There is no exception to this policy.

Policy: c-04 Level Alerts

In attempts to simplify communications we will be utilizing level alerts for notifying EMS employees of the ‘system status’. There will be a total of four level alerts. Please refer to the below for further instructions.

“**LEVEL-1**” will be paged to all EMS personnel via cell phone text message when the system has all available units on calls at the same time and there is a call pending. When **LEVEL 1** is received, EMS personnel will immediately start responding to the station to staff a **MEDIC** unit. Basically a **LEVEL 1** means there is “**PENDING CALLS**” and all EMS staff should respond to staff an ambulance, respond to a scene, or whatever is necessary.

“**LEVEL-2**” will be paged to all EMS personnel when the system has all staffed ambulances on calls at the same time. A **LEVEL 2** alerts the off duty EMS staff that a **LEVEL 1** could be initiated at any time. EMS staff will attempt to remind dispatch to send the level alerts also. Remember a **LEVEL 2** is only sent if **ALL AVAILABLE** Medic Units are on calls and there is “**NO PENDING CALLS**”.

“**LEVEL-3**” will be sent (usually by in house EMS staff) when only one unit is left in the county due to others being transporting patients out of our services area. This alerts the off duty crews that there is only one crew available in the county for calls. On call command staff will ready themselves incase needed.

“**LEVEL-4**” will be paged when the crisis is over and at least one unit is back in service. This basically cancels off duty responding employees. It is assumed that the system is on this level until **LEVEL 1, 2, or 3** is initiated.

Policy: c-05 Pending Calls

When pending calls are received during normal working hours, **dispatch should tone “EMS Command” to the call, depending on who is on duty (Director or Captain(s))**. If there is no command staff on duty then dispatch should **tone both WCEMS and 1st Responders** to the pending call. **Dispatch will also perform a LEVEL 1 page at this time, notifying off duty employees of pending calls as well as the on-call command staff**. No EMS unit will be assigned to the call until an EMS unit goes enroute to the call. The on **duty Lieutenant/Supervisor will be notified of the pending call(s) and will give direction to dispatch on when to request mutual aid and who to call for mutual aid**.

Policy: c-06 Notifying EMS Chain of Command

From time to time during major incidents, busy times (Level 1’s), or just unusual scenarios EMS crews will ask dispatch to notify appropriate Chain of Command. At this time the appropriate Chain of Command should be notified of the situation. At this time the on call command staff will contact dispatch or the EMS crews directly by cell phone or radio. EMS has an in house policy guiding them of when they should notify their chain of command.

All we request is that dispatch assures the chain of command is notified. If for any reason Command Staff can-not be notified then the requesting EMS crew should be made aware that dispatch is unable to contact.

Policy: c-07 Notifying EMS Special Operations Team

Washington County EMS maintains and operates the County Water Rescue Program. The County Water Rescue Boat will be dispatched during **any** water incident where the resource may enhance the operations on the scene. The initial request may come from 911 calls, Law Enforcement, FDs, mutual aid request, etc... Please refer to the attached flow chart. During other unusual scenarios the initial responding crew or other public safety departments may request the EMS Special Operations Team to be deployed to a scene or situation. The on duty SRT and On Duty Lieutenant should be notified and he/she will notify the special operations division and on call command staff. Dispatch will have a preprogrammed water team notification list to be used if requested by Command Staff.

The following definitions should help clarify the above terminology

Command Staff: For this policy “command staff” are defined as the Director or Captain(s)

Back in Service: When WCEMS unit completes a call the unit will advise dispatch that they are back in service so that dispatch can place them back available for calls.

Medic Unit: A Medic Unit (Medic 1) is a fully licensed Mobile Intensive Care Unit Ambulance (MICU). This unit must comply with all TDH licensing requirements.

EMS #1, #2, and Squad 1 & 2 Vehicles:

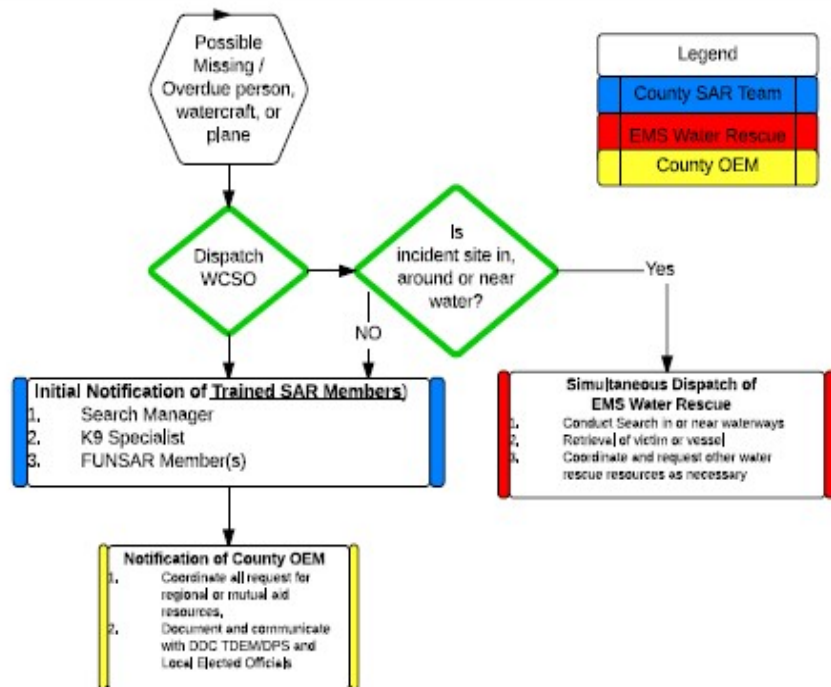
- These vehicles are fully (advanced life support) equipped vehicles that will be utilized by the command staff of WCEMS to provide back up, supervisor, clinical management, as well as level 1 coverage.

Standard SAR Dispatch Guidelines for incidents in Washington County

SAR1

Revised Jan-15

The purpose of this guideline is to assist the dispatch center with appropriateness of dispatching agencies for missing or overdue person(s). Any rescue is not a sole proprietary response by any one single public safety agency and requires a unified and coordinated response. Missing / Overdue person(s) require much of the same response. An uncoordinated response poses a significant and real potential damage a crime scene or destroy pertinent clues that could aid in the search. In addition untrained responders in certain situations can pose a potential and real danger for responders or general public. This policy is an attempt to improve the safety, efficiency and effectiveness of these responses.



Washington County Sheriff's Office <ul style="list-style-type: none"> Ultimate Command and Control of SAR incident, Investigation Responsibilities 	Volunteer Support <ul style="list-style-type: none"> County VFD's Search and logistical Support as requested by Search Manager or WCSO CERT - Search and Logistical support WCFRO - First Responders 	County EMS <ul style="list-style-type: none"> Medical Standby Thermal Imaging FUNSAR Responders Data Loggers 	Office of Emergency Management <ul style="list-style-type: none"> Responsible for regional resource request, Coordination of requested resources,
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Pearls:

- In the State of Texas all lost or missing person incidents are ultimately task to the local law enforcement agency, In Washington County that is the Sheriff's Office,
- The Search Manager is task with ultimately managing the search incident under direction and control of the highest ranking Sheriff's Office Official,
- The County currently has two trained Search Managers, 1 K9 specialist, numerous basic SAR responders and is currently working toward training all if its its deputies with fundamental search and rescue course,
- The County EMS Operates the only rapid response boat (water rescue) program in the county and should be dispatched as soon as possible to allow an efficient response,

Washington County EMS	Driver / Attendant Responsibilities
Standard Operating Procedures	SOP 14

Responding to an emergency:

The driver is responsible:

- for the safe operation of the emergency vehicle

The attendant is responsible for:

- Radio operation
- Siren/emergency lights operation
- Map reading
- Assisting the driver in clearing hazards or intersections

During Patient transport:

The driver shall:

- Drive in a smooth, controlled manner to minimize further patient injury and maximize care provided by the attendant
- Relay information to the attendant regarding impending stops, turns, bumps, etc.
- Run the code (1 or 3) and speed determined by the attendant
- Record mileage for Attendant's paperwork

The attendant shall:

- Administer and document patient care
- Establish and maintain communications with medical control
- Coordinate with the driver to determine the most appropriate transportation code and speed for the patient

After Patient delivery to the appropriate facility:

The driver shall:

- Clean the unit and replace materials to correct compartments
- Check fuel and O2 level
- Put unit back 10-8 as soon as possible

The attendant shall:

- Deliver Patient and Patient Care report to Nurse or Physician
- Complete Run Report form if call volume permits (under no circumstances should completing a Run Report keep a unit from running an emergency call should the unit be cleaned, restocked and ready for service)

Washington County EMS	Eating Out
Standard Operating Procedures	SOP 15

The following policy applies when eating away from the EMS station:

- Any time a crew goes to eat at any food establishment it will be approved by the on-duty station lieutenants/supervisor prior to, so that the lieutenant/supervisor can keep track of the unit status and whereabouts.
- If a crew goes to a food establishment in the unit, they shall take a radio, pagers and a cell phone with them. If you are picking up a food order, one person must stay with the unit (if running). If no units are at the station, then communications should be made aware of their locations.
- The restaurant should be noted for its cuisine as opposed to its alcohol.
- The units should be parked for easy access. The waitress and/or management should be notified in advanced that you are subject to call, may need to leave in a hurry, and will return later for the bill.

Washington County EMS	Education Pay
Standard Operating Procedures	SOP 16

Purpose: The purpose of this policy is to set guidelines for an employee who is eligible for special Training and Education opportunities paid by the Washington County EMS. The following must be met by an employee who wishes to have Washington County pay for any training. If you meet the following criteria then you may write a letter to the EMS Director requesting the particular training. The EMS Director will then evaluate the cost of training with the Lieutenants for final approval. Any additional training or certification/license sponsored financially by this provider will be used to promote patient care in this service. It should be noted that the budget line item for training is limited and covers more than just employee training. It also covers conferences, meetings, etc....

- Employees must have at least 18 months of service with Washington County EMS at a full-time status.
- Employees must have at least 24 months of service if he/she is of part-time status.
- Employees must have course description, dates, and all details of the course at the time of the written request.
- Employees must have no current disciplinary action being conducted or be under investigation.
- An employee that does not meet the above criteria may be given special consideration if the EMS Director feels that the employee needs additional training in a certain area of patient care. The EMS Director would then request that the employee be allowed to attend certain training due to public safety concerns.

TDSHS Initial and Re-certification:

Washington County EMS will cover costs included in registration and continuing education for all full time employees in regards to initial and Re-certification of EMT-Basic through Paramedic to stay in compliance with the Texas Department of State Health Services. PRN employees will be provided costs for registration in regards to initial and Re-certification, and when available, continuing education.

NREMT Initial and Re-certification:

Washington County EMS will cover the costs included in FIRST TIME REGISTRATION with the NREMT for all full time employees and PRN employees. Re-certification and supplemental testing will be the responsibility of the employee. Neither Washington County EMS, nor does the TDSHS, require maintaining the NREMT. Should the employee wish to take a refresher course for continuing education, it is up to the employee to find an accredited course and pay the fee. Washington County EMS will provide the minimum number of required hours for in class learning “refresher course” in compliance with NREMT standards should the employee not wish to take an outside refresher course that is accredited and pay the fee.

It is the responsibility of the employee to allow sufficient time for the Clinical Improvement and Compliance Officer to prepare any needed documents. Continuing Education by Internet will be provided to assist in Re-registration to all full time employees and any PRN employee when available.

PRN Employees:

PRN Staff who have a full time EMS job with another EMS agency will be responsible for education, certification and recertification through their primary EMS agency. Washington County EMS does not assume responsibility for the above.

Alphabet Courses:

(ACLS, PALS, PHTLS, AMLS, HAZMAT, etc.) Alphabet courses are not required for employment with Washington County EMS. Therefore, the employee will not put on his/her time sheet the hours attending the course. The only exception to this would be if the employee is regularly scheduled to work on this same day. The employee will not be expected to lose time, therefore will not have to clock out and back in to attend training. Washington County EMS will cover the cost of the training including registration, instructor fees, books, room, travel etc. according to the above mentioned standards. These courses do qualify for points toward the employee's objective evaluation and should be documented accordingly.

Washington County EMS	Emergency Transfer Policy
Standard Operating Procedures	SOP 17

Introduction: This policy is to serve as a guideline for Washington County EMS crews and supervisors during emergency or critical transfers from Scott and White, Brenham Emergency Room. This policy does not decide protocol or clinical decisions that are already addressed in our existing protocols. The purpose of the policy is to **decrease the transfer time** and allow certain patients to receive the fastest mode of transport to St. Josephs Regional Medical Center or other definitive care facilities.

Guidelines:

This policy will address both trauma and medical patients since the new onset of stroke and cardiac designated hospitals are being phased in. At the present time PHI Med 12 (based out of Bryan) or AirEvac (LaGrange) is the closest airmedical helicopter transfer services to Scott and White, Brenham. Both have an average 25 minute flight time from their respective base to the pad at Scott and White, Brenham and then an additional 20 minutes back to SJRHC. This does not include **any in hospital, dispatching, lift-off, patient loading times or if the aircraft is not coming from the closest base due to call volume**. For this reason when Scott and White, Brenham has an emergency “time sensitive” transfer needing to go to SJRHC or College Station Medical Center they will routinely use WCEMS Units. WCEMS can obviously have the patient to these hospitals faster than waiting on the arrival of a helicopter. When averaging our transfer times to SJRHC (emergency traffic only) we average 40 minutes (39 minutes).

It will be the policy of WCEMS to have a unit at the hospital from the time notified of a transfer within 5-10 minutes. Due to these cases (cath lab, trauma, strokes) being time sensitive WCEMS will also have a “local” on duty supervisor on call 24/7 for these types of calls in the event a third attendant (paramedic) is required due to the patient being intubated or clinical status. We currently have several critical care paramedics or FP-C paramedics and are sending more staff to these professional courses as well. If for any reason WCEMS will have a longer response time than an air-medical provider, the charge nurse at Scott and White Brenham will be notified so the air-medical provider can be summoned.

- WCEMS will if they anticipate the emergency transfer (due to previously transporting the patient) “standby” at the ED for the transfer. To reduce time of calling, dispatching, and responding to TMC.
- WCEMS has placed a supervisor/administrator on call 24/7 in the event that units are busy or a critical transfer requires a third attendant.

Keep in mind that public services such as EMS should not only account for clinically sound practices but fiscally sound practices as well. Helicopter Transfers such as this cost money cost the patient tens of thousands of dollars. While the critical transfer of a patient in an ambulance will be a fraction of the price. In addition to this if the patient is a Washington County resident they will not receive a bill for services by WCEMS.

Washington County EMS	Employment
Standard Operating Procedures	SOP 18

Initial Employment:

During the 6 month probationary period, the new full time employee shall not be employed by another EMS service during this time. At the completion of this 6 month period if the employee gains employment with another EMS system administration will be notified in writing.

Part-time Employees:

A mandatory 24 hours per month will be required. If no shifts are available, the employee will be asked to work as a third-out rider to full-fill the 24 hour requirement. EMS administration has the authority to override this policy if the need should arise.

Washington County EMS	Employee Immunizations
Standard Operating Procedures	SOP 19

Upon hiring a new employee, they will submit a copy of their immunization record and this copy will be filed in the employee's EMS file. When County funds are available the following immunizations will be required:

- **Hepatitis B:** This is a series of three injections given over a six-month period.
- **German measles (Rubella):** This is a one-time injection required if you did not have German measles as a child. This will protect pregnant patients.
- **Tetanus-Diphtheria:** A booster is required every ten years after the initial injection.
- **Mumps:** This is a one-time injection.
- **Polio:** Injection required, so get this one if you were not immunized as a child or are unsure whether you were or not.
- **Flu (Influenza):** This is a yearly inoculation based upon the upcoming "flu season". Although, not complete protection, it will help build up your immunity over time. Theoretically, this will lessen your need to take sick days and will result in less exposure to our patients.

*****If one has not had the Hepatitis B immunization, it must be obtained by the eighth month anniversary of employment and proof thereof submitted to personnel by that time.

*****Additionally, each person shall show proof of a TB skin test within the last six months. All positive reactors must show proof of additional evaluation (chest x-ray, etc.) or treatment.

Washington County EMS	EMS Chaplain
Standard Operating Procedures	SOP 20

Washington County EMS has a chaplain who provides ministerial service to personnel who request it. All EMS business and personnel conversations shall be confidential unless he/she feels you or someone else's life may be in danger. The chaplain is available 24 hours a day, and all personnel should call him whenever necessary. The chaplain shall be called when an EMS employee is seriously injured or killed in the line of duty. The chaplain shall also be called whenever there is a mass casualty. The chaplain will be called to make visits at refugee or local shelters when they are opened.

Washington County EMS	EMS Teddy Bears
Standard Operating Procedures	SOP 21

We have a local organization that provides EMS, law enforcement, fire department, hospital, and child protective services with Teddy Bears for children injured, frightened, or just upset from various trauma. We have the Teddy Bears on each unit and they are to be used whenever needed. If you run short and you need one, you can contact one of the other organizations (i.e. Police Department) for one until we restock the unit with more. Each bear usually has a name tag with the name of the person(s) who donated it.

Washington County EMS	EMS Explorers
Standard Operating Procedures	SOP 22

For an explorer to be able to ride on the units he/she has to be a registered member of the American Boy Scouts of America Explorer Post 2518.

- Those explorers who have completed orientation and maintain a current Basic Life Support CPR card shall be allowed to ride out.
- They shall adhere to all bylaws of the explorer post and the policies of Washington County EMS.
- Should an oriented explorer answer the phone they should identify themselves by saying Washington County EMS and then stating their name. Do not allow them to answer 911 calls.
- No explorer will be allowed to routinely use the mobile and/or hand held radios unless it under an extreme emergency (i.e. placing a crew and/or them in danger).
- They will be able to ride at the discretion of the EMS crews.
- They will assist the ambulance crew with patient care and will be able to perform duties for which they have received training. This shall consist of the basic skill CPR and getting equipment for the crew.
- They shall assist with getting the units available for the next call and performing chores around the station.
- If the explorer does not show up to ride out in their uniform or is a disruptive influence on the shift, they can be sent home at the command of the EMS Captain. An incident report will be completed and submitted to the EMS Director via chain of command.
- The EMS explorer is not to be the sole provider of medical care for the patient at any time.
- The explorer will sign a third-out rider release form the first time he/she rides out.
- Should an explorer be injured during their ride out report to the EMS Director immediately.
- Any complaints made against a Washington County EMS employee by an explorer will be submitted in a completed incident report and forwarded to the EMS Director via chain of command.
- Any complaints made against an explorer will be submitted in a completed incident report and forwarded to the EMS Director via chain of command.
- Minor Explorers will inform their parents when they are riding out and will not be allowed to leave the station without their parent's permission.
- Visitation should be limited to out-side individuals unless they show an interest in joining the Explorer Post. Should frequent visitation interfere with routine EMS business the EMS Captain will request the visitor to leave.
- Telephone use should be limited, allowing the Explorer 5 minutes per conversation, and one to two calls per ride out.
- Washington County EMS computers and/or other equipment should not to be used by the explorers.

Washington County EMS	Equipment Left at Hospitals
Standard Operating Procedures	SOP 23

- Crews shall check on routine calls to see if equipment is available.
- If equipment is left at an Out of County Hospital, the crew shall ask the ED staff to store it for us. You shall tag the equipment if it is not already tagged.
- Notify a supervisor what hospital equipment was left at and what person was going to store it for us and where.
- Post on board (Dry Erase) the equipment, hospital, and date left.

Washington County EMS	Fire Responses
Standard Operating Procedures	SOP 24

The purpose of this policy is to identify the roles and responsibilities of EMS personnel while on the scene of fire stand-by's as well as when they are the first emergency service unit on the scene of a fire situation. Special emphasis is placed on the safety of rescuers, bystanders, and victims in order to minimize or prevent injury.

Stand-by:

Washington County EMS will respond code 3 on general alarms, with known injuries. If there are no known injuries, the crew will respond Code 1 when toned. Upon arrival at a working fire incident, the EMS unit will be placed in an area that is a safe distance from the actual fire (200 to 300 feet, minimum). While driving around the fire scene, avoid driving over fire hoses, if at all possible. Do not drive over hose couplings.

The crew will report to the ranking fire department officer on the scene in order to arrange the following:

- The location of the EMS unit/crew that is mutually beneficial, based on good access in and out of the fire scene, at a safe upwind distance.
- The crew may check with the senior fire officer on scene as to when they are dismissed.

If an injury or illness occurs at the scene of a fire the following procedures will be adhered to:

- Have the patient moved to a safe distance before initiating any treatment. The safety of the rescuers and patients is the primary concern.
- DO NOT take oxygen equipment near the actual fire, especially aluminum oxygen cylinders.
- EMS personnel will NOT enter a burning or smoking structure under any circumstances. This is done only by trained personnel with self-contained breathing apparatus and a safety line tied to them.
- Notify the ranking fire department officer of any injury/illness, especially those requiring transport to the hospital.

If EMS is on Stand-by only (i.e. no current injuries) and a pending call is toned out then the unit on stand-by will respond to the pending call. If responding to a fire with no injuries and a pending call is received, the unit will divert to the pending call. The process for having additional units respond to the fire stand-by will begin if Fire Command sees fit.

EMS First on Scene:

1. Upon arrival at a fire incident, the EMS unit will notify communications.
2. The EMS unit(s) should be parked in a location that will not interfere with incoming fire apparatus or Fire Department operations (i.e. parking by a fire hydrant).
3. Make every reasonable effort to alert occupants of a structure fire to evacuate immediately.
4. Make every reasonable effort to prevent people from entering a burning or smoking structure and establish a safe perimeter around the structure.
5. Attempt to obtain information from bystanders, witnesses, occupants, etc. in order to learn if the structure has trapped occupants, or other such information. If any of the above are indicated, notify the senior fire officer and communications.
6. Do NOT attempt to enter a burning or smoking structure. Again this is done by trained personnel with a self-contained breathing apparatus and safety line tied to them.
7. You may attempt to contain and suppress the exposed fire by garden hoses, fire extinguishers or other means provided it can be performed without entering a dangerous area.
8. Once the Fire Department has arrived on the scene and assumed control. EMS personnel will follow stand-by procedures.

Washington County EMS	Forced Entry
Standard Operating Procedures	SOP 25

Occasionally, EMS responders may be faced with a situation where the unit has been called to the residence and no one appears to be present in the home. If a situation may exist where the patient is believed to be alone and is now medically unable to unlock a door or verbally respond, the EMS responders may consider using forced entry.

Forcible entry will be used in the case of bonified emergencies where other measures to obtain access are unsuccessful. The following procedures are to be followed:

- If there is no answer at the residence, have communications try a call back number.
- If the call back number is ineffective, without endangering themselves, EMS personnel will try all doors and windows.
- If no unlocked openings to the structure are found and available information suggests an emergency does exist, then the following procedures are to be followed:
- Law enforcement assistance is to be requested for securing the residence after forced entry.
- Forcible entry locations should be sought that will minimize damage to the structure. However, reasonable efforts to gain access should be made regardless of damage estimations.
- Personnel will use extreme caution in providing for their safety. If needed, have communications dispatch Squad 1 for forcible entry tools.
- If unable to gain access with entry tools on Squad 1, fire department should be dispatched to assist.
- All pertinent facts of the situation will be documented on the narrative part of the run form.
- The EMS crew will submit a detailed incident report to their EMS Director and/or Supervisor no later than 24 hours after the incident.
- EMS on-shift supervisor will be notified immediately of need for forced entry.

Note: Law enforcement is normally empowered in such situations to gain immediate entry when necessary.

Washington County EMS	Handling of Valuables
Standard Operating Procedures	SOP 26

When the patient is conscious and coherent, the handling of valuables is discouraged.

If contact with patient's valuables (purse, wallet, etc.) is necessary (i.e. to search for medications or identification), it should be done in the presence of at least one witness from outside of our EMS service, such as a law enforcement officer, and documented. If removal of patient's valuables is justified by a need to reduce possible injury (i.e. rings, on injured fingers), this should be witnessed by a law enforcement officer or other official. Jewelry should be placed or taped to a safe location on the patient or bagged and placed in a safe location.

IN ALL INSTANCES, THE HANDLING OF VALUABLES (AND THEIR DESCRIPTION) SHOULD BE CLEARLY DOCUMENTED ON THE AMBULANCE RUN. LIST WITNESSES AND THE NAME OF WHO LAST HAD POSSESSION(S).

Should you discover a patient's personal belongings in an ambulance and/or the EMS bay, immediately report this to your on duty Lieutenant. The lieutenant will then attempt to locate whom these item(s) belong to and request the crew members who treated the patient, return the item(s) immediately.

Washington County EMS	HAZMAT Scenes of Bioterrorism
Standard Operating Procedures	SOP 27

When responding to hazardous material situations or any special circumstances such as rescue scenes, tactical operations, etc... notify command staff and refer to special operations program guidelines.

Washington County EMS	Hospital Procedures
Standard Operating Procedures	SOP 28

Upon arriving at the receiving hospital the primary attendant should communicate any critical patient information directly to the attending physician when possible. If it's not possible to give bedside report directly to the physician then the primary attendant will give report to the RN in charge of the patient. Complete the appropriate paperwork, clean / restock the unit, and return to service as soon as possible after completing call.

More specific procedures are as follows:

1. The primary medic will remain with the patient until a report is given to the nurse who will be responsible for the patient. The waiting time should be used to begin paperwork (ePCR). The driver or secondary attendant will begin the proper decontamination and restocking of the unit.
2. The unit is to be clean and restocked as needed after each call. If the unit and equipment need extensive cleaning, it may be best for all crew members to begin cleaning up. When the majority of the clean-up has been completed, paperwork may be completed by the attending personnel, while the partner(s) complete restocking unit.
3. List equipment left at hospital and check to see if unit needs refueling.
4. Advise communications as soon as the unit is available for calls, even if paperwork has not been completed. It is appropriate to notify communications of unit availability immediately (back in service) upon arriving to the ED if the system status is level 2 or higher in order to prevent pending call scenarios.

The Texas Department of State Health Services requires a copy of the patient's run sheet be left at the receiving hospital (whether is a hard paper copy or an electronic patient record). It is the policy of WCEMS to strictly follow and adhere to Texas DSHS 157.11(1)(7). However, as the current rule policy interpretation states the ePCR or written documentation will be provided "when operationally feasible" at the time of delivery of the emergency patient to the facility. If the EMS staff is in a response-pending status, the written or ePCR shall be delivered to the emergency department at the next earliest opportunity.

Washington County EMS	Incident Reports
Standard Operating Procedures	SOP 29

Situations that are likely to generate a complaint, formal review or similar occurrences should promptly generate an Incident Report. Appropriate uses include those incidents which require administrative follow-up.

Expectation:

Incident reports are to be prepared individually, without consultation of others also preparing reports to preserve uniqueness to the author.

The report should be completed immediately after the incident, if possible so that facts and sequences are fresh in the mind. Basic information should include:

- Name and title of the person filling out the report.
- Date of the report.
- Information identifying the incident (who, what, when, how and why)

Incident reports are expected to be completed prior to the conclusion of the duty shift. Once completed, incident reports are to be delivered to the on duty Lieutenant, Captain, and/or EMS Director.

Customer Service Documentation Tracking:

Any and all complaints will be directed to administration, and in the absence of those individuals, the complainee will be asked to put the complaint in writing and submitted to the Director.

Significant Incident Process:

Medical

Incident Investigation Administrative (Review Board: Consist of 2 Admin, 2 Field Staff & Medical Director if indicated) and/or Proper Authorities.

Operational

Incident Investigation Administrative (Review Board: Consists of 2 Admin, 2 Field Staff & Medical Director if indicated) and/or Proper Authorities.

Each Incident Requires

Create an Incident Folder
Record Audio Tape, if indicated
Request Incident(s) Reports and/or other documents
Copy Run Form
Print and copy of CAD Report

Medical Continue**Clinical Practice (Re-training)**

Verification of proficiency in Employees file.

Operational Continue**Employee Investigation**

On each employee: Check Executive Director's Files, Check Operational Manager's Files, Personnel Files, and copy Issues for Folder.

Medical, Operation and/or Joint

AND/OR

Oral	Reprimand	No Action	Counseling	Oral
Written				Written
Probation				Skill Level Demotion
Suspension				Probation
Termination				Termination

Washington County EMS	Infection Control, Bloodborne Pathogens
Standard Operating Procedures	SOP 30

General Information :

- Washington County EMS will designate an individual to act as its Infection Control Officer. The Infection Control Officer will be responsible to the EMS director and the Medical Director for ensuring compliance with these procedures.
- WCEMS should demonstrate compliance with the OSHA Bloodborne Pathogen Rule “29 CFR, Part 1910.0130” as fully as possible. All EMS personnel should receive formal initial training on the Bloodborne Pathogen Rule. All personnel should complete refresher training annually.

This protocol is divided into four sections and will give information regarding the policies and procedures to be followed regarding:

- **WCEMS Infection Control Practices & Bloodborne Pathogens**
- **Employee Vaccinations**
- **Accidental Exposure Procedures**
- **Cleaning and Disinfection Procedures.**

A: Infection-Control Practices

Universal Precautions:

The routine utilization of exposure control procedures and appropriate **Personal Protective Equipment (PPE)** by the individual EMS employee is essential to the safety of all involved personnel. Its use can help ensure protection from infectious materials to the EMS employee, members of the department, those individuals’ family members, subsequent patients and the general public. The following summarizes recommendations by U.S. Centers for Disease Control and shall be our policy.

1. Wear medical gloves when handling blood and other fluids requiring Universal Precautions, items soiled with blood, substances that contain visible blood or other fluids requiring Universal Precautions.
2. Immediately and thoroughly wash your hands or other skin surfaces after contact with blood or other fluids that require Universal Precautions, after contact with substances that contain visible blood, and after removing gloves.
3. If soap and water are not readily available, alcohol wipes, a wet towelette, waterless foam or soap, water alone, or any clean cloth, paper towel, napkin, or article of clothing can be used to wipe the blood and clean hands or other skin surfaces until more thorough hand washing is possible.
4. Wear protective clothing or other gear when there is a chance of being splashed by blood or other fluids that require Universal Precautions.
5. Depending on the situation, you may only need gloves, or you may need additional protection, such as goggles, mask, or surgical-type gown.
6. Gowns need to be only splash-proof or keep an extra uniform handy and change if a patient’s blood splatters on your shirt.

7. A simple pair of eyeglasses (with or without prescription) is suitable eye protection in most cases.
8. Wash your hands after taking gloves off. When putting on or removing gloves, do not use your teeth. Pull gloves off so that they are inside out, the contaminated side not exposed. Put them in a plastic bag or other container to prevent getting blood on your clothes or vehicle seats.
9. Do not reuse gloves, eat, drink or smoke while wearing gloves.

Personal Protective Equipment (PPE)

To achieve body substance isolation (**BSI**) the appropriate personal protective equipment (**PPE**) will be used when indicated. The following equipment will be used by the employee:

1. **HEPA (face mask)** - Due to the resurgence of tuberculosis (TB), you must protect yourself from infection through the use of a high-efficiency particulate air mask.
2. **Gloves** - Wear disposable protective gloves before initiating any emergency care. When an emergency involves more than one patient, change gloves between patients.
3. **Mask & Protective Eyewear**-These should be worn together whenever blood spatter is likely to occur, such as with arterial bleeding, childbirth, endotracheal intubation and other invasive procedures, oral suction, and clean-up of equipment that requires heavy scrubbing or brushing. Both you and your patient should wear mask whenever the potential for airborne transmission or disease exists.
4. **Eye protection:** A pair of approved goggles will be provided to individual employees and it will be their responsibility to keep them readily accessible on all emergency and non-emergency responses. In addition to keeping readily available they must also care and protect them from damage. When indicated by certain patient criteria or procedures to be performed they should be utilized. Not having the proper eye protection immediately available for use may result in disciplinary actions. If other designs other than the ones provided are wanted they shall be purchased by the individual employee. They must note that that purchased eye protection must be approved by the ICO and Director. They must also be useable during all hours of day (ex. dark shading at night).

Patient criteria/procedures indicating use of eye protection:

- 4.1. Imminent child birth
- 4.2. Arterial bleeding or large amount of venous bleeding
- 4.3. IV access and blood draw
- 4.4. Intubation and other Advanced airway techniques
- 4.5. Hemoptysis
- 4.6. Presence of possible airborne transmission of disease or infection
- 4.7. Cardiopulmonary Arrest
- 4.8. And any other scenarios where the employee may feel the need for proper eye protection

5. **Gowns**-Disposable gowns protect your clothing from splashes. If large splashes of blood and/or any other body secretions wear a gown.
6. **Resuscitation Equipment**- Use disposable resuscitation equipment as your primary means of artificial ventilation in emergency care. Such items should be used once; then disposed of properly.

Needles:

Needles should not be recapped, purposely bent or broken by hand, removed from disposable syringe, or otherwise manipulated by hand. If recapping a needle removal is necessary because of no alternative is feasible or a specific medical procedure requires it, use of a mechanical device or a one-handed technique is recommended. "Sharps", should be disposed of only in approved puncture-resistant containers which are provided on the ambulance and in the drug box. Be conscious of used needles. Contaminated needle containers shall be sealed when full. Disposal is done by Medi-trak Services. Do not put contaminated needle container in trash bins and/or dumpsters. Needleless system devices will be used whenever possible to help prevent accidents.

Potentially Infectious Substances

In the unpredictable and uncontrollable pre-hospital environment, it is safest to follow body substance isolation practices, which consider all body substances to be potentially infectious (i.e. "If its wet, it's bad"). The following should be considered as potentially infectious.

1. Blood and other body fluids containing visible blood
2. Semen and vaginal secretions
3. Human tissue
4. Human fluids (cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid)
5. Feces
6. Nasal secretions
7. Sputum
8. Sweat
9. Tears
10. Urine
11. Vomitus

Using Biohazard Labels:

All of the following fluids/tissues require biohazard-warning labels and are to be affixed to the container or placed in color-coded bags.

1. Blood and other body fluids containing visible blood
2. Semen and vaginal secretions
3. Human tissue
4. Human fluids (cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluids, pericardial fluids, amniotic fluid)

B: Vaccinations

Immunizations:

All employees are required to submit a copy of their immunization records to the Infection Control Officer (ICO). These records will be filed in the employees personnel file. Washington County EMS in conjunction with Scott and White-Brenham provides the Hepatitis B series and the yearly Influenza (any fees will be paid by Washington County EMS).

All others are available at the Texas Department of Health and may be provided by the department if funding is available.

The following are recommended immunizations for all EMS employees:

1. **TDaP:** A booster is required every ten years after initial injection.
2. **MMR :** This is a one-time injection.
3. **Hepatitis B:** This is a series of three injections given over a six-month period.
4. **Hepatitis A :** This is a series of two injections given over a 6-12 month period.
5. **Flu/Influenza:** This is a yearly inoculation formulated by CDC and WHO researchers. Although not always completely protective, it will help build up your immunity over time. Theoretically, this will lessen your need to take sick days and it will result in less exposure to your patients.
6. **IPV:** This is a one-time injection boosting immunity to polio.

Hepatitis B/Influenza Vaccine Declination Statement:

The Washington County EMS offers all new employees the Hepatitis B Vaccine Series and annual Influenza vaccinations. Should an employee decline this series a Declination Statement must be signed and placed in the employees personnel file.

C: Accidental Exposure Procedures

Bloodborne Pathogens Exposure Control Plan

In accordance with Health and Safety Code, Chapter 81, Subchapter H and analogous to OSHA Bloodborne Pathogens Standard, the following exposure control plan exists:

Exposure Determination:

The Texas Department of Health Bloodborne Pathogens Exposure Control Plan requires employers to perform an exposure determination for employees who have occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment. This exposure determination is required to list all job classifications in which employees have occupational exposure, regardless of frequency. The following job classifications apply:

- EMT-B
- EMT-I
- Paramedic

These job descriptions for the above employees encompass the potential occupational exposure risks to Blood borne pathogens. This policy is designed to go beyond AIDS to include a rational approach toward all potentially infectious diseases that pre-hospital personnel face in their work environment. These include everything from Hepatitis B, lice and scabies, meningitis, tuberculosis, salmonella, to the childhood diseases of mumps, chicken pox, measles, etc., to sexually transmitted diseases, to herpes viruses.

To ensure a safe working environment, it is essential that every patient be considered to be a potential carrier of an infectious disease. Sound infectious control practices must be used on all patients, not only those suspected of being a disease carrier. “YOUR BEST LINES OF DEFENSE ARE TO LEAD A HEALTHY LIFESTYLE, USE APPROPRIATE PROTECTIVE GEAR, AND WASH YOUR HANDS OFTEN. You are your own best friend when it comes to infection control.”

Remember: When it comes to infectious diseases, patient confidentiality must always be maintained.

Work Area Restrictions:

In work areas where there is a reasonable likelihood of exposure or other potentially infectious material, employees are not to eat, drink, apply cosmetics or lip balm, smoke or handle contact lenses. Food and beverages are not to be kept in refrigerators, freezers, shelves, cabinets, or on counter/bench tops where blood or other potentially infectious materials are present. All procedures are conducted in a manner to minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious materials.

Personal Hygiene:

Check your hands often for even small breaks in the skin, such as dermatitis or chapped hands. Protect on-intact skin as needed.

Hand Washing:

Hand washing is an aid in the prevention of direct or indirect spread of organisms. In the pre-hospital environment the proper facilities are not always available for hand washing, but when resources are available the following procedure is used:

- Thorough hand washing is the single most important factor in preventing the spread of infection.
- The length of time required for hand washing is one to two minutes when hands are very soiled with a minimum of 15-30 seconds required for routine hand washing.
- All faucets are considered contaminated. After washing and drying hands, turn off faucet with a dry paper towel.

STEPS:

1. Remove all jewelry, except plain wedding bands.
2. Turn on water to a temperature comfortable to hands.
3. Wet hands and wrist and apply soap (if bar soap is used, rinse bar before using).
4. Rub hands together vigorously making certain that soap is distributed over all areas of the hands and wrist. Give attention to areas around nails.
5. Rinse hands thoroughly under running water remembering to keep hands lower than arms to prevent water from running to unwashed areas of the arms.

6. Dry hands and arms with paper towels, drying forearms first, then hands.
7. Turn off faucet with dry paper towels and discard

If hand washing facilities are not feasible, use an antiseptic towelettes or waterless disinfectant in conjunction with a clean cloth/paper towel. If this alternative is used, then the hands are to be washed with soap and running water as soon as feasible.

After removal of personal protective gloves, employees should wash hands and any other potentially contaminated skin areas immediately or as soon as feasible with soap and water. If employees incur exposure to their skin or mucous membranes, then those areas are washed with soap and water or flushed with water as appropriate as soon as feasible following contact.

All garments which are penetrated by blood are removed immediately or as soon as feasible and placed in the appropriate container. All personal protective equipment is removed prior to leaving the work area and placed in the designated receptacle.

If your uniform gets soiled, put on a clean one as soon as possible. Keep dirt out from under your fingernails. Keep your hands out of your mouth, nose, and eyes.

When you get sick, you have a responsibility to your co-workers as well as your patients, many of whom have low resistance to infection when they call the ambulance. Therefore, check with your supervisor to determine if you need to stay or if you can work and just wear a mask, etc. Open sores or cuts should always be covered.

Post Exposure Evaluation:

This procedure will be followed should an employee be exposed to a needle stick, blood, and/or potentially infectious fluids (Sharps injury, Non-intact skin, and Mucous membrane):

Possible Exposure?

1. If practical remove yourself from the patient care.
2. Irrigate/clean wound (blood/body fluid exposure). Immediate first aid measures.
3. Contact a supervisor immediately.
4. Complete an accident form and submit it to the Infection Control Officer (ICO).
5. The following information must be in this report:
 - 5.1. The route(s) of exposure and circumstances related to incident.
 - 5.2. Identification and documentation of the source individual, unless prohibited by state or local law.
6. The ICO will submit a Contaminated Sharps Injury Reporting Form to the Texas Department of Health, no later than ten calendar days after the end of the month in which the incident occurred.
7. The employee describes the extent of exposure and based on the severity will see a physician.
8. The employee is offered the option of having his/her blood collected for testing of the employee's HIV/HBV serological status. The blood sample is preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV serological status. If the employee decides prior to that time the testing will be conducted, then testing is done as soon as feasible.

9. The employee is offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service.
10. The employee is given appropriate counseling concerning infection status, results and interpretations of tests, and precautions to take during the period after the exposure incident.
11. The employee is informed about what potential illnesses can develop and to seek medical evaluation and subsequent treatment.
12. A copy of the accident report will be filed in the employees files.
13. If needed, the appropriate testing and treatment will be provided to the employee, at no charge, by Washington County.

Follow Up:

After obtaining consent, unless law allows testing without consent, the blood of the source individual should be tested for HIV/HBV infectivity, unless the employer can establish that testing of the source is infeasible or prohibited by state or local law. The results of testing of the source individual are made available to the exposed employee with the employee informed the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individuals. The ICO is designated to assure that the policy outlined here is effectively carried out and maintains records related to this policy.

Interaction with Healthcare Professionals:

A written opinion is obtained from the healthcare professional who evaluates employees of Washington County EMS after and exposure incident. In order for the healthcare professional to adequately evaluate the employee, the healthcare professional is provided with:

1. A copy of Washington County EMS exposure control plan;
2. A description of the exposed employee's duties as they relate to the exposure incident;
3. Documentation of the route(s) of exposure and circumstances under which the exposure occurred;
4. Results of the source individual's blood tests (if available); and Medical records relevant to the appropriate treatment of the employee.

Written opinions are obtained from the healthcare professional in the following instances:

1. When the employee is sent to obtain the Hepatitis B vaccine, or
2. Whenever the employee is sent to a healthcare professional following an exposure incident.

Healthcare professionals are instructed to limit their written opinions to:

1. Whether the Hepatitis B vaccine is indicated;
2. Whether the employee has received the vaccine;
3. The evaluation following an exposure incident;
4. Whether the employee has been informed of the results of the evaluation;
5. Whether the employee has been told about the any medical conditions resulting from exposure to blood or other potentially infectious materials which require

further evaluation or treatment (all other findings or diagnosis shall remain confidential and shall not be included in the written report); and

6. Whether the healthcare professional's written opinion is provided to the employee within 15 days of completion of the evaluation.

D: Cleaning and Disinfection of Equipment

Cleaning is defined as the physical removal of foreign and organic materials such as blood, body fluids, and disease causing microorganisms or germs from a surface or object.

- **Cleaning physically removes, but does not kill, germs.** Cleaning is accomplished by using water, detergents, and a scrubbing action. The key to cleaning is the use of friction to remove debris and reduce presence of germs.
- **Disinfection is the process used to kill and prevent the growth of germs** on objects and surfaces. Disinfection is accomplished through the use of chemical products regulated by the U.S. Environmental Protection Agency (EPA). A 1:10 Sodium Hypochlorite solution (fresh solution of chloride bleach in water) is also considered a disinfectant. Disinfectants should only be used after items have been thoroughly cleaned.

Cleaning and disinfection is a two-step process. Following cleaning, the disinfectant should be applied or reapplied and allowed to remain on the surface for the full contact time. Contact time, or kill time, is the length of time that the disinfectant must remain on the surface or object, as specified by the manufacturer. With 1:10 bleach solution, minimum contact time is 2 minutes.

Respiratory and oral secretions as well as wound drainage should always be considered infectious. All equipment contaminated with blood or other bodily fluids shall be thoroughly decontaminated after each use in accordance with the following cleaning procedures:

Blood and or Bodily Fluid Spills:

Blood spills shall be soaked up and the area washed with soap and water. Gloves shall be worn at all times while cleaning areas contaminated with blood. A 1:10 Sodium Hypochlorite solution shall be used to disinfect the affected area. Spine boards and stretchers shall be cleaned in this manner whenever contaminated with blood and/or bodily fluids. Reusable items often contaminated with blood and/or bodily fluids shall be thoroughly cleaned with soap and water. Items then shall be allowed to soak in a 1:10 Sodium Hypochlorite solution for at least ten minutes. Prolonged soaking may damage equipment. After soaking, rinse with water and allow to AIR dry whenever possible. Items shall be disassembled so as to ensure that all parts are adequately cleaned and disinfected.

Soiled and Contaminated Single Use Equipment:

With patients suspected of, or diagnosed as having a communicable disease, dispose of contaminated items by double bagging in plastic bags not less than 1.5 mil thick each. Linens shall be bagged separately. Prior to applying clean linens to the stretcher, personnel shall wash their hands and take appropriate measures to prevent the cross-contamination of clean linen.

Laryngoscope blades and handles : Removed blade from handle and wash with mild soap and warm water. Soak the washed parts in a 1:10 Sodium Hypochlorite solution for 10 minutes. Remove, rinse with water, and allow to air dry for at least one hour.

Stethoscopes and Blood Pressure Cuffs:

Stethoscopes may harbor pathogenic organisms. They shall be cleaned on a daily basis and whenever contaminated with blood and/or bodily fluids, or whenever used on a patient with a communicable disease. To clean, wipe off with mild soap and warm water followed by wiping with a tuberculocidal agent.

Blood pressure cuffs. Wipe off with a 1:10 Sodium Hypochlorite solution. Rinse with warm water and allow to air dry. Gauges shall be wiped off with a 1:10 Sodium Hypochlorite solution or tuberculocidal agent.

Cleaning the Ambulance:

1. **Routine Cleaning :** Clean the floors and walls on a regular basis or when heavily soiled. The floor and walls need not be routinely be disinfected since patients will not be in direct contact with these parts of the vehicle. After EACH transport, surfaces touched by the patient surfaces in contacted with blood or bodily fluids, and surfaces touched by EMS personnel while treating patients shall be cleaned and disinfected. Disinfection shall be with a liquid “hospital disinfectant” (Cavicide) or with a 1:10 Sodium Hypochlorite solution. It is not necessary to air out the vehicle or disinfect items not contacted by the patient or health care provider.
2. **Weekly Deep Cleaning :** Each unit will receive a deep cleaning once a week on a schedule established by shift Lieutenants. This cleaning will include removing mats, seat cushions, stretcher and other bags and wiping down all areas with a liquid “hospital disinfectant” (Cavicide) or with a 1:10 Sodium Hypochlorite solution. Storage bins should be removed and interior all surfaces of cabinets and wall organizers should be cleaned and wiped out. Floors should be mopped with a 1:10 bleach solution or other disinfecting solution. This cleaning shall also include the cab of the trucks as well including dash, armrests and floorboards.
3. **Disinfection / Decontamination:** On a quarterly basis, or when special circumstances exist (ie; flu pandemic, known TB patient, etc...) each unit will be disinfected using the Zimek Micro-Mist system using Vital Oxide disinfectant. Special circumstances where this cleaning needs to be done more frequently will be determined by the Infection Control Officer or Medical Director. Any EMS crew can also request that a unit be disinfected if they feel that it is necessary due events from a previous call (ie: known or suspected TB patient, Hep C positive pt with excessive bleeding, etc...). Prior to disinfection, the truck must be cleaned following the deep cleaning protocols. All cabinets will be opened and bags opened and placed on bench seats for maximum dispersion of disinfectant in the unit. This decontamination will be performed according to the manufactures recommendation for the disinfectant system. This protocol is designed for a rapid cleaning and turnaround of units so they can safely be returned to service.

Although no cleaning and disinfection method is 100% effective in eliminating all microbes, following these protocols will ensure that best practices are being used to help protect both our employees and patients.

Washington County EMS	Inventory Control Part A
Standard Operating Procedures	SOP 31

Each employee is responsible for the care, accountability and cleaning of all equipment on the unit and in the station. Care includes:

- Daily inventory and inspection of all equipment to ensure it is available for use and proper functioning when needed.
- Securing all equipment from unauthorized access or use and maintaining a working knowledge of all equipment. Investigations of lost or missing equipment determined to be the result of negligence will result in disciplinary action.
- All equipment should be cleaned and tested during each morning's inventory of unit. Any missing or damaged equipment will be reported to the supervisor on duty.
- Units are to be inventoried by the on-coming crews. The crews on duty will see that the units returning from maintenance are inventoried once back in station.
- Any missing or damaged equipment should be logged and posted for the on duty crew. If equipment is not back at station by 7:30 a.m., it will become the responsibility of the oncoming crew.
- All equipment shall be cleaned after each use.
- Monitor/Defibrillator batteries will be replaced with fully charged batteries at the beginning of each shift. Batteries will be rotated for deep discharge on a regular basis. The batteries should be left on the charger only long enough to obtain a full charge (unless charger has a "trickle charge function"). **A self-test will be performed on each Life Pak 12 daily.**
- Anytime a unit is parked and unattended in public (except during a call) all doors should be locked to prevent theft.

Washington County EMS	Inventory Control Part B
Standard Operating Procedures	SOP 31

Introduction: This policy shall serve as the complete policy manual for the ordering, storing, and maintaining of records in reference to narcotics and controlled substances utilized by Washington County EMS.

Policy: Narc-01 - Ordering Controlled Narcotics and Medications

The logistics officer (Lieutenant) has the primary responsibility for ordering and maintaining all medications including controlled substances/narcotics. All state and federal laws will be strictly adhered to. WCEMS and its medical director will be registered as per current guidelines with both The Texas Dept. of Public Safety (DPS) and the Drug Enforcement Agency (DEA) and will retain current registration with-out any lapse time of expiration.

In lieu of the logistics officer the EMS Captain is also an approved purchaser controlled substances. No other officer is allowed nor an approved purchaser of controlled substances. The Logistics Lieutenant will assure all paperwork is complete and accurate when ordering (222 forms, etc...).

The following steps will be taken as controlled substances / narcotics arrive to the EMS Department after ordering.

1. At any time, when a shipping container containing Narcotics arrives at the Station, the container will be taken to the on duty Lieutenant or Captain prior to being opened. These boxes are usually marked with "Adult Signature Required".
2. The Lieutenant or Captain will then "inventory and log" the medications according to the invoice into the controlled storage box. The medications will be kept under lock at all times. Our particular setup is a Knox box that is mounted in the supply room at both station 1 and 2. This box requires two pin numbers to access.
3. The EMS Department of Washington County issues its own department ID number in sequential order. The medications are then logged into the appropriate section of the narcotics / controlled substance log book. Each controlled substance has it's own unique section of the log book for ease of records management. The following information will be logged (spread sheet format inside the log book)

- a. Date received
- b. Total amount of medication received
- c. Lot Number identification
- d. Inventory - Total amount of medication in narcotics box (what was in the box plus what is currently in the box after the addition of recently received medications)
- e. Signatures from the Lieutenant and the individual who signed for received invoice (receipt).
 1. If the on duty Lieutenant signed the original invoice then he/she will have a witness sign when logging in the medications.

Policy: Narc -02 - Proper Dispensing

1. When a controlled substance is dispensed by whatever method (administration, disposal, breakage, etc...) it is recorded on the controlled substance usage form. This form is kept with the narcotics as part of the received and Distribution Record Form.
2. The control substance usage of this form is very self explainable and you must completely fill out the form which will contain: Pt's name, Dispatch ID Number, Amount Used, Amount Wasted. The form is then signed by the person who gave the medication and witnessed by the person who witnessed the medication being wasted. The Lieutenant or Captain will also sign the form verifying that a new drug was distributed to the person who signed and witnessed the form.
3. The Lieutenant or Captain will also ensure that the received and distribution part of this form is completed as well and that the unique Washington County Identification number will be placed on the drug. All employees present on the form will re-inventory the particular controlled substance being used and sign off on the count.

Policy: Narc -03 - Records Management

The logistic officer (Lieutenant) will maintain accurate records of controlled substances at all times. The following records will be maintained:

1. The Texas DPS Registration and the DEA Registration will be kept in front of the controlled substance binder.
2. Copies of both registrations will also be kept inside the "black binders" on every vehicle that maintains controlled substances.
3. The narcotics log books (3 -ring binder) will have dividers separating each controlled substance being tracked / inventory. (i.e. one separate area for Fentanyl, Morphine, Valium, etc...). These books will also have a spreadsheet detailing exactly what controlled substance is on each unit. All 5 vehicles controlled substance forms are kept in these logs. It is the on duty Lieutenants responsibility to ensure these records are maintained and managed daily.

4. Every controlled substance assigned to a vehicle will be easily tracked. The logistics officer and EMS Captain will at all times be able to explain where each and every medication is and how they were used or dispensed.

Policy: Narc-04 - Daily Inventory / Tracking

Every morning during shift change the oncoming **Lieutenant and shift** will assume responsibility for the narcotics at each station. Every narcotics box that is assigned to the units will be counted and signed off on. If an EMS Command vehicle is posted at the station then it too will be signed off on. The off going shift will sign off and the oncoming shift will sign on for the medications. The Lieutenants or crew members will also count narcotics from the cabinet - daily during shift change, using the same sign in and sign out process. This will assure daily inventory control measures are kept. The command vehicles are the responsibility of the supervisor assigned to that particular vehicle. However, if the command vehicle is left (posted) at the station for a weekend or due to out of town meetings than the on duty Lieutenant will “sign off” for the vehicle.

If at anytime a narcotic or controlled substance is noticed “missing” or “potentially stolen” the following guidelines will be followed.

1. Immediate notification of EMS Chain of Command
2. Immediate notification of DPS Narcotics and Texas Department of State Health Services
3. Notification of service Medical Director(s)
4. Complete and accurate report to local or investigating police department.
5. Complete and Accurate Internal Audit by logistics officer

Washington County EMS	Inventory Control Part C
Standard Operating Procedures	SOP 31

Washington County EMS employees will be responsible for disposing of all drugs not completely used on a patient and expired or broken drugs as well.

After completing a call where a medication is used but still has remainder medication in the vial, it will be the responsibility of the paramedic in charge of the call to dispose of the remainder medication. Proper disposing of this remainder medication will be as follows:

1. Do not dispose of the medication in a sealed container.
2. Expel the medication in an environment that will not allow the retrieval of the medication.
3. Place the vial and syringe into the sharps container.

While performing morning and monthly drug checks on the ambulance and in the storage room, expired drugs may be found and in need of disposing. Proper disposing of this full medication vial will be as follows:

1. All expired narcotics will be hand delivered by an EMS Supervisor to the Brenham Police Department evidence collection agent/officer.
2. A chain of custody form/receipt will be utilized to assure proper delivery to the evidence room. A copy of the form will be kept with the DEA paperwork for auditing purposes.
3. Brenham PD will then assume responsibility for the medication and will destroy (by incineration) the medication.

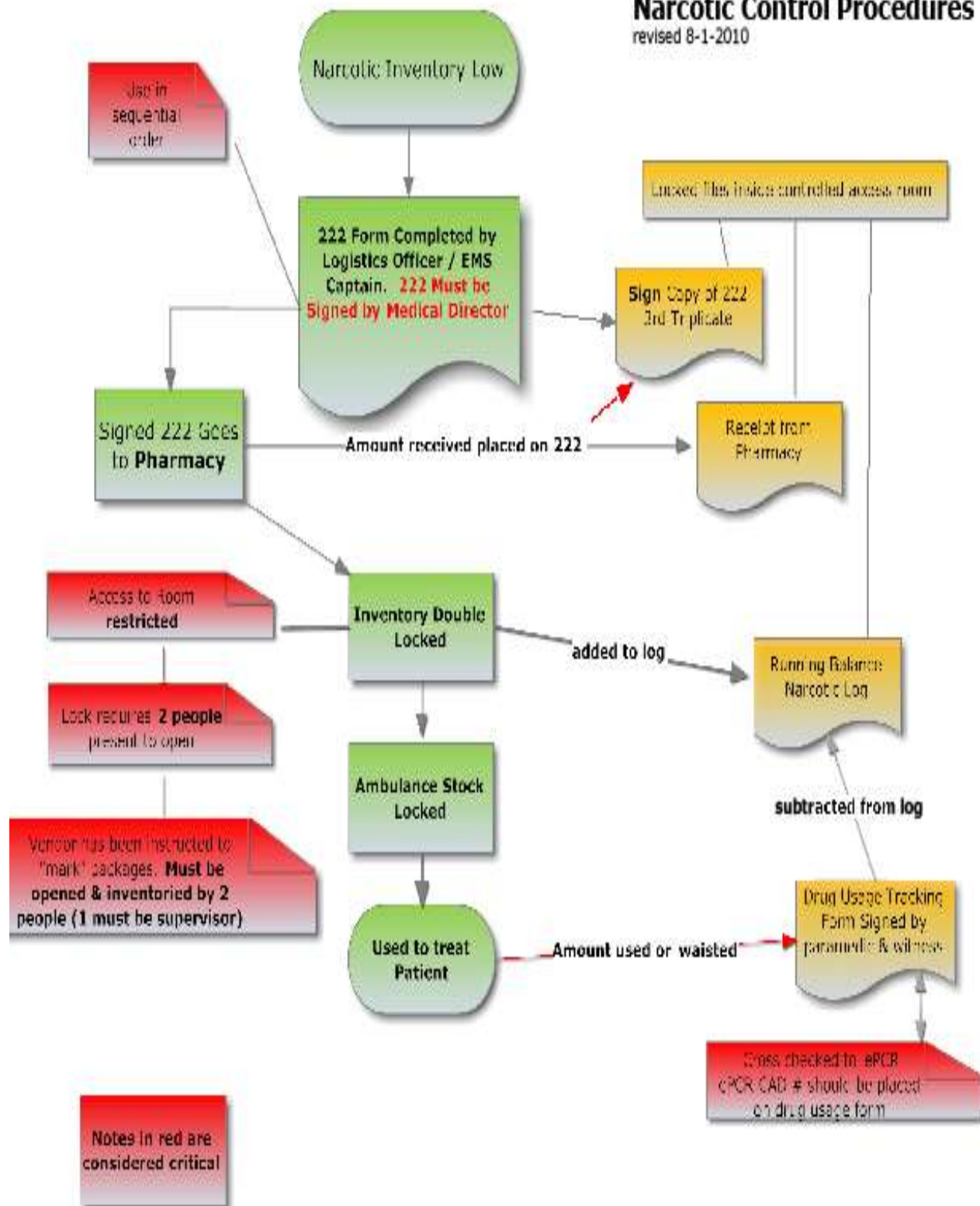
Accidents may occur while EMS employees are checking drugs in the morning or during the administration of a medication. If an accident does occur and a medication vial becomes broken the medication must still be disposed of. Proper disposing of this medication will be as follows:

1. The broken vial must be carefully picked up and placed in a sharps container.
2. Sweep the area with a broom to ensure all pieces of glass have been cleared off the floor.
3. Spray the remainder of the medication that is on the floor with a disinfectant and wipe clean with a rag.
4. Place the rag in a dirty linen bag.

Remember that when dealing with a controlled medication, all forms and documents must be filled out according to policy number SOP31 Part B.

Narcotic Control Procedures

revised 8-1-2010



Washington County EMS	Jail Responses
Standard Operating Procedures	SOP 32

Washington County Jail has a medical director, separate from Washington County EMS, thus different protocols. A copy of Washington County Jail protocols is located on the desk in the exam room of the jail. Washington County EMS medics are to follow these protocols when treating an inmate. If the call is not a life threatening injury and/or illness, Washington County Jail medical control must be contacted for transport orders. If you are unable to obtain contact with medical control, transport orders must come from on call physicians (list at jail). If you cannot make contact with any of the above, call Scott and White, Brenham ER for transport orders. If there is a life threatening injury and/or illness, do not delay transport. Washington County inmates are not billed for EMS services.

When responding to the jail, ensure the following:

1. The stretcher and/or appropriate equipment should be removed from the unit and taken to the patient. Maximum safety precautions should be taken.
2. Any equipment brought into the jail facility must not be left unattended in prisoner access areas.
3. Check with personnel at the booking desk as to exact location of the patient.
4. If the prisoner is transported, law enforcement should accompany the unit to the receiving facility.
5. If the prisoner is to be handcuffed, law enforcement **MUST** accompany the prisoner in the back of the unit.

Jail Protocols written By: Dr. Yoffe, Jail Medical Director

There will be times when medical care is indicated outside routine “sick call” times. Many patients will be content to wait for the next routine time when the physician visits the jail medical facility. However, accidents may happen and situations occur. Therefore, Dr. Yoffe has compiled this list of EMERGENCY CONDITIONS that need immediate attention and should be presented to the Scott and White, Brenham Emergency Room.

1. Uncontrolled bleeding
2. Significant breathing problem
3. Convulsion
4. Head trauma resulting in major alteration in consciousness
5. Accident resulting in bone showing through the skin
6. Severe chest pain of unknown cause

Otherwise, it is best to contact the Medical Director or a physician covering for him. Therefore, use the following guidelines:

If the patient does not fit into the EMERGENCY CONDITIONS, please try to reach Dr. Yoffe for the next four (4) hours. We can re-evaluate the medical problem at that time in case a physician cannot be reached. If for any reason, the EMS personnel is uncomfortable, then page your supervisor for instruction. If the patient is ordered to be taken to the emergency or to the laboratory at Scott & White, Brenham, please make a copy of the instructions given by the physician to the EMS and present that copy to the ER or to the laboratory. If the patient is to be transported by jail personnel, have the jail personnel give a copy of the instructions either to the ER or Lab.

If any situation arises that is not covered, have the EMS transport patient to the emergency room for evaluation. If we are going to the ER, it is better to be on the side of extra caution.

Please call in the following order:

1. Dr. Stuart Yoffe

979/277-2094 (Cell)

979/219-2643 (Home)

2. Dr. William Loesch

979/277-4552 (Cell)

979/337-5800 (Office)	Monday	8am – 5pm
	Tuesday	8am – 5pm
	Wednesday	8am – Noon
	Thursday	8am – 5pm
	Friday	8am – 5pm

3. Scott and White, Brenham Emergency Room

(979/337-5050)

Washington County EMS	Media Relations
Standard Operating Procedures	SOP 33

MEDICAL/CALLS-RELATED INFORMATION

No personnel shall publicize or release confidential information unless authorized to do so by one's supervisor.

NON-CONFIDENTIAL CALL-RELATED INFORMATION WHICH MAY BE RELEASED TO THE MEDIA INCLUDES ONLY THE FOLLOWING:

1. Location of the call
2. Hospital to which the patient was transported to
3. General condition of the patient as call was received
4. Sex and appropriate age (no minors) of patient
5. Any request from the news media for more detailed information should be referred to one's supervisor.

CAUTION should be exercised to NOT disclose the following:

1. Information concerning the patient including assessment of injuries, and treatment given.
2. The name may be withheld if the patient is a DOS or is a minor. It is important to note that a 17 year old (emancipated, married, parents, in the armed forces, and those living independently who are self-supported not receiving financial aid) is not a minor in the State of Texas.
3. Information prejudicial to law enforcement investigations.
4. Information not based on facts.
5. Information which might be an invasion of privacy, such as a suicide, overdose, psychiatric, etc.
6. In case of death, the J.P., physician, or law enforcement will have to give exact cause of death.

MEDIA INTERVIEWS:

Personnel shall not grant interviews to the news media unless authorized to do so by one's supervisor. Any request for interview by the news media should be referred to one's supervisor, who will coordinate such interviews.

WRITTEN MATERIALS:

Any articles, advertisement, or other written material developed for publication in local, state, national or international publications on any matter of the EMS service or referencing this EMS service directly or indirectly must have the approval of the EMS Director of the service. Written articles should be submitted to the EMS Director for editing, review, and approval prior to submission.

Washington County EMS	Medical Staff Delegation
Standard Operating Procedures	SOP 34

MEDICAL DIRECTOR(S):

The Medical Director's of Washington County EMS have control over your ability to use advanced skills since EMS personnel work under the auspices of the Medical Director's license. Therefore, the Medical Director's may deny you the right to use advanced skills at any time during employment.

The EMS Medical Director may take the following disciplinary steps regarding EMS personnel:

1. Counseling
2. A report documenting the medical error
3. Probation
4. Denial of your use of advanced skills

He/She may also require the individual to take appropriate remedial or corrective measures, which may include but not be limited to retaining, testing, and/or field/hospital preceptorship. Depending upon the severity of the medical error, the Medical Director may skip any step and deny your use of advanced and or basic skills. He/She may also recommend disciplinary action to the Texas Department of Health, including revocation of certification. Personnel may be subject for probation of skills, retraining and/or denied use of advanced/basic skills, by the Director's at the order of the EMS Director for not attending training sessions, mistakes in the field, and not attending Medical staff meeting, etc.

DELEGATED PRACTICE:

Texas Board of Medical Examiners, Chapter 197.1: Emergency Medical Services; The purpose of this chapter is to facilitate the most appropriate utilization of the skills of physicians who delegate health care tasks to qualified emergency medical services (EMS) technicians. Implementation of this chapter will enhance the ability of EMS system to assure adequate medical direction of all advanced pre-hospital providers and many basic level providers as compliance by personnel and facilities with minimum criteria to implement medical direction of pre-hospital services.

Advanced life support is any treatment above the level of the Emergency Medical Technician Basic (invasive medical procedures). **Section 197.2 states that "basic life support may be under the medical direction and/or supervision and control of a licensed physician."** The Medical Director(s) also oversees all basic life support care at Washington County EMS.

The Texas Health and Safety Code, Section 773.061: gives disciplinary power to the Texas Department of Health, in stating that given a "violation of....a rule adopted under this chapter, the department (TDH) may decertify, suspend, place on emergency suspension, or place on probation EMS personnel...."

CLEARANCE TO PRACTICE PROCESS:

This process is how new employees are oriented. It is also for current employees who lack preparedness to practice. Administration will assign a Field Training Officer (FTO) to these employees. To determine clearance to practice the following process is completed:

1. The employees will complete the hiring process and perform orientation with an FTO. Reference the FTO's Operational & Training Manual.
2. During the orientation all aspects of patient care, EMS and County policies will be reviewed with the FTO.
3. The new employee will be requested to demonstrate skills to the FTO and show proficiency.
4. Upon completion of this orientation the FTO will issue a written and/or oral exam (this is an evaluation tool, not a pass/fail exam). The results are forwarded to the Director via chain of command.
5. The clearance to practice process includes training in quality patient care and/or documentation (billing/paperwork).
6. When a current employee lacks preparedness to practice he/she will be assigned to the FTO for re-orientated.

PRACTICING OUT OF SERVICE AREA:

When Washington County EMS employees are out of this provider's service area the employee will only practice BLS skills under the Washington County EMS Basic Protocol. The Washington County EMS Medical Director(s) will not be held responsible for any employee choosing to follow an out of service area physician order and/or protocol.

OFF DUTY PERSONNEL (PRACTICING IN SERVICE AREA):

When off duty personnel come upon an ambulance call they are to use the following policies:

1. If a crew is on scene the duty personnel will report to the senior paramedic for direction.
2. If the off duty personnel is first on scene they will provide BLS care under the Washington County EMS Basic Protocol and once the on duty crew arrives they will take direction from the senior paramedic on duty.

ALLIED HEALTH PERSONNEL AND/OR PERSONNEL FROM OTHER SERVICES:

Allied health personnel (i.e. nurses) are not necessarily trained in pre-hospital care and in addition may not be state (TDH) certified/licensed to deliver pre-hospital care. The on scene Washington County crew will solely determine the participation of patient care administered by any allied health personnel. Before allowing these personnel to assist with patient care, verify that they are certified/licensed in an allied profession.

Washington County EMS	Off Duty Personnel
Standard Operating Procedures	SOP 35

RECALL:

All EMS personnel off duty should be aware that, when off duty, they are subject to 24 hour call back.

OFF DUTY PERSONNEL:

At times, off duty personnel are needed for third outs, extra duty to staff vehicles, and/or other unpredictable situations that the service needs. **OFF DUTY STAFF WILL RESPOND IMMEDIATELY REGARDLESS OF WHO IS ON CALL FIRST, ALTHOUGH THE ON DUTY STAFF WILL ATTEMPT TO CALL SOMEONE THAT CAN COME IN EASILY. IF NOT, THE FIRST PERSON, THE SENIOR ON DUTY SUPERVISOR, OR CREW MEMBER, REQUESTED SHALL COME IN IMMEDIATELY, INCLUDING THE DIRECTOR.** Once the emergency is rectified, a level 4 page via text message will be sent, by an EMS employee, to cancel any additional responders.

The following is not acceptable excuses:

1. Having guests
2. Other plans
3. Off duty job
4. Try someone else

Non-Response by any EMS Employee during a RECALL:

The only person that shall over-ride an off duty recall shall be the EMS Director/ EMS Captain. You shall respond and those that do not shall justify it to the EMS Director/ EMS Captain immediately on the EMS Director/ EMS Captain's first working day. The on duty crew member will not have to explain, who they have, or have not called, and who can or cannot respond to anyone except the EMS Director/ EMS Captain.

Washington County EMS employees, who wish to receive text message level pages, will have signed an acknowledgement to receive text messages for Washington County EMS purposes and will be aware that they will be responsible for all standard text messaging charges that will be applied.

- **LEVEL-1** will be sent a text message when the system has All on duty Medic units on calls at the same time and there is a call pending. When a LEVEL 1 is received EMS personnel will immediately start responding to the station to staff an additional Medic unit. Basically a LEVEL 1 means there is **"PENDING CALLS"** and all EMS staff should respond to staff additional units as needed.

- **LEVEL-2** will be sent a text message when the system has All on duty Medic units on calls at the same time. A LEVEL 2 alerts the off duty staff that a LEVEL 1 could be initiated at any time. EMS staff will attempt to remind dispatch to send the level alerts also. Remember a LEVEL 2 is only sent if All Medic units are on calls and there are **“NO PENDING CALLS”**. This takes the place of the FYI text.
- **LEVEL-3** will be sent a text message when one unit is out of county, NOT PEAK HOURS, OR 2 UNITS ARE OUT OF COUNTY DURING PEAK HOURS. This alerts the off duty crews that there is only one crew available in the county for calls.
- **LEVEL-4** will be sent a text message when the crisis is over and/or any of the on duty Medic units are available for calls. This basically cancels off duty responding employees. It is assumed that the system is on this level until LEVEL 1, 2, or 3 is initiated.

When responding off duty, you shall be solely responsible for your actions in obeying traffic laws, etc., for everyone's safety. Washington County EMS is not responsible for your driving of your own vehicle.

Should an EMS employee on duty send a request needing additional staffing for the current day or future shifts, all employees who have signed the text message acknowledgement should call the station regardless of availability.

At any time, if the employee is UNAVAILABLE, they should call the station and have this information posted. This can be done by calling the station, posting your unavailability prior to leaving your tour of duty, or contacting the on shift supervisor for that day. If you do not post that you are unavailable, it will be assumed that you are available for recall, cover the county, cover a shift, etc.

Washington County EMS	On Scene Roles
Standard Operating Procedures	SOP 36

The primary crew of the first EMS unit on the scene assumes overall control and direction of other crews. Only supervisor may take over scene control and supervisory responsibility, if indicated.

Other medical personnel on scene:

PHYSICIAN:

In the instance where a physician who is not the patient's personnel physician appears on scene and elects to direct the care of the patient, thus assuming medical control of the scene, the following guidelines should be used:

1. The physician should identify him/herself and his/her specialty to the EMS crew.
2. After identification, contact should be made with the hospital physician to secure the approval of using the on scene physician's orders
3. If approval by Medical Control, the on-scene physician **MUST** accompany the patient to the hospital and fill out the necessary documents, including the front of the BLS run form and sign the form and dated/witnessed.
4. Nothing in this policy shall be constructed so as to be in conflict with Rule 197.1-197.6 of the Texas State Board of Medical Examiners and EMS Directors Rules.

OTHER EMS & NURSES:

At times, individuals with EMS certification, but from outside our service area, will coincidentally be passing through our service area at the time of an emergency and will offer assistance. These individuals should not be allowed to participate in patient care before showing written verification that their certification is valid. Regardless of the certification level of the individuals, scene control will remain with the primary crew.

FIRE DEPARTMENT PERSONNEL:

Are responsible for all fire suppression, hazard control and heavy extrication.

NOTE: In all rescue and extrication operations the role of EMS personnel will be to direct patient care and advise rescue teams on certain phases of the operation which might compromise the patient's condition.

LAW ENFORCEMENT OFFICERS:

Are responsible for traffic control and control of disruptive bystanders.

NOTE: All EMS vehicles should be parked so as to be clearly visible and not presenting a further traffic hazard or obstruction. Furthermore, all accidents scenes should be cleared as soon as possible so that traffic flow can resume and the probability of more accidents is minimized.

OTHER EMS SERVICES ON THE SCENE:

These situations usually arise when the exact location of the emergency is unknown and two or more services are dispatched to the general area where the emergency is thought to be. In the following it is assumed that all parties are acting in good faith manner solely in the best interest of the patient.

1. When approaching the scene of an emergency, which is out of the prescribed jurisdictional service boundary, the crew should continue their response and initiate patient care as required with the usual protocols.
2. If a crew from the area of the jurisdiction does not arrive on scene prior to the point in patient care when transport is needed, the crew should transport to their usual medical facility.
3. If a crew from the area of jurisdiction does arrive prior to patient transport, then both crews should negotiate further patient treatment and cooperatively determine transport.
4. Destination based upon the patient's condition, BLS v. MICU capabilities of the service, distance and capability of the medical center, etc. If there is any delay or conflict in making these decisions, supervisor on scene or senior medic shall make the decisions.
5. If a crew arrives at a scene within their service area, and finds that another service outside of its area is on scene and patient care has been started the above shall work in reverse.
6. If a state certified/licensed pre-hospital provider and/or crew member(s) from an out of county organization interferes with Washington County EMS in its service area, those individuals may be arrested and/or removed from the scene, at the request of Washington County EMS personnel by law enforcement.
7. On all scenes inside the City of Brenham; the Brenham City ordinance shall apply as written under the local law.

Washington County EMS	Patient's Family Members as Riders
Standard Operating Procedures	SOP 37

All EMS calls should be regarded as true emergencies, with patient care being the single most important factor. Family members riding to the hospital in the ambulance is discouraged because they tend to place the medical staff in a position of sharing attention with the patient. These distractions of assuring family members of the patient's condition, injuries and treatment given can present a significant problem to the EMS caregiver. Attentiveness toward the patient's chief complaint, injuries, vital signs, stabilization and psychological support can be critically compromised by these distractions.

However, it is recognized that occasionally there will be exceptional cases in which the EMS crew may decide that it is necessary to have a family member accompany them in the ambulance. In such cases, the following guidelines should be used:

1. Request by friends or family of the patient to accompany them to the hospital is left to the discretion of the crew.
2. Only one friend or family member should be allowed to ride with the patient.
3. They ride in the driver's compartment of the unit unless the patient is a minor and the parents have a calming effect on the child.
4. Seat belts and door locks shall be used.

THE EMOTIONAL STATE OF THE PASSENGER SHOULD BE SUCH THAT IT WILL NOT INTERFERE WITH THE TREATMENT OF THE PATIENT.

The only exception to the above guidelines is if the patient is a child and both parents request to accompany him/her, and if the person is the one that has to give consent to treat. But guidelines 4 and 5 still apply.

Washington County EMS	Patient Restraint
Standard Operating Procedures	SOP 38

Under normal circumstances EMS personnel should not attempt to restrain a violent patient. Law enforcement personnel should be called for assistance. However, any patient who presents a significant threat to him/herself or OTHERS may be physically restrained by EMS personnel.

Determine patient's competency to make an informed decision using the following:

1. Is the patient alert? Oriented times three (person, place, time)?
2. Does the patient understand his/her illness or injury and the potential for adverse outcome?
3. Can the patient describe his/her condition to you?
4. Does the patient understand consequences (including death) of not treating his/her illness or injury?
5. Does the patient understand the alternatives to immediate care by EMS?
6. Does the patient have any physical findings suggestive of impaired physiology that could affect decision making? Hypotension, hypothermia, hypoxia, head injury, alcohol/drug intoxication, evidence of CVA, symptoms of psychiatric decomposition.

When patient restraints become necessary, the following will be used:

1. The use of triangular bandages by slip knot technique should be utilized when at all possible to restrain extremities. This will prevent damage to the patient and or circulation concerns. Sheets may be utilized across knees or waist to assist in restraining the patient.
2. Use techniques which will cause no injury to the patient, the minimum amount of force possible will be used to secure the restraints.
3. Restraints shall allow for a small amount of movement in each extremity. In no case shall they be so secure as to prevent all movement.
4. Get assistance from a peace officer when possible and, if available, get the officer to accompany the patient in the ambulance to the hospital. (If the patient is handcuffed, the officer MUST accompany the patient in back of the ambulance in case the cuffs must be removed for an emergency.)
5. Chemical Restraint reference to "Psychiatric Emergencies" Washington County EMS Protocol. **Never leave a patient alone after any form of restraint. Document all pertinent details including signatures of witnesses if possible.**

Washington County EMS	Private or On Scene Physician
Standard Operating Procedures	SOP 39

For situations in which a Texas Licensed Physician is at the scene of an EMS call the following procedures should be followed. In all cases, the Pre-hospital Provider is responsible for management of the patient and acts as an agent of the Medical Director unless the patient's private physician is present (as in a physician's office and/or by telephone) and assumes patient care responsibilities. When EMS personnel are in direct contact with a patient's private physician he/she is to be respected as the senior medical person on the scene and their orders are to be followed, unless an out of county physician is making the request, the patient must be taken to the local hospital emergency department first. NOTE: see transport out of service area section.

Private Physician On-Scene:

Conduct yourself in a professional manner and respectful attitude at all times. The physician has certain professional and legal prerogatives as the senior medical officer on the scene.

- Advise the physician that you are operating under the Washington County EMS Protocol promulgated by the/this providers Medical Director, and request that you be allowed to follow these orders as needed.
- Follow any reasonable request of the physician. Pre-hospital Providers shall not comply with others which exceed their scope of practice or training.
- If the Pre-hospital Provider believes that the care rendered or requested by the private physician is inconsistent with quality patient care the Provider should contact On-Line Medical Control for guidance.
- When the physician elects to accompany their patient to the hospital, EMS personnel should respect the physician's wishes in the management of that patient during the entire course of EMS care of that patient.
- When the physician request that the patient be transported immediately, this should be done with all reasonable haste after obtaining patient consent.
- It is not appropriate to evaluate a patient previously evaluated by a physician prior to transporting that patient. However, it is reasonable to expect a physician or their representative to give an adequate report regarding that patient to EMS personnel and physicians will be continually encouraged by the Medical Director to give such a report.
- Once direct contact with a patient's physician ends, EMS personnel will give a progress report to the receiving Emergency Department physician by radio or phone. The physician may then give additional orders or change pervious orders if necessary, depending upon the patient's condition.

Intervener Physician On-Scene Wanting to Assume Patient Care:

A pre-hospital provider at an emergency scene should relinquish responsibility for patient management when the intervener physician has:

Been properly identified (i.e. Medical ID card),

Agreed to assume responsibility AND:

Agreed to fully document the intervention.

- The intervener physician should agree in advance to accompany the patient to the hospital if required or needed. However, in the event of a mass casualty incident or disaster patient care needs may require the intervener physician to remain at the scene.
- The physician assuming responsibility must personally initiate any procedure or administer any medication not within the scope and/or training of the Pre-hospital Provider.
- If the treatment at the emergency scene differs from existing EMS protocols and is contradictory to quality patient care, the Pre-hospital Provider retains the right to revert to existing EMS protocols for the continued management of the patient. On-Line Medical Control should be immediately established for guidance.
- In cases of disagreement between an Intervener Physician and On-Line Medical Control, the Pre-hospital Provider will follow the orders of On-Line Medical Control.

Washington County EMS	Protective Clothing
Standard Operating Procedures	SOP 40

The job of the EMT and Paramedic is inherently dangerous. It is incumbent of all personnel to utilize protective equipment to the fullest extent intended and use good judgment when working in dangerous environments or around hazardous objects. Personnel should make an educated decision as well as consulting with EMS Command Staff and other public safety officials on scene for protective clothing that may be needed. The following policy regarding protective equipment should be utilized with sound judgment from the attending paramedic. However, if PPE is not utilized in attempts to make medical rescue environments safe (both for the patient and the paramedic) the paramedic will assume responsibility and liability for the incident. Currently the second leading cause of line of duty death to paramedics is from violence, second only to vehicular accidents. Across the nation and globe departments are attempting to provide safer environments for its rescue personnel and body armor is one attempt in doing so.

Helmets are to be worn when available at:

1. At motor vehicle accidents where extrication equipment is required (except when the patient is outside of the vehicle).
2. At rescues (buildings, rough terrain, etc.,)
3. At close fire ground operations.
4. In designated hard hat areas (power plants, construction sites, etc.,) and at any other times when above normal risk of head or eye injury exists or easy on-site EMS identifications is needed (Mass casualties, natural disasters, or unruly, potentially violent situations). Chinstraps and cups are integral parts of the helmet's safety system and are to be worn any time the helmet is in use.

Gloves when available:

Leather gloves are to be worn at any incident where danger of hand injury exists (traffic accidents with broken glass or sharp metal, construction sites, working fires, etc.,). This will be a decision made by the paramedic on scene due to medical operations being extremely difficult while wearing leather gloves. Medical gloves shall be worn under leather gloves.

The Department does provide NFPA and OSHA approved protective clothing for rescue and emergency medical operations. This equipment is issued to every full time employee and three additional sets (Medium, Large, and XL) are made available to part time employees. This gear is well over \$1,000 for each employee and should be taken care of by the employee. Due to the extreme austere environment that paramedics and EMT's work in there is no perfect policy for when and when not to wear protective clothing. The senior official on scene will help guide this decision, however the following will be a general policy that should be adhered to when at all possible. Each crew member should keep their personal protective clothing in the ambulance when on duty. One member of each responding Medic Unit should properly dawn protective clothing when responding to the following situations:

1. All major vehicle accidents and 'unknown' accidents. During major vehicle accidents the possibility of a paramedic being exposed to bloodborne pathogens, chemicals, or other unforeseen substances is extremely high. For this reason one member of the responding crew (at a minimum) will wear protective clothing. If both attendants do in fact need protective clothing the one person already wearing will be able to buy the other attendant's time. The equipment should be donned prior to responding (when possible).
2. On motor vehicle accidents involving extrication rescues, where rescue equipment is required and/or gasoline spills.
3. At fire ground operations while standing by or actively involved in emergency medical care or rescue.
4. At night time where high visibility is advantageous for wearer safety, (vehicle accidents, on busy streets).
5. At any other time when above normal risk of injury due to fire, chemical agents, sharp metal, broken glass, mass casualty, natural disasters, etc.

Life vests when available:

During any water rescue or recovery of patients or any time paramedics are working around open water.

Lifting Belts when available:

During any time an employee is lifting/moving equipment and/or patients.

Reflective Safety vest when available.

Any time the EMS Crew is working in low light environments around a highway. This obviously includes motor vehicle accidents but can also include residences where the unit must be parked on or near a busy roadway or street.

Body Armor:

Any type of incident in which EMS may be exposed to harm as a result of violent or threatening act(s). Such situations may include, but not limited to: riots, fights, violent crimes, suicides, domestic disagreements, any weapon caused injuries, or any other circumstance in which EMS Personnel may reasonably fear for their safety.

Body Armor has statistically proven to save officers that have suffered from blunt trauma including vehicular accidents. Currently EMS leads the nation in LODD from vehicular accidents and for this reason all personnel are encouraged to wear their body armor at all times. As with any PPE the EMS Department does not wish to mandate the climate / environment but only wishes to increase the safety of the personnel.

Body Armor shall be worn when at all possible to the following:

- Any shootings or stabbing incidents
- Any civil disturbance
- Any SRT (special response team) response

- Standby or police situations involving violence
- Any domestic disturbance
- Any fights or suspected violence
- Any address where there is a known responder alert for safety
- Anytime the IC or command staff suggest its wear

The department issues body armor that is designed to be worn over the uniform shirts yet remain somewhat inconspicuous. The purpose is to provide safety and not draw undue attention to the paramedics. The body armor must have the department insignia if worn over the uniform shirts. If wearing a “street shirt” the armor must be worn when “off campus”.

Care and upkeep of PPE:

The department provides thousands of dollars of protection equipment in attempts to make the employees as safe as possible while working in emergency medical / rescue operations. No equipment can keep you from danger or even death in certain situations. The equipment that is issued to you is your responsibility and if it is neglected or carelessly treated you can be made to pay for repairs. Please read all of the manufacturers recommendations in reference to storage, cleaning, and inspection of gear. The county has purchased you a bag to maintain and store this gear in. **The rescue protective clothing should NOT be washed with hot water and should not be dried with machine dryer. It should be washed on gentle cycle and preferably a side load washer with no agitator and hung up to air dry. Body armor has specific instructions for care and maintenance that includes washing with mild soap and water if soiled. Do NOT use bleach or submerge in water.**

What is provided for your safety:

- Latex Gloves (all sizes)
- Leather Rescue Gloves
- HEPA filter Masks (appropriately sized)
- Reflective Vest and ballistic vest
- Incident Command Vest
- OSHA approved splash suits and masks
- Class A uniform
- Rain Jackets
- Light weather Jacket or “job shirt”
- NFPA / OSHA / blood borne pathogen resistant protective clothing
 - o Coat with Liner / Rain retardant
 - o Pants
- Gas Mask with appropriate cartridges
- SCBA

Washington County EMS	Radio License
Standard Operating Procedures	SOP 41

Radios:

Washington County EMS issues hand held radios to all full time employees and part time employees who live in the county. These radios are to be carried away from the station while on duty. This equipment is your “Life Line” should you need additional help. Each ambulance is equipped with a mobile radio allowing direct radio communication to all county/city agencies. The radio channels are to be used in emergencies, per the dispatch frequency assigned by the central dispatch and County Sheriff.

Cellular Phone:

Each Washington County EMS allows each individual to have access to their own cell phone device.

Notifications:

The City of Brenham Communications Dept. (Dispatch) will notify employees via text message on their personal cell phones if the employee chooses to do so. The employee is responsible for any text message fees.

Washington County EMS	Radio / Telephone Communication
Standard Operating Procedures	SOP 42

EMS Personnel should attempt to follow a consistent protocol when communicating patient information to other medical personnel via telephone or cellular telephone.

The following procedures will be used when communicating with the Emergency Department:

1. Alert the emergency department physician as to the urgency of the information to be transmitted. Transmission can and should be brief and to the point, and not require any “decoding” by the physician.
2. State the patient’s age and sex, followed by a clear and concise description of the situation and patient condition as determined by your assessment.
3. Report all pertinent history and vital signs, and describe the treatment rendered.
4. Request orders if necessary and give your ETA.
5. Reports should be given as soon as possible to ensure the emergency department has adequate time to prepare for your patient.

Every aspect of radio communications is to be conducted in a uniformed and professional manner by all EMS employees. To minimize and simplify radio communications, clear text shall be used. The number zero shall be used rather than “O” when stating the unit number. EX: M1 responding to six-zero-three Hillside, Brenham. The unit number shall be given at the beginning of all transmissions.

Standard Letters for Phonetic Spelling:

A-adam	N-nora
B-baker	P-paul
C-charles	Q-queen
D-david	R-robert
E-edward	S-sam
G-george	T-tom
H-henry	U-union
I-ida	V-victor
J-john	W-william
K-king	X-x-ray
L-lincoln	Y-young
M-mary	Z-zebra

Radio reports- All personnel are expected to utilize the correct format and sequence in all radio reports. **MDTs should be utilized as much as possible to reduce radio traffic.**

Response acknowledgements.

- When considerable distance from unit (in the hospital, a restaurant, etc.), the crew will acknowledge by portable radio as soon as possible.
- Crews will acknowledge by vehicle radio, ASAP, that they are responding en-route. Communications shall acknowledge the unit with the appropriate call number and patient information.
- Crews should notify communications of any delay in response (traffic congestion, blocked railroad-crossing, etc.).

Arrival Acknowledgement.

- Crews will notify communications of the unit arrival on scene by MDT if possible. Crews will use the radio if the MDT is unavailable. EX: EMS, Medic One, Brenham has arrived on scene.
- The arriving crew will request an address verification if the address is questionable.

Initial Report.

- The unit will give the correct address or location, if different from the initial dispatched location.
- The unit will transmit a request for additional support if needed.

Status Report.

- A status report will be transmitted as soon as the unit can determine what action they are going to need to take.
- If it is a traffic accident, the crew will have to advise communications of the number of patients, ASAP. This should include the total number of patients and the number of patients that will be transported.

Departure Report.

- Upon leaving the scene, the unit shall advise communications of the number of patients, what code, and the destination of transport.
- Crews should advise communications by MDT whenever possible. If it is not possible to notify by MDT then the radio should be utilized. EX: EMS, Medic One, Brenham. Transporting two patients code one, to Scott and White-Brenham.

Washington County EMS	Refusal or Treatment and Transport
Standard Operating Procedures	SOP 43

When a patient refuses treatment and/or transport by a Washington County EMS unit for any reasons the following steps should be taken:

The definition of a patient is any human being that:

- Has a complaint suggestive of potential illness or injury.
- Requests evaluation for potential illness or injury.
- Has obvious evidence of illness or injury.
- Has experienced an acute event that could reasonably lead to illness or injury.
- Is in a circumstance or situation that could reasonably lead to illness or injury.

No patient is defined as:

- No patient upon arrival of EMS, **OR**
- False call, **OR**
- Person or people on scene did not request an ambulance **AND** deny any physical complaint **AND** EMS personnel cannot visualize any injury or evidence of injury or illness **AND** the person on scene is competent to make a decision.
- If the patient called for the ambulance, the “No Patient” classification no longer applies.

Assess the physical and psychological status of the patient to the best of your ability as the patient permits. This should include a complete set of vital signs (whenever the patient allows the attendant to obtain the Vital Signs). Problems occur when a person who has refused treatment and/or transport, later suffers harmful consequences after the EMS service leaves. Some of the significant legal questions that arise are:

1. Can it be determined what information the patient was given to make the decision to refuse treatment and/or transport?
2. Did the patient have the capacity to make an informed decision?
3. Did they fully understand the risks that they were taking by refusing treatment or transport?
4. What options were given to the patient if they changed their mind? If deemed an emergent situation, explain to the patient the necessity of seeking further medical help by being transported to a local facility.
5. When possible, have your partner, a family member or a law enforcement official explain the same concerns to the patient.
6. If all reasonable options have been exercised; try again to convince the patient of the need for further care.
7. If the patient still refuses to be transported; have them sign the back of the run form in the area for the patient’s refusing transport. The front of the run form shall

be filled out completely as soon as possible and a complete and detailed description of the incident shall be written on the back in the space provided.

Documentation should include the following:

1. Oriented to person, place, and situation?
2. Altered level of consciousness?
3. Possible head injury?
4. Alcohol or drug ingestion by exam of history?
5. Complete description of illness/injury.
6. Advised to seek medical attention.
7. If parent/guardian was on scene and or contacted via telephone.
8. All patients will be advised the following:
9. Medical treatment/evaluation needed.
10. Ambulance transport needed.
11. Further harm could result without medical treatment/evaluation.
12. Transport by means other than ambulance could be hazardous in light of patient's present illness/injury.
13. If the patient will not sign the back of the run form document the refusal and get substantiating witness signature, preferably law enforcement if possible.

Regarding Witnesses

1. EMS personnel may sign as witnesses on a refusal form.
2. On any unusual or questionable refusal, law enforcement, fire department personnel or credible bystander should sign as a witness.
3. It should be made clear that the cosigner is witnessing only the refusal and not making a comment on any medical situation.

EMS Station Walk-In Patient(s)

1. EMS Station Walk-In patient(s) shall receive treatment, transport and/or follow the Refusal of Treatment/Transport policy.
2. Crew member(s) encountering any patient at the EMS station will complete a run form with the proper signature(s).
3. Should a minor request aid without the presents of his/her parent (guardian), an attempt should be made to obtain permission for treatment/transport, if they're not available treat and transport.
4. A parent (guardian) signature is required on the run form when not treating/transporting.
5. Should the minor refuse treatment/transport and the parent (guardian) not be available, contact law enforcement officials.

Washington County EMS	Self Protection
Standard Operating Procedures	SOP 44

This policy provides guidelines for EMS personnel to protect themselves from physical danger by a violent person with or without a weapon.

In all cases where the threat of physical harm is probable (i.e., domestic violence, hostage situations, psychiatric patients, any situation where there may be weapons on the scene), EMS personnel should contact law enforcement through communications before entering the area. The EMS crew should NOT enter the area until law enforcement reports that the scene is secure. At no time should personnel attempt to manage the situation without aid. Primary emphasis in such situations should be the safety of the crew.

If already on the scene, EMS personnel, when threatened with bodily harm either by serious verbal threat or weapon(s) should make every effort to avoid a confrontation by leaving the premises/scene and requesting law enforcement assistance.

Although avoidance is always superior to confrontation, some violent scenes may require self-defense. In addition to methods to control a person with physical restraint and the use of equipment (e.g., metal clipboards, jump kits, stretchers) or other items such as furniture to block an aggressor, self-defense measures may include physical maneuvers that can allow escape. If escape cannot be achieved and the EMS personnel is confined in a dangerous situation (e.g., being held a hostage), he or she should do the following:

1. Remain as calm as possible
2. Avoid any confrontation
3. Play an active role with the captor in resolving the incident
4. Focus on a peaceful resolution and escape

Under situations where EMS personnel are exposed to serious verbal threat or threat of weapon(s) where efforts to avoid confrontation are unsuccessful, and personnel injury seems imminent, then EMS personnel may use any measure reasonable and prudent to protect themselves from injury or death. Immediately notify law enforcement.

Washington County EMS	Sexual Assault
Standard Operating Procedures	SOP 45

In the event a patient reports that he/she has been sexually assaulted, the following procedure should be followed:

1. With the patient's permission, contact law enforcement immediately.
2. If a weapon is involved, then law enforcement **MUST** be contacted.
3. To protect patient confidentiality, avoid using the patient name or the nature of the injury over monitored radio frequencies.
4. History taking should be limited to information pertinent to the patient's injuries and subsequent treatment.
5. Any detailed description of the assault is unnecessary and may be psychologically injurious to the patient.
6. Injuries should be treated following standard triage principles. Wounds containing debris should not be cleansed at the scene, unless they are life threatening.
7. The site of the sexual assault should not be examined by EMS personnel unless obvious bleeding needs to be controlled.

In addition to the treatment of physical injury, particular attention should be paid to the psychological injury suffered by the patient. Referral to a Sexual Assault Program will be helpful. Initial contact with the victim should include the following:

- Non-judgmental and supportive attitude
- Empathetic and sensitive comments
- Quiet speech
- Slow movements
- Considerate gesture (ensure privacy and respect modesty)

The patient should be advised not to wash, shower, brush his/her teeth, use mouthwash, douche, urinate or defecate (if at all possible) prior to examination in the Emergency Department. If the sexual assault was oral, they should also be advised not to smoke or drink. (This is important so that potentially valuable physical evidence may be preserved prior to the hospital examination.) The scene should be treated as any other crime scene with special attention given to the preservation of evidence. Any clothing must be treated as any other crime scene with special attention given to the preservation of evidence.

Each garment should be placed separately in its own paper bag. It is preferable that each piece of clothing be folded inward, placing a piece of paper against any stain, so that the stains are not in contact with the bag or other parts of the clothing. This policy provides guidelines for EMS personnel to protect themselves from physical danger by a violent person with or without a weapon. If moisture of any kind is on the clothing and might leak through the paper bag, then the bag should be placed inside a larger paper bag with the top of the second bag left open.

Washington County EMS	Special Patients
Standard Operating Procedures	SOP 46

We do not charge the city or county for patients in law enforcement custody.

We do not charge city and county employees when injuries occur in the line of duty.

Medicaid Patients:

Phone 1-800-873-6768 or Fax 512-343-4100 for Medicaid patients being transported NON-EMERGENCY to facilities and/or residence. The healthcare provider for the patient is responsible for getting the PAN#.

SUPPORTING DOCUMENTATION: All prior authorization requests must be accompanied by supporting documentation. The following are examples of supporting documentation.

- Admit and discharge records with prognosis.
- A history and physical from the primary care physician or the care plan with daily activity sheet from the nursing home.
- A history and physical that has been performed within one year or a letter from the primary care physician (PCP).

If a letter is sent requesting prior authorization, it must be on the physician's letterhead and signed by the physician. The letter must include a detailed description of the client's physical disability or other information documenting that the client meets the severely disabled criteria.

In hospital to hospital or hospital to outpatient medical facility transfers and other situations where documentation is not immediately available, the ambulance unit will consider information over the telephone. NHIC may request the facility to fax the supporting documentation when available.

What facilities or specialist is available at the other facility that is not available here?

- The patient must be able to go by stretcher only.
- You'll need the following information when you call for the PAN number.
- Our provider number is #A05066617.
- DOB, Name, Address, Age, Medicare number, Medicaid number, reason for transfer to another facility, physician's name here and their destination and the reason the patient is stretcher bound.
- C.I.D.C. (Critically Ill & Disabled Children)- This program is a branch of Medicaid and will be handled the same as any other Medicaid patient following the above listed guidelines transfer, on any and all Medicaid patient(s) where the patient may not really need an ambulance.

- Know the gestation of the pregnant patient.
- Patient or a patient representative must be notified prior to transport if there is a possibility Medicare, Medicaid, or Insurance may not pay for EMS transport and the Signature Authorization Form must be signed.
- The Medicaid client requests a service that in the opinion of the provider may not be reasonable and medically necessary for the client's care.

The service received is not a benefit of the Texas Medical Program.

The provider accepts the client as a private pay patient.

The client is accepted as a private pay patient pending Medicaid eligibility determination and does not become eligible for Medicaid retroactively.

VA Patients:

- For prior approval we need a PAN from the admission officer. Monday-Friday 8a.m.-4p.m. at 1-800-925-9126 Fax 1-512-514-4205
- After 4p.m. and on weekends call 713-795-4111 and ask for admitting and request a PAN.
- Contact the county's VA officer for assistance. He can be a great deal of assistance.
- On any call, always receive the name and title of who you talked to.
- Never advise a patient or anyone else that coverage will not pay an ambulance bill.
- On auto accidents always document the vehicle insurance information, since we may bill that insurance for payment. Also, document the type and year model of the vehicle, since they may have more than one car on their insurance.
- Always check if any information from a driver's license is accurate, since many people don't change their address on their license.
- If a patient gives you general delivery as their address, get a location where they live and their next of kin, phone number, and name.
- On patients that life support efforts will be ceased, as in auto accidents, ask the law enforcement officers to check their driver's license to see if they are an organ donor. If so, notify Medical Control immediately.
- On lifeline patients ask for the name of the company, phone number, and name of caller. We can receive important information from them.

Washington County EMS	Telephone Answering Policy
Standard Operating Procedures	SOP 47

All telephone calls should be answered in accordance to this policy.

1. When answering the telephone you should notify yourself by saying “Washington County EMS and then stating your name”. Always remember that this is a place of business and act professional at all times.
2. You should determine if it is an ambulance call or not. Although we have 911, nursing homes and some private citizen will still call on our non-emergency lines.
3. If the call is for someone else get the name, who they represent, place them on hold and tell the person they are requesting what line they are on.
4. When answering a call from dispatch find out if it is a medical call or trauma call and what is the patient’s respiratory status (Is the patient breathing?). If it is a trauma call find out the number of patients and if anyone is trapped. Also find out which law enforcement units are also responding. Also find out if any weapons are involved.
5. Get the exact location of the call and a cross street.
6. If a medical call get the nature of the call.
7. If it is a 911 call be sure that we have received a 911 printout.
8. If it is an emergency out of county treat it as you would a non-emergency out of county, however confirmation can be done while the crew is enroute to pick up the patient.
9. If the family is requesting an out of county transfer, advise them that we need a local doctor to order the transfer, or go through our medical directors and/or ER physician. If the crew determines the patient is not stable and it will risk the patient’s welfare by transporting out of county they will transfer the patient to the local ER to be stabilized. If they have a local doctor ordering the transfer contact that doctor to confirm that he has ordered the transfer.

Obtain the following information for transfers:

1. Is this an emergency? (Confirmation from TMC-ED to another receiving ED is not required).
2. Date of transfer and requestors name.
3. Non-emergency bed confined Medicare patient (A PCS is required & Medicare#).
4. Non-emergency Medicaid patient (PAN # required & Medicaid #).
5. Pick up time.
6. Patient’s name (if non-emergency may require additional personal information).
7. Destination (Receiving Facility) physical address.

8. Sending Physician.
9. Accepting Physician (specialty).
10. May require an explanation as to what is available at receiving facility that's not at Scott and White-Brenham, i.e. a Medicare patient transferred to see cardiologist.
11. Additional pertinent information pertaining to the patient's transport, i.e. DX, medications, EKG monitoring required, etc.

Washington County EMS	Third Out Riders Rules and Regulations
Standard Operating Procedures	SOP 48

All EMS third-out riders are at all times to conduct themselves with proper decorum.

They are to refrain from:

1. Use of alcoholic beverages prior to and during shift.
2. Use of profane or abusive language.
3. Use of excessive conversations while riding in the unit which may interfere with radio communications.
4. Making remarks or voicing opinions to patients or family members, bystanders, police officers, fire personnel, or first responders in any manner which would tend to provoke or degrade anyone or escalate tension/anxiety.
5. Making known to any person not authorized, any information concerning the emergency call, patient information or outcome.
6. Using information gained through the EMS third-out rider program for personnel gain.
7. Wearing on their clothing any article, sign, or symbol that advertises any product, business or organization.

EMS third-out riders are to:

In the station:

1. Adhere to all policies and procedures pertaining to EMS personnel while in the station.
2. Provide own transportation to and from the station.
3. Bring sufficient money to cover meal expenses as crews may eat out of the station or share in station cost.
4. Shall not bring any other person to the station during their ride out time.

In the unit:

1. Ride in designated seat with the seat belt attached at all times.
2. Remain in or near the unit while on an emergency call.
3. Not remove any equipment from the unit unless expressly directed to do so by the crew.
4. Third-out riders are not authorized to carry radios and/or pagers.
5. Are to be observers only unless instructed by a crew member (exceptions are students who have clearance to perform certain procedures as a part of their training program).
6. EMS third-out riders may not carry any weapon during their tour of ride out, or have any on EMS property.

- EMS third-out riders are to dress neatly and conservatively at all times. Conservative shoes, including black athletic type shoes, or boots may be worn. It is recommended that sturdy shoes be worn. Sandals or tennis shoes are prohibited. Hair must be groomed. Blue jeans, shorts, and t-shirts are prohibited. Cleanliness and physical hygiene are required at all times.
- All third-out riders are subject to removal for any violation of the above rules and regulations. Additionally, due to operations or training requirements, they may be asked to leave at a moment's notice.
- Injury to a third-out rider:
- On duty supervisor and third-out rider should fill out an incident report and sign it. The third-out rider should be sent home if on duty supervisor deems the work environment has become unsafe.

Washington County EMS	Third Out Riders in EMS Units
Standard Operating Procedures	SOP 49

Third-Out Riders

1. All third-out riders must sign a third-out rider release form prior to riding out.
2. Only authorized persons will be allowed to ride on an EMS vehicle.
3. Third-out riders must follow all requirements and rules prior to and while riding.
4. No one less than eighteen (18) years of age may ride without expressed written permission from the Director. EMS Explorers and First Responder will be addressed in a separate policies/agreement and should refer to that policies/agreement concerning any questions about their operation.
5. It is the responsibility of all EMS personnel to assure that the rider has been approved to ride and a third-out rider release form has been signed.
6. It is the responsibility of all EMS personnel to note the personnel appearance of each third-out rider when they arrive to ride out. If he/she does not meet the rules and regulations pertaining to dress, he/she will be advised by the EMS personnel and will not be permitted to ride until he/she has complied with the rules.

Third-out riders are persons who fall into four groups - observers, explorers, first responders and student interns.

Observers:

These are certain individuals, who for some personal reason may desire the experience of pre-hospital care by observation. Frequently this is to gain a sense of the EMS roles in the community and to understand the interaction of various agencies. Observers should not be involved in the patient care process, only allowed to observe EMS personnel render care to the patient.

Student Interns:

Their role is to interact in the patient care process by performing duties as delegated by the affiliate agreement with the training institution. The amount of involvement is to be determined by the senior medical staff on the ambulance.

Interns should perform the skills, as determined by the senior medical crew member which falls within the practice for the certification the student is obtaining.

NOTE: Interns are “in training” and therefore should never be left in the role of providing sole care for the patient. Not enough skill or training may have been obtained by the student to permit critical independent judgments. All decisions should be agreed upon by the senior EMS crew member

Washington County EMS	Third Out Riders Release
Standard Operating Procedures	SOP 50

In consideration of being allowed to accompany Washington County EMS personnel on ambulance calls and otherwise participate in the EMS program: I, the undersigned, binding my heirs, executors, administrators, and assigns, do hereby release and agree not to hold liable, Washington County EMS, its officers, agents, and employees from any and all actions, causes of actions, claims, injuries or death sustained by me or my property while participating in the EMS program. I further agree, binding my heirs, executors, administrators, and assigns, to indemnify, hold and save harmless action, claim, damage, award or judgment incurred or suffered by the above EMS service or individuals as a result of any act or omission by me or caused by me while participating in the above named program.

In addition, I make the following representations and acknowledgments upon which I intend the EMS service to rely:

I understand and agree that while accompanying any EMS employee during his/her duties, I am to be only a lay observer and bystander with no active role whatever and that I will have and am given no duties, rights, powers or authority whatever other than those conferred by law upon any other person in like similar circumstances as may arise from time to time.

I realize and agree that while participating in this project, I will not be an agent, servant or employee of Washington County EMS and therefore will not be covered by Washington County EMS for any worker's compensation, death, or disability benefits.

I realize that as an inherent incident of this program, I will at unpredictable times be placed in both foreseeable positions of considerable danger and agree that neither the Washington County EMS nor any of its officers or employees shall be obligated to take any steps or action to protect my person or provide a means of withdrawal or retreat for me, and release them of any duty to do so.

I agree that any information I may gain, through participation in this program will be used by me only for my personal educational purposes except where I am summoned as a witness in any administrative or court proceeding.

I understand that my participation in the above named program is a privilege subject to revocation at any time by the EMS Director.

Rider's Signature / Date:

Print Rider's Name:

If indicated, the Rider's Parent or Guardians Signature:

Washington County EMS	Transporting Violent Patients
Standard Operating Procedures	SOP 51

EMS personnel will, on occasion have to deal with a belligerent/violent patients.

They may refuse treatment and refuse to sign a release. If possible, law enforcement should be called to witness the refusal and control the belligerent person. If the person does not need ambulance transportation, then law enforcement should assume responsibility for the patient.

Under normal circumstances, EMS personnel should NOT attempt to restrain a violent patient. Law enforcement should be called for assistance. When necessary, transportation to a hospital will be made following police arrest or restraint of patient. Be sure to document.

*******Reference Patient Restraint Protocol*******

Washington County EMS	Vehicle Breakdown
Standard Operating Procedures	SOP 52

If the vehicle breaks down, notify communications immediately. Whether enroute to the scene or to the hospital:

1. Stop the vehicle immediately.
2. Call for a second unit if a patient is on-board.
3. Attempt to safely mark your vehicle area with the proper warning devices (triangles, road flares, etc.).

If out of county GET THE PATIENT TO THE HOSPITAL BY ANOTHER EMS SERVICE AND THE VEHICLE BACK TO WASHINGTON COUNTY, VIA WRECKER, ETC.

Contact the lieutenant on duty, if not available contact the EMS Director or Captain.

Should another EMS service assist in transporting the patient, it is the responsibility of the attending crew member to accompany the patient to the receiving facility if indicated. Be sure and get the name of the company, attendants, address and phone number of the other EMS service.

Washington County EMS	Vehicle Maintenance
Standard Operating Procedures	SOP 53

Change of Shift Reporting:

The outgoing crew will be responsible for reporting to the oncoming crew any use of supplies which have not been restocked and/or any malfunctioning equipment (including the vehicle). The oncoming crew will be responsible for verifying the on-board presence of all items on the supply list and for verifying the working condition of all medical equipment, as well as all aspects of the EMS vehicle itself. Supplies will immediately be restocked and any mechanical problems will be reported and dealt with as soon as possible. In addition to the crews restocking, the Station Lieutenant (at shift change) will meet and the oncoming supervisor should be made aware of any operational needs.

Reporting Equipment & Mechanical Failure:

First, complete a Vehicle & Equipment Malfunction/Damage/Replacement Form and submit it to the shift supervisor. Second, the supervisor will make the appropriate arrangements to replace and/or repair the problem (a copy of this form will be placed on the appropriate supervisor's desk). Third, once a solution has resolved the problem, it will be documented at the bottom of this form by the supervisor. Fourth, a copy of this form will be placed in the vehicle maintenance book and/or filed.

Reserve Unit:

This provider has a total of five units, four of those units are listed with TDH as MICU and the fifth is a reserve unit. This reserve unit is not equipped for immediate use and is to only be used in case of mechanical failure in one of the other four. When a unit is going to be out of service for more than one day, the reserve unit is to be stocked with the other unit's supplies/equipment. Any other use of this unit for patient care must be reported to the Texas Department of Health.

THD Requirements:

UNDER NO CIRCUMSTANCES should a vehicle be placed in service which has:

- Supplies insufficient to meet EMS licensing requirements.
- Supplies insufficient to render reasonable patient care.
- Mechanical deficiencies great enough to compromise patient care.
- Mechanical deficiencies great enough to endanger the patient, crew, or the public. If any one or any combination of the above occur, the vehicle should be placed out of service and replaced by a back-up unit until appropriate remedial measures have been carried out and the supervisors and/or Director have been notified.

Unit Log Books:

There are maintenance books for each unit located on the shelf in the report writing room with the time sheets and gas log. After the unit is brought back from maintenance, make a copy of the invoice. Stamp or write the invoice with the date and write in the line item code. Sign the original invoice. Place one copy in the vehicle maintenance lieutenant's box & put the original in the secretary's folder.

Washington County EMS	Vehicle Operations
Standard Operating Procedures	SOP 54

Code 1 designates the operation of the EMS vehicle without the use of emergency lights or sirens. Employees will drive the vehicle under routine driving procedures in accordance with the Texas Uniform Traffic Act. Headlights will be used when transporting a patient or while enroute to a designated emergency call. ALWAYS START THE VEHICLE WITH ALL LIGHTS AND SYSTEMS TURNED OFF.

Code 2 designates the operation of the EMS vehicle using emergency lighting without the use of an audible siren and/or air horn. **Employees WILL NOT operate an EMS vehicle under code 2 conditions as this violates state law.**

Code 3 designates the operation of the EMS vehicle using emergency lighting, siren, and/or air horn, and headlights (emergency conditions). Employees are authorized to utilize the EMS vehicle under Code 3 conditions when:

1. Enroute to a designated emergency call.
2. The EMS crew determines that the patient's condition is unstable.
3. Communications or an EMS supervisor give expressed authorization.
4. Employees operating an EMS vehicle under Code 3 conditions may exercise privileges set forth in Article 2, Section 24 of the Texas Uniform Traffic Act:

Any legal changes to the above shall over-ride the proceeding:

- Park or stand in restricted area.
- Exceed the maximum speed limit so long as life and property are not endangered.
- NOTE: Cities and towns may regulate emergency vehicle speed by ordinance.

Disregard regulations governing direction of movement or turning in a specified direction. Employees are not to drive against traffic flow on a one way street unless it is the only prudent way to get in and out of an emergency scene.

NOTE: The above provisions DO NOT relieve the driver from the duty to drive with regard to the safety of all persons and DOES NOT protect the driver from the consequences of reckless operation of the vehicle. The driver should always consider the environment when exercising these rights; including weather conditions, traffic load, pedestrian traffic, existing hazards, etc.

All persons driving Code 3 will be required to come to a complete stop prior to entering a controlled intersection. A controlled intersection is defined as one where the right-of-way is controlled by a stop sign (including all way stop) or a traffic signal displaying a steady or flashing red light facing the ambulance. Signal controlled intersections displaying a green light are to be treated with usual caution.

Upon arrival at a call the EMS employee will park the vehicle in such a manner that the vehicle protects the patient and employees while not unnecessarily posing a hazard or impending traffic.

Unless necessary for safety reasons, all emergency lighting and nonessential systems on the vehicle will be turned off on arrival at a call and the parking brake should be set.

When backing an EMS unit, one person will be required to station him/herself at the rear of the unit to spot for the driver. If the unit is involved in a collision when utilizing a spotter, then both the driver and the spotter can be held responsible for the accident.

Should a critical patient need to be transported Code 3 and no spotter is available, then the driver should attempt to make a 360 degree walk around the unit to be sure there is adequate clearance to back the unit safely.

NOTE: A spotter shall be used when backing into the EMS station and observe electronic doors.

NEOP/Re-Training

In effort to ensure each employee has a basic understanding of driver expectancies and knowledge, areas of topic for driving are discussed and trained on as followed:

1. Scanning the road and area while driving.
2. Maintaining an area of cushion around your ambulance.
3. Covering your break when you scan a potential hazard.
4. Ambulances have longer braking, stopping, and following distance.
5. Ambulances have more blind spots.
6. Controlling your emotions while driving to a scene.
7. Driving with due regard.
8. Obeying traffic laws is not omitted when running emergency traffic.
9. Have spotters when backing.
10. Driving on gravel roads.
11. Driving on roads with multiple curves
12. Driving on roads with multiple hills
13. Backing around obstacles and angles.

All above topics and SOP 54 is covered during NEOP process or in the event an employee needs re-training on ambulance driving.

Washington County EMS	Washington County First Responders
Standard Operating Procedures	SOP 55

Agreement: Washington County First Responders are a first responder organization currently registered by the Texas Department of Health. Washington County EMS and the Washington County First Responders maintain an agreement, approved by the Commissioners Court and EMS Medical Director, and are required by law to follow all requirements of this agreement.

Service Area: Washington County First Responders will respond within the geographical area served by the Washington County EMS. The City of Brenham is not included, unless requested by a Washington County EMS employee and/or all EMS resources are exhausted, the Brenham Dispatch may request assistance.

Supplies: Washington County First Responders will replace disposable supplies from Washington County EMS. A charge will be submitted to the EMS billing office within 24 hours of the ambulance call.

Patient Documentation: Washington County First Responders are required to complete a run sheet for each patient and/or ambulance run. This organization has its own run sheet and includes a charge list. This form is to be complete and submitted within 24 hours of the ambulance call and may be faxed (must alert billing staff).

Medical Direction: This organization works under the direction of the Washington County EMS Medical Director and a Basic Life Support Protocol, approved by this physician.

Discipline: In the event any discrepancies arise between Washington County EMS and Washington County First Responders a meeting of the Washington County EMS Director of Operations, Washington County EMS Medical Director, Washington County First Responders Chief, and Assistant Chief to resolve discrepancies.

NOTE: First Responders utilize their skills through the delegation of the Washington County EMS Medical Director and will follow his or her orders under the Texas Board of Examiners, Chapter 197.2. In addition will be subject to The Texas Health and Safety Code, Section 773.061; giving disciplinary power to the Texas Department of State Health Services.

Reporting Discrepancies: Should a Washington County EMS employee have any discrepancies with a member(s) of the Washington County First Responder organization an incident report is to be completed and submitted to the on duty supervisor.

Uniforms: Washington County First Responders will wear uniform while attending Stand-Bys and on calls when available. All First Responders will be issued an I.D. badge indicating the following:

Membership status of the Washington County First Responders

Name

Level of Certification

NOTE: This I.D. bade will be displayed on the First Responder on all EMS calls and/or Standbys.

Training: Washington County First Responders shall make an attempt to have at least 80% of their personnel TDSHS certified or licensed. Those that are not TDSHS certified of license shall maintain a AHA, or Red Cross “CPR Card”, and a first aid card by the American Red Cross, or the National Safety Council. Monthly training sessions are conducted and members that do not attend 60% of training may have privileges suspended or revoked. The First Responders Chief is responsible for verifying proficiency (documentation) of all First Responders training, certification and license.

Orientation: Washington County First Responders are required to be familiarized with the ambulance, equipment, and supplies. A First Responder riding out on ambulance shifts accomplishes this. It is the responsibility of the First Responders Chief to assure proficiency (documentation) that all First Responders attend orientation/ride-out. These orientation and ride-outs session can be conducted any day of the week.

Administrative Policies: The Washington County First Responders have implemented separate policies from the Washington County EMS. These policies were developed by their organization and will be followed accordingly to the agreement between the Washington County EMS and Washington County First Responders.

Disabled: If the Washington County First Responders disbands, then all supplies, equipment, money or other items of material value shall be turned over to Washington County within 5 working days.

Washington County EMS	Washington County EMS NEOP Uniform
Standard Operating Procedures	SOP 56

When an application is received, it will remain on file for one year before being discarded.

Once an applicant has tested, their application will remain on file for 6 months from the date of testing before being discarded, unless, the applicant has scored in the top two of their hiring process. If the applicant scored in the top two of the process, their application will be kept on file for one year from date of test.

When Washington County EMS conducts a New Hire Testing Process, it will be encouraged that all personnel participating in the interviews, be present at the testing (physical and written) of the candidates.

During the Interview process, the interview panel will be made up of the following staff:

- Director or Captain (if available)
- Lieutenants
- Field Training officers
- 1 Seasoned Employee

NEOP Employee Uniform: While undergoing the full NEOP process the following uniform will be required if the employee has not been issued a uniform:

- White Pullover 3 button shirt (Polo Style)
- Navy Blue EMT Pants
- Black Belt
- Black Boots

When the NEOP employee nears the end of their NEOP Training, a uniform will be ordered through the Administrative Secretary.

Washington County EMS	Washington County EMS Computer Use
Standard Operating Procedures	SOP 57

This policy is enforced to maintain a respectable and ethical work environment as well as ensure the proper use of all electronic equipment. WCEMS permits the proper use of WCEMS computers, Internet, and electronic mail in accordance with these guidelines to ensure appropriate communications and to protect the integrity and security of our information system. The following policy does not apply to personnel laptops.

1. WCEMS provides personnel with Internet access to encourage the use of this powerful tool for work-related research and fast retrieval of up-to-date information on a wide variety of subjects relevant to our organization's mission. (i.e. medication research, equipment research, continuing education sites, etc)
2. Internet access and use is a necessary function for billing and claim submission purposes, as well as ePCR activity.
3. To ensure the Internet access is used in furtherance of appropriate objectives and to provide a measure of control and structure to its use. WCEMS applies strict guidelines to Internet access.

The following uses of the Internet are prohibited:

1. Participation in personal domain sites included but not limited to yahoo messenger, my space, you tube, Facebook, messenger sites, etc.
2. Sending or posting discriminatory, harassing, or threatening messages or images.
3. Accessing any websites that are pornographic in nature including any "adult sites".
4. Stealing, using or disclosing someone else's code or password without authorization.
5. Copying, pirating, or downloading software and electronic files without authorization.
6. Sending or posting confidential material, including information about internal WCEMS matters.
7. Violating copyright laws.
8. Failing to observe licensing agreements.
9. Engaging in unauthorized transactions that may incur a cost to the organization or initiate unwanted Internet services and transmissions.
10. Sending or posting messages or material that could damage WCEMS image or reputation.
11. Attempting to break into the computer system of another organization or person.
12. Using the Internet for political causes or activities, religious activities, or any sort of gambling.
13. Sending offensive or sexually explicit messages, or viewing websites with sexually explicit, pornographic or offensive materials.

All employees are assigned a WCEMS email address and may only use that address for business purposes.

The computer infrastructure WCEMS uses daily is an integral part of our operation. We rely heavily for patient reporting, medical records management, scheduling, etc. The misuse of our computer infrastructure will not be tolerated. Any violations of this policy will be dealt with swiftly and completely up to and including termination.

Washington County EMS	Wash Co EMS "Safe Baby Moses Site"
Standard Operating Procedures	SOP 58

Introduction: Of the over 100 babies that are abandoned each year in Texas, about 16 will be found dead. An unknown number of babies are never found. There is a solution. A Texas Law provides a responsible alternative to mothers who might otherwise abandon, harm, or murder a newborn child. This law is nicknamed “The Baby Moses Law” from the ancient story of the baby Moses who was abandoned, but was saved and grew to become an important person. This bill was authored by Geanie Morrison, who is a State of Texas Representative for the Austin/Victoria area, which was put into law on September 1, 1999.

Under the Texas State Law 262.301, Texas fire stations, EMS stations and hospitals are “designated emergency infant care providers” for these abandoned babies. In addition, Texas State law 262.306 says, “Each designated emergency infant care provider shall post in a conspicuous location a notice stating that the provider is a designated emergency infant care provider location and will accept possession of a child.”

This policy is to be enforced with regard to Texas Family Code Chapter 262 Sub-chapter D, concluding that Washington County EMS is considered a safe baby drop site.

What are my responsibilities as an emergency infant care provider?

- Accept an infant who appears to be less than 60 days old and who appears not to be injured
- Offer the parent an anonymous health form and an addressed-stamped envelope
- Assess the infant for any injury or illness
- Follow the Chain of Command and notify on-duty Lt.
- Notify EMS 1 or EMS 2
- Contact CPS between the hours of 8am-5pm Mon-Fri , @ 1- 979-836-7951 (Angela Dungen) after 5 or weekends call 1-800-252-5400
- Transport to Scott and White-Brenham for further assessment

What if the infant appears to be injured or older than 60 days old?

- Always accept infant/child
- Always use prudent judgment for your safety and the infant’s safety
- You may attempt to gather identifying information, such as vehicle description, license plate, description of parent, direction of travel, etc.
- In addition to contacting EMS 1 or EMS 2 and CPS, PD should be contacted.

In the case of an Administrative Staff member receiving a child, handle it as a walk in patient and immediately notify shift Lt. and direct care staff

Washington County EMS	Washington County EMS "Petty Cash"
Standard Operating Procedures	SOP 59

This policy is in reference to the cash in and cash out process of “Petty Cash” with the Washington County EMS Department.

Authorized Personnel:

EMS Director
EMS Captains
Administrative Secretary

Control:

There will be dual control when accessing the Petty Cash fund. There must be two authorized personnel to initial any time cash is taken in or out of the Petty Cash Fund.

Maximum Dollar Amount:

There will be an initial/maximum dollar amount of \$100 in the Petty Cash Fund. Upon entry into the ledger, it will be counted and initialed by 2 Authorized Personnel.

Minimum Dollar Amount:

There will be a minimum dollar amount of \$20 in the Petty Cash Fund. Upon reaching minimum amount the Billing Coordinator will fill out the Check Cutting Form, along with the receipts, to be turned in to and reimbursed by the Treasurer’s Office.

Procedures:

Money in:

The Billing Coordinator will add money to the Petty Cash Fund by adding a credit in the Ledger and have it counted and signed by her/himself and another Authorized Personnel.

Money out:

Using dual control money will be signed out of the Petty Cash Fund by subtracting a debit in the Ledger and removing the cash needed. A receipt will then be put into the envelope with a brief description of usage and signed by the employee.

Balancing Petty Cash Fund:

Monthly (preferably the 1st of every month) the Billing Coordinator and a second Authorized Personnel will balance the Petty Cash fund and initial in the ledger. Should the Petty Cash Fund be to the Minimum level at this time, the steps above will be taken under “Minimum Dollar Amount.”

Washington County EMS	BISD Medically Fragile Patients Policy
Standard Operating Procedures	SOP 60

This policy is intended to serve as a guideline for staffing of the Brenham Independent School District Medically Fragile Children's bus and classroom. Due to state mandates, the school district is required to have medically trained personnel on the Medically Fragile Children's bus and in the classroom. These students have various medical conditions that require continuous care. Typically the school district has nurses to fill these requirements. Occasionally, the school district will use WCEMS personnel to fill in when the nurses are not available.

WCEMS will supply personnel that have been trained for this special needs care. If you are an EMT Basic, you will have to be approved to perform some of the treatments that may be required. The primary clinical disorder that you should be concerned with are seizures. Seizures are very common in these patients and do not always require treatment or transport to the hospital. There are individual medical plans for each patient which can be found in the classroom or in the WCEMS backpacks that will be provided for your use.

If you are required to staff the bus and classroom, you will be required to at the bus barn at 0745 hours. You will board the bus and assist in picking up the children from their homes. When you arrive at the school, you will assist in the classroom. You will also staff the bus on the return ride back to their homes. The bus will return you to the bus barn. You will follow a special WCEMS protocol as a guideline when treating these patients should any medical issues occur.

Washington County EMS	Authorization to Practice
Standard Operating Procedures	SOP 61

The credentialing process within the department is not meant to replace or be confused with the Texas Dept. of State Health Services or NR certification / licensure process. The medical director and clinical management staff at WCEMS is responsible for granting authorization or clearance to practice medicine at a certain level after completion of the internal credentialing processes have been met by the candidate. However, the medical director may authorize any provider to function at any level as per TDSHS Rule 157.11.

This policy is an attempt to describe the current authorization process within the EMS Department. The department understands that it is the responsibility of Tx DSHS to assure minimum criteria is met for proper licensure and certification of EMS Providers we also understand it's the departments responsibility to assure training and education to allow proper care to be rendered. The department of EMS in Washington County takes this role extremely serious taking all steps possible to assure the EMS provider has the knowledge, skills, and expectancies to properly care for the injured or ill patients while employed with the department.

Pre-Employment Process:

Potential public safety providers of Washington County EMS will be required to complete the following before an offer for employment within the department:

- A full TX-DPS Criminal background check with counseling of County Attorney if required.
- Drug Screen and physical pre-employment screening
- Pre-employment clinical competency written exam with minimum passing of 75% of current skill level knowledge.
- Pre-employment physical ability testing
- Oral interview with background questioning

NEOP:

The New Employee Orientation Process is the fundamental building block of the department. The process is centered on a core understanding of *system knowledge and operational understanding*. This policy/guideline should be used as a guide for the Field Training Officers and new employees of WCEMS. The New Employee Orientation Program is a complex management training system: with the goal of improving the department's overall effectiveness, efficiency, and clinical practice. The program enhances the field training with daily on-the-job observations and feedback along with extensive classroom didactic education. The program is designed for employees who meet the Texas Department of State Health Services criteria for either licensed or certified EMT, EMT-I or Paramedic. Although a certified EMT, EMT-I, Paramedic or Licensed Paramedic by the State of Texas received a thorough academic introduction to basic and advanced care procedures, the new employee **cannot** be expected to immediately function as an operationally and clinically experienced employee.

The Trainee will be required to perform a variety of clinical skills and demonstrate adequate patient assessment, scene management and leadership control from a variety of scenarios.

The FTO's have a "master list" of tasks that must be accomplished prior to completing the NEOP Program. The tasks are in order so that the Trainee is exposed to the most basic and necessary task first. These tasks form the foundation upon which the Trainee will build for the remainder of the program and into subsequent years of service. The Trainee's performance will be evaluated by the FTO. Also monitored by the clinical management team and medical director at multiple points throughout the program. Evaluations will be sincere and given in a straightforward manner so that there is absolutely no confusion of the service expectancies.

The NEOP clearance to practice process will include approximately 3-5 eight hour days of didactic classroom education. This will be taught by the clinical management team of the department and will include a wide array of subject matter such as:

- Operational procedure manual review
- Emergency Vehicle Operations
- Advanced and Basic Airway Management
- CPAP
- Protocol Review / Testing
- Mobile Data and ePCR
- HIPPA
- Radio Traffic
- Blood Borne Pathogens
- Inventory Control
- CPR Pit Crew Approach
- All Department Credentialing Processes

(For additional lectures during NEOP see current process details). At the completion of the classroom portion of the NEOP the candidate for authorization will perform up to 720 hours of third rider precept field training experience with an assigned FTO. At the completion of the didactic field training with the FTO, the candidate must pass an oral board testing process. The oral board is designed to test the candidates overall clinical decision process and ability to treat patients according to WCEMS SOCs.

The WCEMS protocols are in general broken down and described by skill level. However, the following is to be used as a quick reference guide for procedures and practice guidelines. Once cleared from the initial NEOP field training stage the employee is given a clearance to practice authorization at one of the following levels:

Emergency Medical Technician

- Patient assessment
- Pulse oximetry
- Oxygen administration
- Use of oral adjuncts for oxygen administration (including OPA's , BVM, etc...)
- Use of "rescue" airway device (King)
- Vital sign monitoring (manual & non-invasive machine techniques)
- All Bandaging & Splinting techniques
- Hemorrhage Control
- Cervical Spine Immobilization
- Manual Techniques for airway provision, maintenance and support, relief of airway obstruction as prescribed by current AHA standards
- Use of automated CPR devices
- Automated External Defibrillation
- Emergency Childbirth procedures
- Blood glucose assessment
- Administration of Aspirin, Oral Glucose, Activated Charcoal, Albuterol, and Nitroglycerin (under the direction of a P1 – Paramedic)
- Operation of CPAP device (under direction of a P1 paramedic)
- Acquisition of ECG and monitoring, both 4-LEAD and 12-LEAD are permitted under the direction of the a P1
- Use of qualitative & quantitative EtCO2 detection equipment

Emergency Medical Technician – Intermediate

- All above skills and procedures
- Vascular Access
- IO Access
- IV Fluid Administration
- Administration of D50% (under the direction of a P1 – paramedic)
- Orotracheal intubation (under the direction of a P1 – paramedic)
- Use of "rescue" airway device (King)
- Blood specimen collection

Paramedic (P1) has a current “departmental clearance to practice authorization”, upon full release from NEOP to perform the following skills:

- All skills listed / procedures listed above
- All routes of medication administration (IV, ET, SQ, IO, SL, PR, IM, etc..)
- Vagal Maneuvers
- Defibrillation, cardioversion, and external cardiac pacing
- Nasogastric intubation /lavage
- Nebulized bronchodilation
- Chest decompression
- P1 Paramedics are **NOT AUTHORIZED TO PERFORM**: Rapid Sequence Intubation, Post ROSC hypothermia protocol utilization, Cricothyrotomy, Pain Management, TNKase administration, Blood Administration, and utilization of the WCEMS treat and release box, unless under the direction of an on scene P3 paramedic or direct online medical control consultation.
- P1 Paramedics are **NOT AUTHORIZED TO PERFORM** facility by pass authorization or no patient transport authorization unless under online P3 consultation. .

Paramedic (P2) is a departmental experienced paramedic with WCEMS and has met the P2 status in accordance with those guidelines. These personnel are cleared to practice the following skills:

- All above skills that the EMT-B, EMT-I, and EMT-P1 are cleared to practice
- Pain Management Credentialed and Authorized
- Post ROSC Credentialed and Authorized
- Cricothyrotomy
- Treat and Release Protocol Authorization (utilizing the treat and release box)
- P2 Paramedics are **NOT AUTHORIZED TO PERFORM**: RSI, TNKase administration, Blood Administration, unless under the direction of an on scene P3 paramedic or direct online medical control consultation.
- P2 Paramedics are **NOT AUTHORIZED TO PERFORM** facility by pass authorization or no patient transport authorization unless under online P3 consultation.

Paramedic (P3) Is a more experienced and educated paramedic that has progressed through the P1 and P2 level, and has had additional training in community medicine and independent practice and has met the P3 status in accordance with those guidelines. They are cleared to practice the following skills:

- All above listed EMT-B, EMT-I, EMT-P1, and EMT-P2 skills
- No patient transport decision authorization orders
- Facility bypass protocols authorization orders (only if acting as Lieutenant)
- TNKase Administration (per protocol)
- Blood Administration
- RSI

Washington County EMS	Quality Process Improvement Plan
Standard Operating Procedures	SOP 62

This policy is to serve a guideline for the department's commitment to continuous quality process improvement. In previous years this policy was termed QA/QI Plan and appeared to center around only clinical related issues. As EMS progresses, operational and clinical related issues appear to become a grey line instead of clearly black and white. For this reason, we have chosen the words "process improvement" instead of QA – Plan for the simple fact that so many operational issues can result in inadequate or substandard clinical care. For example – chute times or any other response time can adversely affect patient care and the clinical management team needs to address these operational issues just as they would a clinical issue.

As departments grow (in request for services) and decrease in manpower, it's also essential that departments are allocated sufficient manpower to the task of improving the service clinically. The EMS Department performs a curser review of all (100% - review) clinical charts. A quick review is performed by the on duty paramedic supervisor (Lt) and then a second review is performed by the EMS Captain in a slower slightly more methodical way. The shift supervisors are instructed to review primarily for clinical performance and the Captain is primarily reviewing for operational deficiencies. Our goal is truly for "quality" chart review to be performed and for a standard of care to be present not matter what paramedic is on duty for the day.

We have introduced the philosophy of 'benchmarking' our performance within the department. Benchmarks are created for numerous areas within the clinical practice guidelines (protocols) that will help accurately gauge truly how we are doing as a department and not just one individual. For example, we wanted to know how well we perform on pain management. We knew protocol was being followed but we didn't know if each paramedic had the same philosophy on pain management. So we assigned a supervisor to benchmark and dive into every patient we treat for pain.

Benchmarks were created for how quickly we alleviated pain, how quickly we identified the need for pain management, did the paramedics attempt to manage pain with basic treatments, and we listed a goal of 50% reduction in the pain scale prior to arrival to the hospital. Each of these were tracked and reviewed monthly. The shift supervisors randomly pull charts from within the areas of the clinical care they are benchmarking and we review these with the medical directors monthly. The first Wednesday of every month we invite all parties involved with these patients to attend. During the meetings we review all clinical performance benchmarks and statistically how we are meeting and what work we need to do correct our deficiencies

Currently the department has standing benchmarks for:

- Sudden Cardiac Arrest
- STEMI and Cardiac Chest Pain
- Stroke
- Pain Management

- CPAP & Respiratory distress
- RSI
- Transfers

The benchmarks will rotate and change periodically throughout the year as performance measures are reviewed.

The Department does perform a 100% Review on any procedure that requires “credentialing”

- RSI, Induced Hypothermia, Facility Bypass, etc...
- All outside complaints will trigger a full peer review and administrative review of the chart or incident.

Our clinical management team consists of virtually everyone in the department. We believe every person in the organization plays a vital role in improving patient care and processes. However, the key functional staff members are the three Field Training Officers, three (3) Lieutenants, the Operations Captain, the EMS Director, and the Medical Director(s).

The initial process improvement meeting (PI) will be held at a minimum on a monthly basis but more importantly as needed by the department. These meetings should be attended by the entire process improvement team (as described above). The purpose of the PI meeting is to identify any system performance problems or identify specific shift, crew, or individual poor performances. These findings should be based on:

- Field Evaluations / Observations
- Protocol Testing
- Clinical Competency Testing
- Statistical data from ePCR database
- Or simple daily observations and or “gut feelings” from senior CM staff

The monthly process improvement meetings will guide the direction our field training staff and supervisors' ongoing field training and continuing education for the department. As we identify areas of shortcoming within the benchmarks, the field training staff and department educators will deploy training and education specific for those needs.

The department does perform loop closure as soon as reasonably possible. The supervisor generates a letter that essentially acts as a report card for the paramedics or crew members on the call that was evaluated. All concerns as well as all the good points and benchmarks that were achieved are reported in a standardized format. Each shift Lt., Medical Director, Capt, and EMS Director also received a carbon copy of the report. This allows for others to learn from these loop closure letters.

All complaints whether it be a clinical or operational issue, internal or external, go through the full CQI process including a follow up with the Medical Directors. Typically calls that we receive a complaint on initially go through the peer review process within 24 hrs. Peer review is done randomly on many calls. Most high acuity level calls warrant a peer review process

Should continual benchmark failures or protocol deviations occur, a retraining plan is developed and deployed at the discretion of the paramedic supervisor or clinical improvement team. At times, these retraining plans may require the paramedic to be suspended from his/her clinical duties until retraining is performed to the satisfaction of the Medical Directors.

Washington County EMS	School Related Transportation Incidents
Standard Operating Procedures	SOP 63

Response to School Related Transportation Incidents (BUS) in Washington County

Background

The potential number of patients, the frequent presence of uninjured children who do not require hospitalization, the jurisdiction of the school district and the responsibilities of EMS providers often raise conflicting issues of jurisdiction, consent, treatment, and transportation. The roles and responsibilities of the school district and the EMS agency must be identified in advance of any incident, by jointly developing operations plans so that a common understanding of their respective expectations and responsibilities are well defined.

The Department of EMS for Washington County has a longstanding relationship with the School Districts in Washington County and frequently provide educational opportunities for the districts educational and operational staff. We believe this relationship provides a monumental advantage for both the paramedics and the district staff. This policy is not the answer to every question and medical control should be contacted early should potential problems be noticed.

Ultimately the initial EMS Crew should triage the scene and determine the following:

1. Mechanism of Injury / Accident
2. Number of patients
3. Damage to school transport vehicle
4. Determine resource allocation (Fire Dept, Rescue, Traffic Control, another school Bus, or EMS units)

Bus Accidents will be prioritized using the above information and placed into one of the four categories.

LEVEL 1 Bus Incident:

Significant injuries present in one or more children, or the existence of an obvious mechanism of injury that can be reasonably expected to cause significant injuries.

LEVEL 2 Bus Incident:

Minor injuries present in one or more children with no obvious existence of a mechanism of injury that could reasonably be expected to cause significant injuries.

Level 3 Bus Incident:

No injuries present in any children and no mechanism that could be reasonably expected to cause injuries.

Level 4 Bus Incident:

Bus incident without obvious injury involving special healthcare needs and / or have communication difficulties , EMS must contact family and or school official that routinely deals with the patient for refusal authorization.

- **All children** in a level 1 SBI (school bus incident) will be transported to hospital(s)
- For all Level 1 SBI the START/SMART triage system will be utilized by initial responding crew.
- Must obtain a signature on this form from district official or transportation provider
- Seating Chart and Roster manifest should be made available immediately by the bus driver.
- If a patient is released separately to a parent then a complete ePCR should be generated using ESO
- If all patients are being released back to school officials then this form is attached to the ePCR
- When possible a second school bus should be requested asap to the scene if not done so by district staff.

Initial Response Matrix for Level(s)

(Matrix is not an absolute just a guide - depending on resources and supervisor judgement)

LEVEL 1(SBI)	LEVEL 2(SBI)	LEVEL 3(SBI)	LEVEL 4(SBI)
MICU X 2	MICU X 2	MICU	MICU
SQ1	SQ1	SQ1	SQ1
EMS Command	EMS Command		

WCEMS SCHOOL BUS RELEASE OF SERVICE FORM

Type of incident:

Date:

Location of incident:

Level of incident: _____ 2 injuries noted with no obvious mechanism of injury
_____ 3 no injuries present and no mechanism of injury

Time of call _____ Arrival at scene _____ Patient contact _____ Call completed _____

RELEASE FROM RISKS OF MEDICAL RESPONSIBILITY

I, _____ hereby release the EMS System, its physicians, and employees of any responsibility and liability for the worsening of medical condition of multiple victims involved in this incident. I acknowledge that I have been informed of the risks and I voluntarily assume all responsibility on the behalf of the school board and or its contracted transportation provider for the district. In making this decision. I acknowledge that all refusals carry the inherent risks of deterioration of medical condition or death but are accepting custody, release and risk responsibility of the minor victims involved in this incident as per the pre-arranged WCEMS and School District agreement.

Date:

Signature of authorized school designee _____

Signature of witness Printed name of witness: _____

NAME DOB

NAME DOB

EMS Crew Signature: _____

Squad 1 (supervisor): _____

Washington County EMS	Response to Mass Patients Incidents
Standard Operating Procedures	SOP 64

Response to Mass Patient Incidents (MPI) in Washington County

Background

Mass Patient Incidents (MPI) require careful advance planning to managed effectively. For rural EMS providers MPI's are somewhat difficult to manage due to limited daily resources. However, proper planning and understanding of core capabilities has proven to be the biggest advantage in these situations. Formerly known as Mass Casualty Incidents (MCI) the department has chosen to call these incidents "patient" incidents rather than "casualty". The small change simply assist the department in preparing resources adequately and allowing no terminology confusion between how many patients are effected rather than differences in opinion on the definition of "*casualty*".

With countless mass casualties affecting our country we must not tunnel our thoughts into a few recent events. Public Safety Departments must constantly be vigilant of the potential threat and allocate resources accordingly to protect our communities from these risks. As we have seen over recent years the agent for mass patient incidents can truly be anything. Ranging from a movie theatre, mass transit bus, active shooter, a marathon, to even a local festival or football game EMS must have contingency plans in place for proper response to occur. Recent events in Colorado, Boston, and even in Texas have shown that improper planning will result in a congested scene that ultimately results in Paramedics not being able to get ambulances close enough to the scene. This ultimately resulted in police officers and other non medical trained responders transporting patients in squad cars to hospitals and paramedics wheeling stretchers over half a mile to the scene. Some data suggest that up to 25% of the injured in mass patient incidents or active shooter incidents can be saved with immediate advanced life support interventions. It's imperative that public safety works to assure this occurs in our community.

The Department is the sole provider of EMS in our near 700 square mile area and therefore will pre-plan any event (major or minor) that has potential to cause a mass gathering event (MGE). See "Planning for Mass Gathering Events in Washington County" for further on this subject.

The Department of EMS for Washington County has a longstanding relationship with the other public safety departments within Washington County and frequently provide educational opportunities for the paramedics and first responders on subjects such as MCI response. We believe this relationship provides a monumental advantage for both the paramedics and the community during an MPI event. This policy is not the answer to every question or concern and medical control should be contacted early should potential problems be noticed.

RESPONSE

Ultimately the initial EMS Crew and EMS Lt. should triage the scene and determine the following:

1. Mechanism of Injury / Accident / Scene Safety for Responders
2. Number of patients
3. Setup of Triage, Treatment, and Transport sectors of the MPI
4. Determine resource allocation (Fire Dept, Rescue, Traffic Control, alternate transportation, Air Rescue, or additional EMS units)

The EMS Department has created a series of levels in regards to MPI events. This will allow the majority of the above four steps to be completed with **simple scene management**. Once an MPI event is declared by the first responding EMS unit a systematic **and predictable response** will occur both within the EMS Department and within the region and state if indicated.

Initial Response Matrix for Mass Patient Incidents

(Matrix is not an absolute just a guide - depending on resources and supervisor judgment)

LEVEL 1 MPI Incident: (5-10 patients)

Any scene where more than Five and less than 11 patients may are requiring transportation to a hospital. The department currently has the ability to staff four (4) Mobile Intensive Care Unit Ambulances and 2 ALS Supervisors immediately 24/7. Additionally we provide a staffing plan for rapid recall of staff to respond our fifth (5) ambulance during MPI or disaster response. The department also has a cache of disaster response supplies available to deploy to the scene of any major incident with additional supplies should the scenario dictate. Due to the fact that our EMS units are designed to transport up to three patients at a time we have determined a safety threshold for MPI's that will be used as a general rule during MPI events.

Response for Level 1:

Internal Department Response: **5 Ambulances and 2 Supervisors**

Regional Response: **1 Air Rescue (local air medical provider)**

Notification only of mutual aid

LEVEL 2 MPI Incident: (11-15 patients)

Any scene where more than **10** and less than **16** patients may are requiring transportation to a hospital.

Response for Level 2:

Internal Department Response : **5 Ambulances and 2 Supervisors**

Regional Response: **3 Mutual Aid Ambulances**

2 Air Rescue Providers

LEVEL 3 MPI Incident: (16-20 patients)

Any scene where more than 15 and less than 21 patients may requiring transportation to a hospital.

Response for Level 3:

Internal Department Response : **5 Ambulances and 2 Supervisors**

Regional Response: **6 Mutual Aid Ambulances**

2 Air Rescue Providers

LEVEL 4 MPI Incident: (over 21 patients)

Any scene where more than 20 patients may requiring transportation to a hospital.

Response for Level 4:

Internal Department Response : **5 Ambulances and 2 Supervisors**

Regional Response: **6 Mutual Aid Ambulances**

3 Air Rescue Providers

EMTF / STATE Response EMTF7 **AMBUS** (ATCEMS)

 EMTF7 EMS Strike Team (**5 ambulances & 1 STL**)

State Response As situation indicates

City or Town	SJREMS	Austin County EMS	Waller County EMS	Bryan FD EMS	PHI - Bryan	Starflight Austin / HLF
Level 2	2 Ambulance	1 Ambulance			1	
Level 3		1 Ambulance	1 Ambulance	1 Ambulance		1
Level 4				Additional If Necessary		2
	BVRAC & EMTF Response					

Washington County EMS	No Patient Found
Standard Operating Procedures	SOP 65

In the following circumstances, EMS may be dispatched to a scene where there are no “patient(s)”. For this protocol, a patient is defined as “a person who requests medical care, assessment, or treatment or has been determined to require medical care, assessment, or treatment by EMS or Law Enforcement or other Washington County Public Safety Entity”. In the following circumstances an ePCR may be completed **without** any patient information being collected or signatures obtained;

False Alarm-An emergency alarm, such as a fire alarm or a lifeline alarm which is set off unnecessarily, even if contact with the subject is made.

No Pts. Found-Upon arrival on scene, none of the patients requested or requires EMS (i.e. an accident scene that a passerby called 911 but no one involved requested or requires EMS).

Call Cancelled-The patient or responsible party cancels EMS. Dispatch must have this information directly from the patient or the responsible party (i.e. patient’s guardian if a minor). If a Washington County Public Safety Entity (on duty or off duty) cancels EMS, then it can be considered a call cancelled.

However, if EMS determines that the subject needs medical care, assessment, or treatment or if Law Enforcement requests EMS to assess a subject, that subject becomes a patient and a full ePCR (including patient information and signatures) must be completed, even if that ePCR is a no patient transport.

Washington County EMS	In Car Video and Audio (ICVA) Policy
Standard Operating Procedures	SOP 66

The department's in-car video / audio policy (ICVA) is designed to protect the public safety paramedics and employees of the county as well as protect the citizens in which it serves. The department's ICVA system does have limitations. It is designed to give video coverage immediately before, during, and after an accident, g-force alerts, and numerous other programmable defaults. The ICVA camera is not designed to "catch" an employee not performing according to policy. However, in cases where this occurs it certainly will be used when safety concerns and public safety issues are of a concern.

If reasonable, paramedics must record their code 3 responses, approach to crime scenes and any scene they feel could benefit from being recorded, according to the policy. If practical, the camera will be activated to record high risk and high litigation instances such as any domestic disturbances, patients who are agitated, or where criminal activity is suspected.

The video system was installed over a period of years by the department. Multiple, different platforms and models of the ICVA are in existence within the department. Every EMS unit does not have an ICVA system at the time of this policy creation. Nor does every system have the same capabilities.

It is the policy of the department to record these situations "when possible" and when the system allows it. It is the responsibility of the paramedics and employees of the department to understand each system's capabilities. Training is provided by the department on the proper use of the ICVA system but ultimately it is the responsibility of the primary and secondary attendant to understand the core capabilities.

The lapel mics that the ICVA uses should be worn on the employee's duty belt with an approved protector case that will not limit the noise capturing capability of the system. The department will provide these protective cases. It is not necessary for the lapel mics to be "on" recording every conversation when you are on duty or is this the intent. However, the excuse of "I forgot to turn it on" during an incident that the recording could have benefited will be cited as a policy violation and disciplinary action will follow.

Please refer to video usage policy for further information. The video is only used for driver training education, policy adherence, and CQI of which is limited to selected command staff personnel. This video is NOT to be viewed publicly or by mid management (Lts) supervisors without expressed permission from command staff.

This policy also serves to give guidance on the in-car audio system (ICAS). The ICAS in our units are a David Clark brand of audio headsets. These are designed to give you better communication during a response. The crews are encouraged to utilize these headsets during any response and routine driving of the units. However, it is mandatory when these systems exist (not all units have the systems) that the driver utilize the headset when a patient is being transported or when a student rider is in the patient compartment. This will provide optimal communication during these responses when the "attending paramedic" or student in the rear needs to communicate with the driver or vice versa.

Washington County EMS	Fatigue Mitigation Plan
Standard Operating Procedures	SOP 67

Crew safety has always been a priority at Washington County EMS (WCEMS). The goal is to provide not only the safest equipment but the best practices.

Sleeping is prohibited in areas accessible to the general public. Resting will not excuse personnel from responsibility of participating in station duties (daily inspections/restocking/decontamination of units, logging narcotics, report writing, etc.) If a crew is requiring “rest time,” at the shift supervisor discretion, crews can be moved to lower call volume areas to help provide such time. Employees suffering from sleep deprivation must have notified their immediate supervisor immediately "after the call" and never "just prior to a call". This is to ensure never to cause a public safety delay in response due to fatigue management.

Ground Division

Washington County EMS (ground) operates with a schedule of 48 hours on/96 hours off. WCEMS wants the crew members to feel comfortable in notifying their immediate supervisor when they feel the necessity for rest due to higher than normal call volume. The shift supervisor will attempt to take the necessary steps to provide the time that the employee needs when call volume and daily activities permit. The shift supervisor will utilize their best judgement and available personnel to assist in that request. However, all normal morning duties and responsibilities should be performed prior to any request for rest.

Aviation Division

Washington County EMS (air) operates with a schedule of 24 hours on shift, 24 hours off shift, 24 hours on shift, 120 hours off shift. WCEMS wants the crew members to feel comfortable in notifying their immediate supervisor when they feel the necessity for rest due to higher than normal call volume. The shift supervisor will attempt to take the necessary steps to provide the time that the employee needs when call volume and daily activities permit. The shift supervisor will utilize their best judgement and available personnel to assist in that request. However, all normal morning duties and responsibilities should be performed prior to any request rest.

Special Patients



Washington County EMS	Immunization Program
Clinical Practice - Standing Protocols	SP 01
Special Patients	

Introduction: In the wake of September 11th, 2001, Washington Count EMS formed what is now known as the “Special Operations Division” of the counties EMS Department. This division was formed in attempts to deal with the unfortunate and abnormal situations that are, at times, outside of the normal training of the Paramedic curriculum. In 2003 due to the possibility of a bioterrorism incident occurring in our country, the WCEMS department partnered with the Texas Dept. of State Health Services (locally) to assist in the smallpox vaccination program. Several of our team members were vaccinated with smallpox vaccination. Since this time numerous “white paper” studies have shown the effectiveness of paramedics administering vaccines. The results have been overwhelmingly positive for numerous reasons.

First, Paramedics are already trained in both the cognitive and psychomotor objectives of medication administrations. Paramedics routinely administer subcutaneous, IM, and Intravenous medications in their day to day profession. Paramedic education involves didactive, laboratory, clinical, and field instruction totaling approximately 1,200hrs beyond that of the entry level emergency medical technician. Some states are allowing EMT’s to administer vaccines. Our special operations rescue paramedics undergo an additional eight hours of training in vaccination and administrative paperwork issues. The training is sponsored by the Texas Department of State Health Services Immunization Programs Department.

As EMS continues to evolve into an “**expanded scope of practice**” and to meet its community needs more EMS Vaccination programs are highly likely. With funding cuts and budgetary concerns for state funded agencies more and more local healthcare issues are being dealt with within its local healthcare community. The mobility, existing training, and available advanced life support equipment make EMS extremely useful as a vaccination program.

The programs goal is:

- To have the ability to perform our own (in-house) vaccines to existing and new hire employees
- Ability to provide vaccinations to other public safety personnel if needed (police, fire, government officials, etc...)
- Assist the public health agencies with mass vaccinations in lieu of a bioterrorism or pandemic event
- We are also a TVCP Provider (Texas Vaccine for Children Provider) which enables us to provide “free” vaccines that are required by law for infants and school aged children.

Our Special Operations Division is focusing on the **mobility of this program**. Our paramedics are accustomed to working in adverse conditions on a daily basis. Our paramedics will bring the mobile TVCP program to the “door” so to speak of underserved or “hard to reach” areas of our county to children who may otherwise go unvaccinated. EMS has the advantage of bringing healthcare interventions to the public wherever it is; rather than depend on the public to travel to a more controlled setting.

Authorization: Special Operations Paramedics (only)

Only paramedics trained in the vaccinations and vaccination program are allowed to participate in the program. Paramedics giving vaccines must follow this outline exactly and are to be familiar with all aspects of this protocol. The guidelines were developed with medical direction input, Centers for Disease Control guidelines, and the assistance of regional DSHS representation. **Only paramedics who are “active” within the special operations division have automatic authorization.** Others who have been trained by the Special Operations Division may participate as authorized by the EMS Director or Special Operations Division. All vaccinations are standing orders and do not require physicians orders.

Patient and Vaccine Information:

- Informed consent is required
- Only a parent or legal guardian can consent for the immunization of a child (not a babysitter, not a grandparent, not a sibling, etc...) per Texas Family Code 32.001.
- If there are any concerns about a patients vaccination schedule or eligibility, refer the patient to the local DSHS nurse or the patients primary care physician
- Refer to the individual vaccine package insert for dosage information. Different vaccine manufactures will recommend different amounts of their product.
- Refer to the individual vaccine package insert for proper vaccine handling and storage recommendations. State requirements for ordering vaccines and other TDSHS requirements must be adhered to.
- Records of the patient eligibility screening form must be maintained on file for a period of 3 years. If requested, the records must be made available to the Texas Department of State Health Services.
- Vaccines supplied by TDSHS and administered to a child who is eligible for the TVCP program may not be charged to the child or parent. However, administrative charges for paperwork filing or supplies (syringes, band aides, etc...) may be charged up to \$15.00.

Absolute Contraindications:

No live attenuated virus vaccines (MMR, varicella) are to be administered to the following patients:

- Pregnant female patients, or females who may become pregnant in the next three months.
- Patients or close family contacts with cancer, lymphoma, leukemia, high dose steroid dependency, or AIDS.

Procedure:

1. All parents are to fill out the current immunization packet including the medical screening form.
2. A paramedic will review the medical screening form before any vaccinations are given.
3. The Vaccine Program is not a part of the day to day emergencies that occur. These vaccines are under tight control from the vaccine programs of TX DSHS and the CDC.

These vaccines will not be kept on licensed DSHS Ambulances and will be stored according to current DSHS and CDC recommendations. Due to frequent changes in recommendations from the CDC and DSHS this protocol will be used as a guide only and will not be substituted for the most current vaccine storage or administration guidelines given by the DSHS oversight group based in Temple TX. Nor will this list be considered an exhaustive list. At times other vaccines are recommended and these will be housed in addition to any on this list. The list will be kept as current as humanly possible to reflect our current vaccine capabilities. The Vaccine program is under strict temperature and storage guidelines and is frequently audited by DSHS personnel to assure compliance. The Vaccines will not be kept in the Medical Directors Medication list. The following vaccines may be given:

- dT: adult tetanus, diphtheria toxoid
- DT: pediatric diphtheria, tetanus toxoid
- DTaP: diphtheria, tetanus, acellular pertussis
- DTP: diphtheria, tetanus toxoid, absorbed whole cell pertussis vaccine
- HPV-Human Papillomavirus Quadrivalent
- Hep A: hepatitis A
- Hep B: hepatitis B
- Hib: conjugated *Haemophilus influenza* –type B
- Influenza: “flu shot”
- IPV: inactivated polio vaccine (since January 1, 2000)
- MMR: measles, mumps, rubella
- MCV4-Menningococcal conjugate
- PCV7: pneumococcal conjugate
- Varicella: chicken pox

In addition to these vaccines our paramedics will also be trained in performing a Tb (tuberculosis skin test).

4. Administer the needed vaccines according to the table on the following page. Approved paramedics may administer vaccines to employees, to children and any other requesting parties who meet the needed requirements.
5. Report any possible adverse reactions following immunization. Persons who administer vaccines are required by law (National Childhood Vaccine Injury Act of 1986) to report adverse events following vaccination. The Vaccine Adverse Event Reporting System (VAERS) is the reporting agency. Reporting forms and information about reporting requirements or completion of forms can be obtained 24 hours a day by calling VAERS in Rockville, Maryland, at **(800) 822-7967**.

To prevent any injuries during our vaccination clinics the standard precaution suggested by CDC and DSHS will be adhered to. Patients will be lying down or sitting down during vaccinations (in case a patient faints). A fully stocked emergency response vehicle will be on site during all clinics. This may or may not be an MICU ambulance. Our command staff response vehicles are equipped at the MICU level including all allergic reaction, monitoring, advanced and basic airway management equipment. So it is allowable to have a command staff present in lieu of a MICU ambulance.

Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2011

For those who fall behind or start late, see the schedule below and the catch-up schedule

Vaccine ▼	Age ►	7–10 years	11–12 years	13–18 years	
Tetanus, Diphtheria, Pertussis ¹			Tdap	Tdap	Range of recommended ages for all children
Human Papillomavirus ²	see footnote ²		HPV (3 doses)(females)	HPV series	
Meningococcal ³		MCV4	MCV4	MCV4	
Influenza ⁴		Influenza (Yearly)			Range of recommended ages for catch-up immunization
Pneumococcal ⁵		Pneumococcal			
Hepatitis A ⁶		HepA Series			
Hepatitis B ⁷		Hep B Series			Range of recommended ages for certain high-risk groups
Inactivated Poliovirus ⁸		IPV Series			
Measles, Mumps, Rubella ⁹		MMR Series			
Varicella ¹⁰		Varicella Series			

This schedule includes recommendations in effect as of December 21, 2010. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

- Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).** (Minimum age: 10 years for Boostrix and 11 years for Adacel)
 - Persons aged 11 through 18 years who have not received Tdap should receive a dose followed by Td booster doses every 10 years thereafter.
 - Persons aged 7 through 10 years who are not fully immunized against pertussis (including those never vaccinated or with unknown pertussis vaccination status) should receive a single dose of Tdap. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid-containing vaccine are needed.
 - Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Human papillomavirus vaccine (HPV).** (Minimum age: 9 years)
 - Quadrivalent HPV vaccine (HPV4) or bivalent HPV vaccine (HPV2) is recommended for the prevention of cervical precancers and cancers in females.
 - HPV4 is recommended for prevention of cervical precancers, cancers, and genital warts in females.
 - HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
 - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
- Meningococcal conjugate vaccine, quadrivalent (MCV4).** (Minimum age: 2 years)
 - Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
 - Administer 1 dose at age 13 through 18 years if not previously vaccinated.
 - Persons who received their first dose at age 13 through 15 years should receive a booster dose at age 16 through 18 years.
 - Administer 1 dose to previously unvaccinated college freshmen living in a dormitory.
 - Administer 2 doses at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
 - Persons with HIV infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
 - Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
 - Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older).
- Influenza vaccine (seasonal).**
 - For healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used.
 - Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
- Pneumococcal vaccines.**
 - A single dose of 13-valent pneumococcal conjugate vaccine (PCV13) may be administered to children aged 6 through 18 years who have functional or anatomic asplenia, HIV infection or other immunocompromising condition, cochlear implant or CSF leak. See *MMWR* 2010;59(No. RR-8):33–34.
 - The dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7.
 - Administer pneumococcal polysaccharide vaccine at least 8 weeks after the last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition.
- Hepatitis A vaccine (HepA).**
 - Administer 2 doses at least 6 months apart.
 - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
- Hepatitis B vaccine (HepB).**
 - Administer the 3-dose series to those not previously vaccinated. For those with incomplete vaccination, follow the catch-up schedule.
 - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
- Inactivated poliovirus vaccine (IPV).**
 - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
 - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
- Measles, mumps, and rubella vaccine (MMR).**
 - The minimum interval between the 2 doses of MMR is 4 weeks.
- Varicella vaccine.**
 - For persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007;56[No. RR-4]), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
 - For persons aged 7 through 12 years, the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
 - For persons aged 13 years and older, the minimum interval between doses is 4 weeks.

The Recommended Immunization Schedules for Persons Aged 0 Through 18 Years are approved by the Advisory Committee on Immunization Practices (<http://www.cdc.gov/vaccines/recs/acip>), the American Academy of Pediatrics (<http://www.aap.org>), and the American Academy of Family Physicians (<http://www.aafp.org>).
Department of Health and Human Services • Centers for Disease Control and Prevention

Catch-up Immunization Schedule for Persons Aged 4 Months Through 18 Years Who Start Late or Who Are More Than 1 Month Behind—United States • 2011

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age

PERSONS AGED 4 MONTHS THROUGH 6 YEARS					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B ¹	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Rotavirus ²	6 wks	4 weeks	4 weeks ²		
Diphtheria, Tetanus, Pertussis ³	6 wks	4 weeks	4 weeks ⁴	6 months	6 months ³
<i>Haemophilus influenzae</i> type b ⁴	6 wks	if first dose administered at younger than age 12 months 8 weeks (as final dose) if first dose administered at age 12–14 months No further doses needed if first dose administered at age 15 months or older	if current age is younger than 12 months 8 weeks (as final dose) ⁴ if current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered at younger than 15 months No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal ⁵	6 wks	if first dose administered at younger than age 12 months 8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older or current age 24 through 59 months No further doses needed for healthy children if first dose administered at age 24 months or older	if current age is younger than 12 months 8 weeks (as final dose for healthy children) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated Poliovirus ⁶	6 wks	4 weeks	4 weeks	6 months ⁶	
Measles, Mumps, Rubella ⁷	12 mos	4 weeks			
Varicella ⁸	12 mos	3 months			
Hepatitis A ⁹	12 mos	6 months			
PERSONS AGED 7 THROUGH 18 YEARS					
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis ¹⁰	7 yrs ¹⁰	4 weeks	if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months	
Human Papillomavirus ¹¹	9 yrs	Routine dosing intervals are recommended (females) ¹¹			
Hepatitis A ⁹	12 mos	6 months			
Hepatitis B ¹	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated Poliovirus ⁶	6 wks	4 weeks	4 weeks ⁶	6 months ⁶	
Measles, Mumps, Rubella ⁷	12 mos	4 weeks			
Varicella ⁸	12 mos	3 months 4 weeks if person is younger than age 13 years 4 weeks if person is aged 13 years or older			

- Hepatitis B vaccine (HepB).**
 - Administer the 3-dose series to those not previously vaccinated.
 - The minimum age for the third dose of HepB is 24 weeks.
 - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
- Rotavirus vaccine (RV).**
 - The maximum age for the first dose is 14 weeks 6 days. Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
 - The maximum age for the final dose in the series is 8 months 0 days.
 - If Rotarix was administered for the first and second doses, a third dose is not indicated.
- Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).**
 - The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.
- Haemophilus influenzae* type b conjugate vaccine (Hib).**
 - 1 dose of Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy.
 - If the first 2 doses were PRP-OMP (PedvaxHIB or Comvax), and administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
 - If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.
- Pneumococcal vaccine.**
 - Administer 1 dose of 13-valent pneumococcal conjugate vaccine (PCV13) to all healthy children aged 24 through 59 months with any incomplete PCV schedule (PCV7 or PCV13).
 - For children aged 24 through 71 months with underlying medical conditions, administer 1 dose of PCV13 if 3 doses of PCV were received previously or administer 2 doses of PCV13 at least 8 weeks apart if fewer than 3 doses of PCV were received previously.
 - A single dose of PCV13 is recommended for certain children with underlying medical conditions through 18 years of age. See age-specific schedules for details.
 - Administer pneumococcal polysaccharide vaccine (PPSV) to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant, at least 8 weeks after the last dose of PCV. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See *MMWR* 2010;59(No. RR-11).
- Inactivated poliovirus vaccine (IPV).**
 - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
 - A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months following the previous dose.
 - In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
- Measles, mumps, and rubella vaccine (MMR).**
 - Administer the second dose routinely at age 4 through 6 years. The minimum interval between the 2 doses of MMR is 4 weeks.
- Varicella vaccine.**
 - Administer the second dose routinely at age 4 through 6 years.
 - If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
- Hepatitis A vaccine (HepA).**
 - HepA is recommended for children aged older than age 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
- Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).**
 - Doses of DTaP are counted as part of the Td/Tdap series.
 - Tdap should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years or as a booster for children aged 11 through 18 years; use Td for other doses.
- Human papillomavirus vaccine (HPV).**
 - Administer the series to females at age 13 through 18 years if not previously vaccinated or have not completed the vaccine series.
 - Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
 - Use recommended routine dosing intervals for series catch-up (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.

Information about reporting reactions after immunization is available online at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967. Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for immunization, is available from the National Center for Immunization and Respiratory Diseases at <http://www.cdc.gov/vaccines> or telephone, 800-CDC-INFO (800-232-4636).

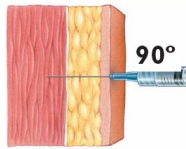
Department of Health and Human Services • Centers for Disease Control and Prevention

Anatomic Sites *for* IMMUNIZATION

INTRAMUSCULAR (IM)

Vaccines given intramuscularly (IM):

- Diphtheria-Tetanus-Pertussis
- *Haemophilus influenzae*, type b
- Hepatitis A • Hepatitis B • Influenza
- Meningococcal Conjugate
- Pneumococcal Conjugate

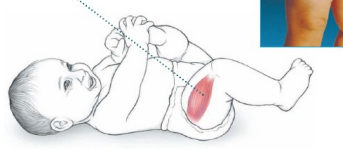


Intramuscular (IM) Needle Size:
23–25 gauge
Needle Length:
1"

• Infant/Toddler Intramuscular Shot

Site:
Vastus Lateralis

• Example
of two
IM sites



Age: 0–36 months

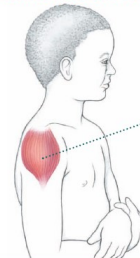
Intramuscular shots in infants and toddlers are usually given in the anterolateral thigh. The vastus lateralis muscle is on the outside of the leg in the mid- to upper-thigh.

Use 23–25 gauge, 1" needle. Insert entire needle at 90° angle.

• Child/Adult Intramuscular Shot

Site:
Deltoid

• Example
of two
IM sites



Age: 3 years–Adult

Intramuscular injections to children and adults are usually given in the upper arm. The deltoid muscle is found about 3 fingers below the acromion, above the level of the armpit.

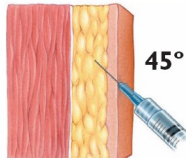
Use 23–25 gauge, 1" needle. Insert entire needle at 90° angle. A 1 1/2" needle may be needed for large adults.

SUBCUTANEOUS (SC)

Vaccines given subcutaneously (SC):

- Inactivated Polio Vaccine*
- Measles-Mumps-Rubella
- Pneumococcal Polysaccharide*
- Varicella

*Can also be given IM



Subcutaneous (SC) Needle Size:
25 gauge
Needle Length:
5/8"

• Infant/Toddler Subcutaneous Shot

Site:
Outer Aspect

• Example
of two
SC sites



Age: 0–36 months

Subcutaneous shots in infants and toddlers are given either in the upper arm or in the fatty area of the thigh. The tissue is "pinched" up between the thumb and index finger.

Use 25 gauge, 5/8" needle. Insert entire needle at 45° angle.

• Child/Adult Subcutaneous Shot

Site:
Outer Aspect

• Example
of two
SC sites



Age: 3 years–Adult

Given in the upper arm. The tissue on the back of the upper arm is "pinched" up between the thumb and index finger.

Use 25 gauge, 5/8" needle. Insert entire needle at 45° angle.

IMMUNIZATION
TECHNIQUES
Safe • Effective • Caring
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Department of Public Health, Immunization Branch

Patient name: _____ Date of birth: ____/____/____
(mo.) (day) (yr.)

Screening Questionnaire for Child and Teen Immunization

For parents/guardians: The following questions will help us determine which vaccines your child may be given today. If you answer "yes" to any question, it does not necessarily mean your child should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

	Yes	No	Don't Know
1. Is the child sick today?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the child have allergies to medications, food, a vaccine component, or latex?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Has the child had a serious reaction to a vaccine in the past?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Has the child had a health problem with lung, heart, kidney or metabolic disease (e.g., diabetes), asthma, or a blood disorder? Is he/she on long-term aspirin therapy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If the child to be vaccinated is between the ages of 2 and 4 years, has a healthcare provider told you that the child had wheezing or asthma in the past 12 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the child, a sibling, or a parent had a seizure; has the child had brain or other nervous system problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Does the child have cancer, leukemia, AIDS, or any other immune system problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In the past 3 months, has the child taken cortisone, prednisone, other steroids, or anticancer drugs, or had radiation treatments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. In the past year, has the child received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the child/teen pregnant or is there a chance she could become pregnant during the next month?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Has the child received vaccinations in the past 4 weeks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Form completed by: _____ Date: _____
Form reviewed by: _____ Date: _____

Did you bring your child's immunization record card with you? yes ☐ no ☐

It is important to have a personal record of your child's vaccinations. If you don't have a personal record, ask the child's healthcare provider to give you one with all your child's vaccinations on it. Keep this record in a safe place and bring it with you every time you seek medical care for your child. Your child will need this important document for the rest of his or her life to enter day care or school, for employment, or for international travel.

Technical content reviewed by the Centers for Disease Control and Prevention, October 2010

www.immunize.org/catg.d/p4060.pdf • Item #P4060 (10/10)

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org

Washington County EMS	Obstetrics Emergencies
Clinical Practice - Standing Protocols	SP 02
Special Patients	

Introduction: Most pregnancies progress in an orderly, normal fashion. Abnormalities during pregnancy affect both mother and child. Thus, care of the pregnant patient focuses on the evaluation and treatment of both mother and in-utero child. Common emergencies encountered in the pre-hospital environment are – bleeding, abnormal presentation of child, complicated deliveries and abdominal pain. Rapid assessment and recognition of acute problems including the possibility of having to support two or more lives with complications is the primary focus of the pre-hospital environment.

EMT - Basic

1. ABCs and administer supplemental oxygen 100% ASAP, with oximeter before & during.
2. If the obviously pregnant women (greater than 20 weeks gestation) requires spinal immobilization, securely package her supine and tilt the spine board 45 degrees on the left.
3. Assessment/Vital Signs (include fetal heart rate if possible).
4. Collect any aborted tissues and transport with the patient. Transport the patient greater than 20 weeks gestation on her left side.
5. Reference SPECIAL SITUATIONS/CONDITIONS listed below. Remember get an APGAR scores at **one and five** minutes after birth. Infants with scores of 3 or less require aggressive resuscitation.

EMT-Intermediate (In addition to above)

1. Blood glucose assessment, if indicated.
2. Start IV NS TKO or LR TKO in the event NS is unavailable.

Paramedic (In addition to above)

1. Blood glucose assessment, if indicated and not yet done.
2. Obtain ECG if indicated.
3. Start IV NS or LR in the event NS is unavailable and give 10-20 ml/kg IV bolus for hypotension (SBP < 90 mm Hg). Maintain a SBP of > 90 mm Hg.
4. A pregnant patient in cardiac arrest should be managed with rapid transport to the hospital and early notification of the ED that the patient is a pregnant arrest (this allows the ED to mobilize a team for emergent C-section if necessary). Pregnant arrests should be managed with a small elevation (pillow, sheet) under the right hip to shift the uterus off the great vessels in the pelvis during resuscitation attempts.

Consider the following while performing your assessment and history taking:

1. Prenatal care? Last Menstrual Period? Pain – type and location? Is pregnant high risk? Have there been any complications? Due date (gestation)? Gravida? Para? Contractions? If so, how far apart? Bleeding? Rupture of membranes? Urge to push? Any vaginal discharge? Cramping? Previous miscarriages? Fetal movement?

SPECIAL SITUATIONS/CONDITIONS: One of the major considerations in managing a prehospital delivery is timing. **If birth is imminent, - stay and deliver the baby.** If high risk or complicated, attempt to delivery enroute to the hospital. This patient would be considered “critical” according to our patient prioritization protocol and a third attendant should be requested when resources are available, when delivering in the field.

a. Cord presentation – relieve pressure to maintain a Pulsatile cord, transport rapidly, placing her in the knee chest position and keep cord moist with saline dressing.

b. Limb presentation – support presenting part, place mother in Trendelenburg & knee-chest position.

c. Breech Birth – rapid transport with delivery enroute if necessary.

d. Cord around neck – unwrap cord from neck and deliver normally, keep face clear, suction mouth & nose, etc.

e. Eclampsia/Pre-eclampsia – **Magnesium Sulfate 1-2 grams IVP** is often used in the emergent treatment. Contact On-Line medical control only.

f. Infant not breathing – stimulate with dry towel, rub back, flick soles of feet with fingers. Suction, ventilate 100% BVM, begin chest compressions if HR<60. Reassess quality of ventilation efforts, if indicated intubate –failure to respond usually indicates hypoxia – airway management is paramount in neonates.

g. Inverted or prolapsed uterus/abruptio placenta/profuse vaginal bleeding/ placenta previa/ ruptured ectopic pregnancy: Shock management with rapid transport to the hospital. These patients should be managed philosophically like trauma patients.

h. Post – partum hemorrhage – fundal massage (with or without placental delivery)& shock management as indicated.

Washington County EMS	Pediatric ACLS
Clinical Practice - Standing Protocols	SP 03
Special Patients	

EMT - Basic

1. ABCs (CPR if indicated).
2. Give supplemental oxygen ASAP, with oximeter before & during O2.
3. Assessment/Vital Signs

EMT - Intermediate (In addition to above)

1. Administer IV's, Intubation (ET only) and MAST (legs only) at the discretion of the attending paramedic

Paramedic (In addition to above)

2. Administer Defibrillation, IO's, Intubation, fluid challenge, reactive airway disease medications (Epi, Benadryl, Albuterol, etc...). First line PALS medications (Epi, Atropine, Amiodarone) may be performed in a full arrest situation without physicians orders. As soon as reasonably possible the paramedic should contact medical control for physician input on medications.

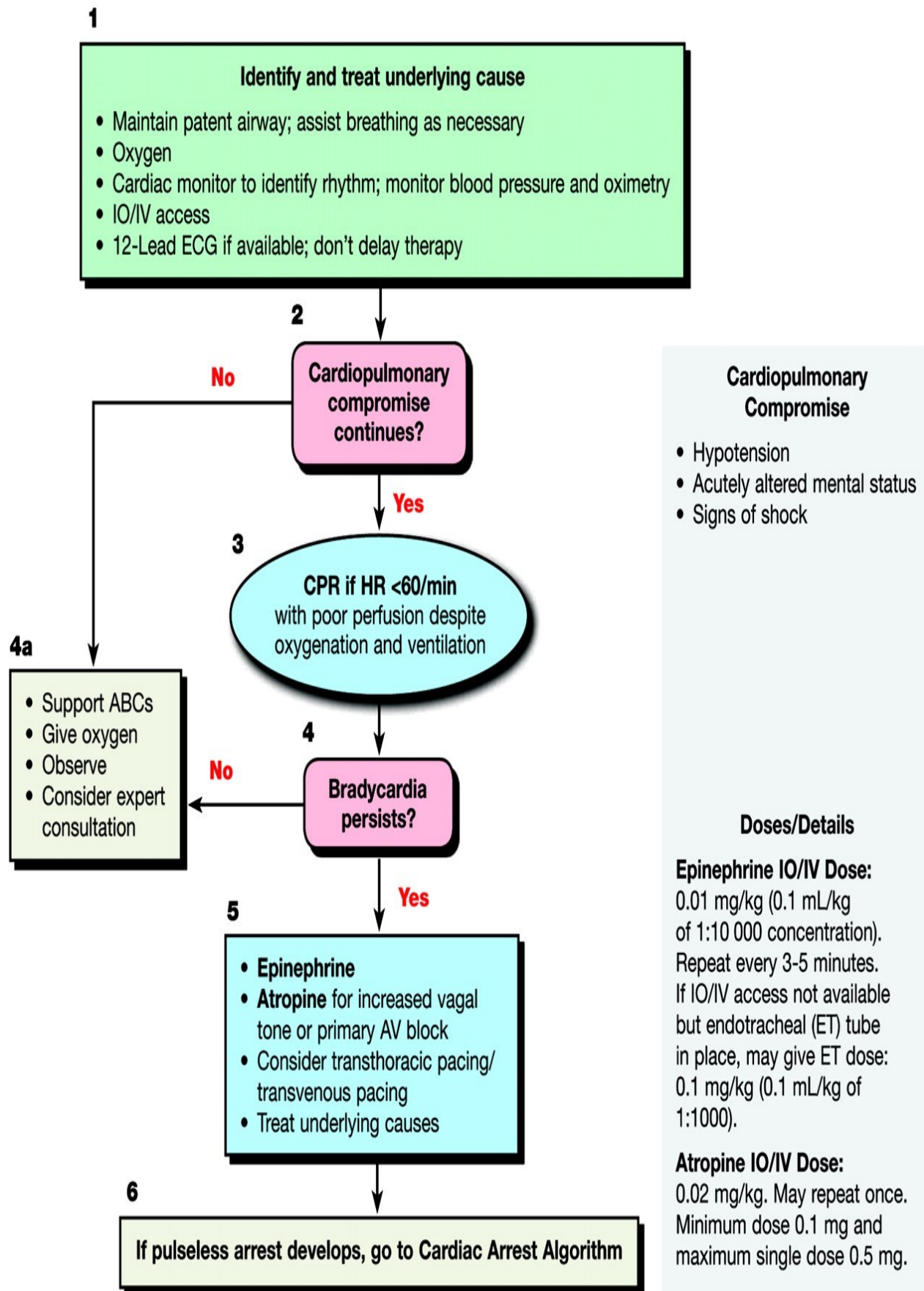
PEDIATRIC BRADYCARDIA

(Pediatric Bradycardia is usually the result of Hypoxia)

1. Obtain ECG.
2. Administer intubation.
3. Start IV or IO NS or LR if NS is unavailable, 20 ml/kg IV bolus if indicated.
4. With severe cardio-respiratory compromise (poor perfusion, hypotension, respiratory difficulty) administer

Pediatric Bradycardia

With a Pulse and Poor Perfusion



ASYSTOLE & PULSELESS ARREST – See attached Algorithm

Confirm cardiac rhythm in more than only one lead.

Determine Pulselessness and begin CPR.

VF or Pulseless VT:

- a. Continue CPR, secure airway
- b. Ventilate w/ 100% Oxygen
- c. Obtain IV or IO NS TKO (20 ml/kg IVP if indicated)
- d. DO NOT DELAY DEFIBRILLATION
- e. Defibrillate (as indicated) 2 J/kg initial, 4 J/kg subsequent shocks
- f. EPI 1:10,000 (0.01 mg/kg) IV/IO or ET 1:1,000 (0.1 mg/kg) Q 3-5 minutes.
- g. Amiodarone 5 mg/kg
- h. Defibrillate 4 J/kg 30-60 seconds after medication.
- i. Epi 1:1,000 (0.1 mg/kg) up to 0.2 mg/kg. Repeat Q 3-5 minutes.
- j. Defibrillate 4 J/kg 30-60 seconds after medication.

Asystole:

- a. Continue CPR, secure airway
- b. Ventilate w/ 100% Oxygen
- c. Obtain IV or IO NS TKO (20 ml/kg IVP if indicated)
- d. EPI 1:10,000 (0.01 mg/kg) IV/IO or ET 1:1,000 (0.1 mg/kg) Q 3-5 minutes.

EMD/PEA:

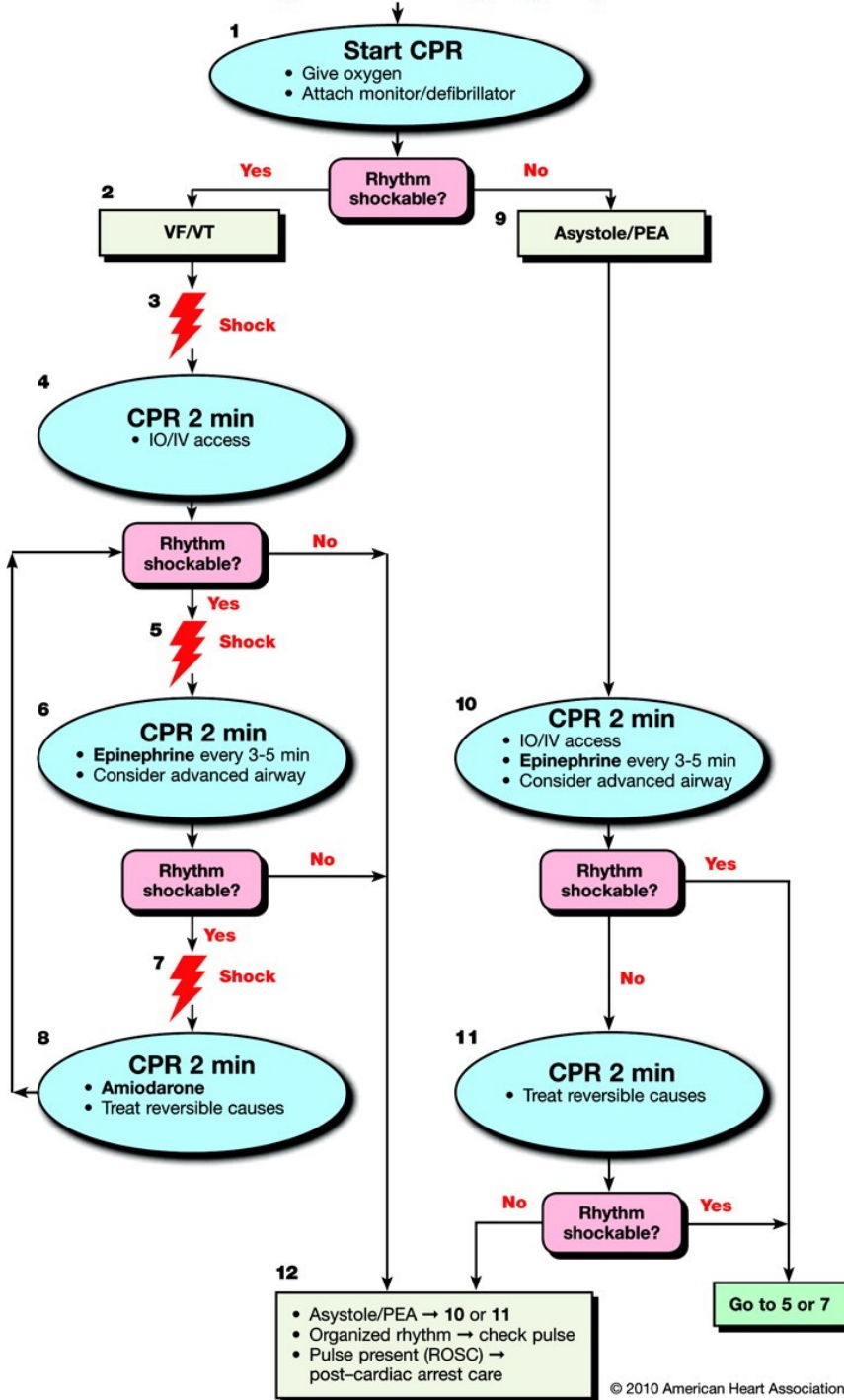
- a. Identify and treat causes:
 - Hypoxemia
 - Acidosis
 - Hypovolemia
 - Tension Pneumothorax
 - Cardiac Tamponade
- b. Continue CPR, secure airway
- c. Ventilate w/ 100% Oxygen
- d. Obtain IV or IO NS TKO (20 ml/kg IVP if indicated)
- e. EPI 1:10,000 (0.01 mg/kg) IV/IO or ET 1:1,000 (0.1 mg/kg) Q 3-5 minutes.

NEONATES:

- **EPI 1:10,000 (0.1-0.3 mg/kg) IV/IO or ET 1:1,000 (0.1 mg/kg)**
- **Fluid resuscitation should be 10 cc/kg bolus (repeat as indicated)**
- **If NS is unavailable, LR will be initiated**

Pediatric Cardiac Arrest

Shout for Help/Activate Emergency Response



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Doses/Details

CPR Quality

- Push hard ($\geq 1/3$ 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 IO/IV Dose:** 0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes. If no IO/IV access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration).
- Amiodarone IO/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)

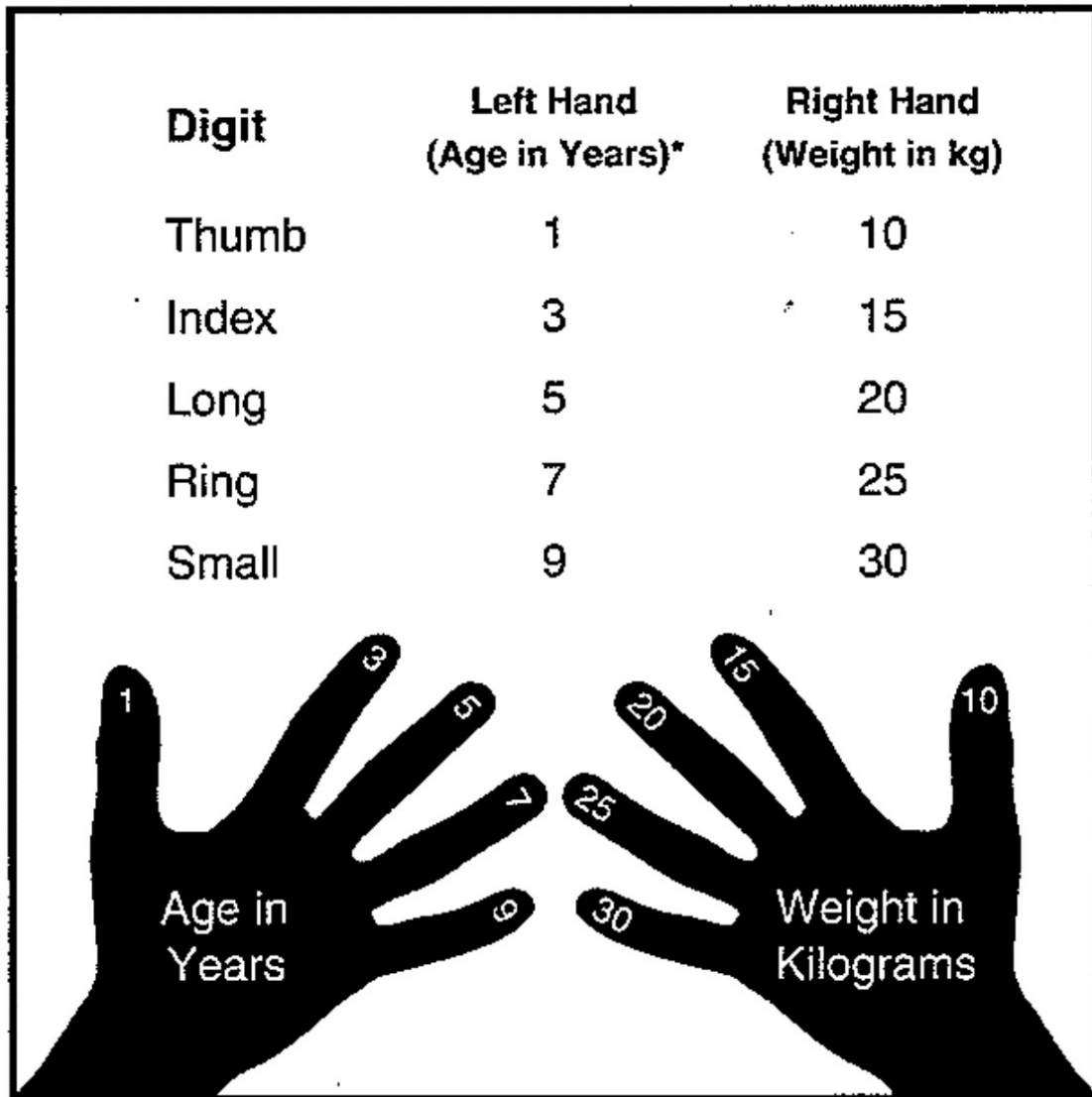
Return of Spontaneous Circulation (ROSC)

- 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

Washington County EMS	Pediatric Medication Dosages - Handtevey Guide
Clinical Practice - Standing Protocols	SP 04
Special Patients	



Washington County EMS	Pediatric Medication Dosages (Newborn)
Clinical Practice - Standing Protocols	SP 04.1
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - NEWBORN - 4 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	0.4 mg
Albuterol	NEB	Dose =	1.25 mg
Amiodarone	IV	5 mg/kg	20 mg
Atropine Sulfate	IV	Dose =	0.1 mg
Benadryl	IV/IM	1 mg/kg	4 mg
Bicarbonate 4.2% (Dilute 8.4% 1:1 NS)	IV	1 mEq/kg	4 mEq
D10W (D50W - 40ml) + 40ml NS	IV	0.2 g/kg IV	0.8 g
Dopamine	IV	Titrate to BP: Max 4 gtt/min	Titrate to BP: Max 4 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	0.4 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.04 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.04 mg
Etomidate	IV	0.2 mg/kg	0.8 mg
Fentanyl	IV/IM/IN	1 mcg/kg	4 mcg
Glucose (Oral)	PO	3 YR and Older	3 YR and Older
Magnesium Sulfate	IV	50 mg/kg	200 mg
Morphine	IV	0.1 mg/kg	0.4 mg
Narcan	IV	0.1 mg/kg	0.4 mg
Normal Saline Bolus 0.9%	IV	10 mL/kg	40 mL
Promethazine	IV	3 YR and Older	3 YR and Older
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	0.4 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	4 mg
Succinylcholine	IV	1 mg/kg	4 mg
Valium	IV/IM	0.2 mg/kg	0.8 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.04 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	0.4 mg
Versed	IV/IM/IN	0.1 mg/kg	0.4 mg
Zofran	IV/IM	0.1 mg/kg	0.4 mg

Washington County EMS	Pediatric Medication Dosages (4 Month old)
Clinical Practice - Standing Protocols	SP 04.2
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 4 MONTH OLD - 6 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	0.6 mg
Albuterol	NEB	Dose =	1.25 mg
Amiodarone	IV	5 mg/kg	30 mg
Atropine Sulfate	IV	0.02 mg/kg	0.12 mg
Benadryl	IV/IM	1 mg/kg	6 mg
Bicarbonate 4.2% (Dilute 8.4% 1:1 NS)	IV	1 mEq/kg	6 mEq
D10W (D50W - 40ml) + 40ml NS	IV	0.5 g/kg IV	3 g
Dopamine	IV	Titrate to BP: Max 4 gtt/min	Titrate to BP: Max 4 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	0.6 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.06 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.06 mg
Etomidate	IV	0.2 mg/kg	1.2 mg
Fentanyl	IV/IM/IN	1 mcg/kg	6 mcg
Glucose (Oral)	PO	3 YR and Older	3 YR and Older
Magnesium Sulfate	IV	50 mg/kg	300 mg
Morphine	IV	0.1 mg/kg	0.6 mg
Narcan	IV	0.1 mg/kg	0.6 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	120 mL
Promethazine	IV	3 YR and Older	3 YR and Older
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	0.6 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	6 mg
Succinylcholine	IV	1 mg/kg	6 mg
Valium	IV/IM	0.2 mg/kg	1.2 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.06 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	0.6 mg
Versed	IV/IM/IN	0.1 mg/kg	0.6 mg
Zofran	IV/IM	0.1 mg/kg	0.6 mg

Washington County EMS	Pediatric Medication Dosages (6 Month Old)
Clinical Practice - Standing Protocols	SP 04.3
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 6 MONTH OLD - 8 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	0.8 mg
Albuterol	NEB	Dose =	1.25 mg
Amiodarone	IV	5 mg/kg	40 mg
Atropine Sulfate	IV	0.02 mg/kg	0.16 mg
Benadryl	IV/IM	1 mg/kg	8 mg
Bicarbonate 4.2% (Dilute 8.4% 1:1 NS)	IV	1 mEq/kg	8 mEq
D10W (D50W - 40ml) + 40ml NS	IV	0.5 g/kg IV	4 g
Dopamine	IV	Titrate to BP: Max 8 gtt/min	Titrate to BP: Max 8 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	0.8 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.08 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.08 mg
Etomidate	IV	0.2 mg/kg	1.6 mg
Fentanyl	IV/IM/IN	1 mcg/kg	8 mcg
Glucose (Oral)	PO	3 YR and Older	3 YR and Older
Magnesium Sulfate	IV	50 mg/kg	400 mg
Morphine	IV	0.1 mg/kg	0.8 mg
Narcan	IV	0.1 mg/kg	0.8 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	160 mL
Promethazine	IV	3 YR and Older	3 YR and Older
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	0.8 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	8 mg
Succinylcholine	IV	1 mg/kg	8 mg
Valium	IV/IM	0.2 mg/kg	1.6 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.08 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	0.8 mg
Versed	IV/IM/IN	0.1 mg/kg	0.8 mg
Zofran	IV/IM	0.1 mg/kg	0.8 mg

Washington County EMS	Pediatric Medication Dosages (1 Year Old)
Clinical Practice - Standing Protocols	SP 04.4
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 1 YEAR OLD - 10 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	1 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	50 mg
Atropine Sulfate	IV	0.02 mg/kg	0.2 mg
Benadryl	IV/IM	1 mg/kg	10 mg
Bicarbonate 8.4%	IV	1 mEq/kg	8 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	5 g
Dopamine	IV	Titrate to BP: Max 8 gtt/min	Titrate to BP: Max 8 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	1 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.1 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.1 mg
Etomidate	IV	0.2 mg/kg	2 mg
Fentanyl	IV/IM/IN	1 mcg/kg	10 mcg
Glucose (Oral)	PO	3 YR and Older	3 YR and Older
Magnesium Sulfate	IV	50 mg/kg	500 mg
Morphine	IV	0.1 mg/kg	1 mg
Narcan	IV	0.1 mg/kg	1 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	200 mL
Promethazine	IV	3 YR and Older	3 YR and Older
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	1 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	10 mg
Succinylcholine	IV	1 mg/kg	10 mg
Valium	IV/IM	0.2 mg/kg	2 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.10 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	1 mg
Versed	IV/IM/IN	0.1 mg/kg	1 mg
Zofran	IV/IM	0.1 mg/kg	1 mg

Washington County EMS	Pediatric Medication Dosages (2 Year Old)
Clinical Practice - Standing Protocols	SP 04.5
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 2 YEAR OLD - 12 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	1.2 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	60 mg
Atropine Sulfate	IV	0.02 mg/kg	0.24 mg
Benadryl	IV/IM	1 mg/kg	12 mg
Bicarbonate 8.4%	IV	1 mEq/kg	12 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	6 g
Dopamine	IV	Titrate to BP: Max 8 gtt/min	Titrate to BP: Max 8 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	1.2 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.12 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.12 mg
Etomidate	IV	0.2 mg/kg	2.4 mg
Fentanyl	IV/IM/IN	1 mcg/kg	12 mcg
Glucose (Oral)	PO	3 YR and Older	3 YR and Older
Magnesium Sulfate	IV	50 mg/kg	600 mg
Morphine	IV	0.1 mg/kg	1.2 mg
Narcan	IV	0.1 mg/kg	1 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	240 mL
Promethazine	IV	3 YR and Older	3 YR and Older
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	1.2 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	12 mg
Succinylcholine	IV	1 mg/kg	12 mg
Valium	IV/IM	0.2 mg/kg	2.4 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.12 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	1.2 mg
Versed	IV/IM/IN	0.1 mg/kg	1.2 mg
Zofran	IV/IM	0.1 mg/kg	1.2 mg

Washington County EMS	Pediatric Medication Dosages (3 Year Old)
Clinical Practice - Standing Protocols	SP 04.6
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 3 YEAR OLD - 15 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	1.5 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	75 mg
Atropine Sulfate	IV	0.02 mg/kg	0.3 mg
Benadryl	IV/IM	1 mg/kg	15 mg
Bicarbonate 8.4%	IV	1 mEq/kg	15 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	7.5 g
Dopamine	IV	Titrate to BP: Max 12 gtt/min	Titrate to BP: Max 12 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	1.5 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.15 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.15 mg
Etomidate	IV	0.2 mg/kg	3 mg
Fentanyl	IV/IM/IN	1 mcg/kg	15 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	750 mg
Morphine	IV	0.1 mg/kg	1.5 mg
Narcan	IV	0.1 mg/kg	1.5 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	300 mL
Promethazine	IV	0.25 mg/kg	3.75 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	1.5 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	15 mg
Succinylcholine	IV	1 mg/kg	15 mg
Valium	IV/IM	0.2 mg/kg	3 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	.15 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	1.5 mg
Versed	IV/IM/IN	0.1 mg/kg	1.5 mg
Zofran	IV/IM	0.1 mg/kg	1.5 mg

Washington County EMS	Pediatric Medication Dosages (4 Year Old)
Clinical Practice - Standing Protocols	SP 04.7
Special Patients	

Handtevey Medication Guide for Pediatric Emergencies - 4 YEAR OLD - 17 kg Ideal Weight

<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	1.7 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	85 mg
Atropine Sulfate	IV	0.02 mg/kg	0.34 mg
Benadryl	IV/IM	1 mg/kg	17 mg
Bicarbonate 8.4%	IV	1 mEq/kg	17 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	8.5 g
Dopamine	IV	Titrate to BP: Max 12 gtt/min	Titrate to BP: Max 12 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	1.7 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.17 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.17 mg
Etomidate	IV	0.2 mg/kg	3.4 mg
Fentanyl	IV/IM/IN	1 mcg/kg	17 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	850 mg
Morphine	IV	0.1 mg/kg	1.7 mg
Narcan	IV	0.1 mg/kg	1.7 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	340 mL
Promethazine	IV	0.25 mg/kg	4.25 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	1.7 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	17 mg
Succinylcholine	IV	1 mg/kg	17 mg
Valium	IV/IM	0.2 mg/kg	3.4 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	.17 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	1.7 mg
Versed	IV/IM/IN	0.1 mg/kg	1.7 mg
Zofran	IV/IM	0.1 mg/kg	1.7 mg

Washington County EMS	Pediatric Medication Dosages (5 Year Old)
Clinical Practice - Standing Protocols	SP 04.8
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 5 YEAR OLD - 20 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	2 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	100 mg
Atropine Sulfate	IV	0.02 mg/kg	0.4 mg
Benadryl	IV/IM	1 mg/kg	20 mg
Bicarbonate 8.4%	IV	1 mEq/kg	20 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	10 g
Dopamine	IV	Titrate to BP: Max 16 gtt/min	Titrate to BP: Max 16 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	2 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.2 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.2 mg
Etomidate	IV	0.2 mg/kg	4 mg
Fentanyl	IV/IM/IN	1 mcg/kg	20 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1 g
Morphine	IV	0.1 mg/kg	2 mg
Narcan	IV	0.1 mg/kg	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	400 mL
Promethazine	IV	0.25 mg/kg	5 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	2 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	20 mg
Succinylcholine	IV	1 mg/kg	20 mg
Valium	IV/IM	0.2 mg/kg	4 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.2 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	2 mg
Versed	IV/IM/IN	0.1 mg/kg	2 mg
Zofran	IV/IM	0.1 mg/kg	2 mg

Washington County EMS	Pediatric Medication Dosages (6 Year Old)
Clinical Practice - Standing Protocols	SP 04.9
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 6 YEAR OLD - 22 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	2.2 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	110 mg
Atropine Sulfate	IV	0.02 mg/kg	0.44 mg
Benadryl	IV/IM	1 mg/kg	22 mg
Bicarbonate 8.4%	IV	1 mEq/kg	22 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	11 g
Dopamine	IV	Titrate to BP: Max 16 gtt/min	Titrate to BP: Max 16 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	2.2 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.22 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.22 mg
Etomidate	IV	0.2 mg/kg	4.4 mg
Fentanyl	IV/IM/IN	1 mcg/kg	22 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1.1 g
Morphine	IV	0.1 mg/kg	2.2 mg
Narcan	IV	0.1 mg/kg	2.2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	440 mL
Promethazine	IV	0.25 mg/kg	5.5 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	2.2 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	22 mg
Succinylcholine	IV	1 mg/kg	22 mg
Valium	IV/IM	0.2 mg/kg	4.4 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.22 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	2.2 mg
Versed	IV/IM/IN	0.1 mg/kg	2.2 mg
Zofran	IV/IM	0.1 mg/kg	2.2 mg

Washington County EMS	Pediatric Medication Dosages (7 Year Old)
Clinical Practice - Standing Protocols	SP 04.10
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 7 YEAR OLD - 25 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	2.5 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	125 mg
Atropine Sulfate	IV	0.02 mg/kg	0.5 mg
Benadryl	IV/IM	1 mg/kg	25 mg
Bicarbonate 8.4%	IV	1 mEq/kg	25 mEq
D25W (D50W - 25ml) + 25ml NS	IV	0.5 g/kg IV	12.5 g
Dopamine	IV	Titrate to BP: Max 20 gtt/min	Titrate to BP: Max 20 gtt/min
Epinephrine 1:1,000	ET	0.1 mg/kg	2.5 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.25 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.25 mg
Etomidate	IV	0.2 mg/kg	5 mg
Fentanyl	IV/IM/IN	1 mcg/kg	25 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1.25 g
Morphine	IV	0.1 mg/kg	2.5 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	500 ml
Promethazine	IV	0.25 mg/kg	6.25 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	2.5 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	25 mg
Succinylcholine	IV	1 mg/kg	25 mg
Valium	IV/IM	0.2 mg/kg	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.25 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	2.5 mg
Versed	IV/IM/IN	0.1 mg/kg	2.5 mg
Zofran	IV/IM	0.1 mg/kg	2.5 mg

Washington County EMS	Pediatric Medication Dosages (8 Year Old)
Clinical Practice - Standing Protocols	SP 04.11
Special Patients	

Handtevey Medication Guide for Pediatric Emergencies - 8 YEAR OLD - 27 kg Ideal Weight

<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	2.7 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	135 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	1 mg/kg	27 mg
Bicarbonate 8.4%	IV	1 mEq/kg	27 mEq
D50W	IV	0.5 g/kg IV	13.5 g
Dopamine	IV	Titrate to BP: Max 20 gtt/min	Titrate to BP: Max 20 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.27 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.27 mg
Etomidate	IV	0.2 mg/kg	5.4 mg
Fentanyl	IV/IM/IN	1 mcg/kg	27 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1.35 g
Morphine	IV	0.1 mg/kg	2.7 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	540 ml
Promethazine	IV	0.25 mg/kg	6.75 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	2.7 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	27 mg
Succinylcholine	IV	1 mg/kg	27 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.27 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	2.7 mg
Versed	IV/IM/IN	0.1 mg/kg	2.7 mg
Zofran	IV/IM	0.1 mg/kg	2.7 mg

Washington County EMS	Pediatric Medication Dosages (9 Year Old)
Clinical Practice - Standing Protocols	SP 04.12
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 9 YEAR OLD - 30 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	3 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	150 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	1 mg/kg	30 mg
Bicarbonate 8.4%	IV	1 mEq/kg	30 mEq
D50W	IV	0.5 g/kg IV	15 g
Dopamine	IV	Titrate to BP: Max 24 gtt/min	Titrate to BP: Max 24 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	0.01 mg/kg	0.3 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.3 mg
Etomidate	IV	0.2 mg/kg	6 mg
Fentanyl	IV/IM/IN	1 mcg/kg	30 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1.5 mg
Morphine	IV	0.1 mg/kg	1.5 g
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	600 ml
Promethazine	IV	0.25 mg/kg	7.5 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	3 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	30 mg
Succinylcholine	IV	1 mg/kg	30 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.3 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	3 mg
Versed	IV/IM/IN	0.1 mg/kg	3 mg
Zofran	IV/IM	0.1 mg/kg	3 mg

Washington County EMS	Pediatric Medication Dosages (10 Year Old)
Clinical Practice - Standing Protocols	SP 04.13
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 10 YEAR OLD - 35 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	3.5 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	175 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	1 mg/kg	35 mg
Bicarbonate 8.4%	IV	1 mEq/kg	35 mEq
D50W	IV	0.5 g/kg IV	17.5 mg
Dopamine	IV	Titrate to BP: Max 28 gtt/min	Titrate to BP: Max 28 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	Dose =	0.3 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.35 mg
Etomidate	IV	0.2 mg/kg	7 mg
Fentanyl	IV/IM/IN	1 mcg/kg	35 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	1.75 mg
Morphine	IV	0.1 mg/kg	3.5 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	700 ml
Promethazine	IV	0.25 mg/kg	8.75 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	3.5 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	35 mg
Succinylcholine	IV	1 mg/kg	35 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.35 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	3.5 mg
Versed	IV/IM/IN	0.1 mg/kg	3.5 mg
Zofran	IV/IM	0.1 mg/kg	3.5 mg

Washington County EMS	Pediatric Medication Dosages (11 Year Old)
Clinical Practice - Standing Protocols	SP 04.14
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 11 YEAR OLD - 40 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	4 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	200 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	1 mg/kg	40 mg
Bicarbonate 8.4%	IV	1 mEq/kg	40 mEq
D50W	IV	0.5 g/kg IV	20 g
Dopamine	IV	Titrate to BP: Max 32 gtt/min	Titrate to BP: Max 32 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	Dose =	0.3 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.4 mg
Etomidate	IV	0.2 mg/kg	8 mg
Fentanyl	IV/IM/IN	1 mcg/kg	40 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	50 mg/kg	2 g
Morphine	IV	0.1 mg/kg	4 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	800 ml
Promethazine	IV	0.25 mg/kg	10 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	4 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	40 mg
Succinylcholine	IV	1 mg/kg	40 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.4 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	4 mg
Versed	IV/IM/IN	0.1 mg/kg	4 mg
Zofran	IV/IM	0.1 mg/kg	4 mg

Washington County EMS	Pediatric Medication Dosages (12 Year Old)
Clinical Practice - Standing Protocols	SP 04.15
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 12 YEAR OLD - 50 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	5 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	250 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	1 mg/kg	50 mg
Bicarbonate 8.4%	IV	1 mEq/kg	50 mEq
D50W	IV	0.5 g/kg IV	25 g
Dopamine	IV	Titrate to BP: Max 36 gtt/min	Titrate to BP: Max 36 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	Dose =	0.3 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.5 mg
Etomidate	IV	0.2 mg/kg	10 mg
Fentanyl	IV/IM/IN	1 mcg/kg	50 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	Dose =	2 g
Morphine	IV	Dose =	4 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	800 ml
Promethazine	IV	0.25 mg/kg	12.5 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	5 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	50 mg
Succinylcholine	IV	1 mg/kg	50 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.5 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	5 mg
Versed	IV/IM/IN	0.1 mg/kg	5 mg
Zofran	IV/IM	Dose =	4 mg

Washington County EMS	Pediatric Medication Dosages (13 Year Old)
Clinical Practice - Standing Protocols	SP 04.16
Special Patients	

<i>Handtevey Medication Guide for Pediatric Emergencies - 13 YEAR OLD - 60 kg Ideal Weight</i>			
<i>Medication</i>	<i>Route</i>	<i>Dose / Kg</i>	<i>Amount</i>
Adenosine (1st)	IV	0.1 mg/kg	6 mg
Albuterol	NEB	Dose =	2.5 mg
Amiodarone	IV	5 mg/kg	300 mg
Atropine Sulfate	IV	Dose =	0.5 mg
Benadryl	IV/IM	Dose =	50 mg
Bicarbonate 8.4%	IV	Dose =	50 mEq
D50W	IV	Dose =	25 g
Dopamine	IV	Titrate to BP: Max 44 gtt/min	Titrate to BP: Max 44 gtt/min
Epinephrine 1:1,000	ET	Dose =	2.5 mg
Epinephrine 1:1,000	IM	Dose =	0.3 mg
Epinephrine 1:10,000	IV	0.01 mg/kg	0.6 mg
Etomidate	IV	0.2 mg/kg	12 mg
Fentanyl	IV/IM/IN	Dose =	50 mcg
Glucose (Oral)	PO	Dose =	15 g
Magnesium Sulfate	IV	Dose =	2 g
Morphine	IV	Dose =	4 mg
Narcan	IV	Dose =	2 mg
Normal Saline Bolus 0.9%	IV	20 mL/kg	1000 ml
Promethazine	IV	0.25 mg/kg	15 mg
Rocuronium (Defasciculating Dose)	IV	0.1 mg/kg	6 mg
Rocuronium (Fasciculating Dose)	IV	1 mg/kg	60 mg
Succinylcholine	IV	1 mg/kg	60 mg
Valium	IV/IM	Dose =	5 mg
Vecuronium (Defasciculating Dose)	IV	0.01 mg/kg	0.6 mg
Vecuronium (Fasciculating Dose)	IV	0.1 mg/kg	6 mg
Versed	IV/IM/IN	Dose =	5 mg
Zofran	IV/IM	Dose =	4 mg

Washington County EMS	Rescue Paramedic Operations
Clinical Practice - Standing Protocols	SP 05
Special Patients	

Introduction: This protocol refers specifically to those paramedics or EMTs credentialed through the Special Operations Team; however, can be authorized by EMS Command Staff in disaster circumstances. These protocols are supplement to the protocols and standards found in the standard protocol manual. Remember that the goal is to **bring medicine to the patient within 5 minutes**. All members of the special operations team will have received training on operating, patient handling, and PPE. The team will also train routinely on the equipment to assure competency.

Note: In certain situations, patient treatment modalities may necessitate change. Consider some of the following changes in patient treatments for the special operations paramedics (team) or authorized personnel during these situations. A monitor may not be available to the rescue paramedic at the time, so the provider must rely on a proper assessment to further guide patient care (ex. mentation, radial pulse strength, skin changes, etc.).

Airway Management:

Due to the unpredictable nature certain situations, unconscious patients needing airway management consider placing a supraglottic device (ex. King Tube) placed initially instead of traditional intubation. If the patient requires a BVM, an Autovent can be used to free up hand use during the rescue.

Hemorrhage Control:

In certain situations, direct pressure techniques may or may not be an option. In these, and potentially other, situations the use of modern hemorrhage control agents such as QuikClot or early tourniquets usage may be indicated. If tourniquets are utilized, then the date and time should be written directly on the patient when possible. The provider should consider administering blood products and/or TXA if major hemorrhage and hypoperfusion is suspected.

Pain Control:

Administering pain medication could play a crucial role in controlling the patient and making the situation safer for both the patient and provider. When administering pain medication in these environments, consider utilizing medications that will not negatively impact their cardiovascular status such as fentanyl or ketamine. These medications can be administered through alternate routes (IN for fentanyl and IM for both fentanyl and ketamine) allowing for easier use in the field. Monitor the patient closely for changes in ABCs.

Head Injury:

Head injuries can pose a serious threat to the patient. Keep the patient's head elevated when possible. Be prepared to manage the patient's airway for potential vomiting and monitor the patient for decreased respirations/mental status.

Washington County EMS	Special Trauma Considerations - Pediatrics
Clinical Practice - Standing Protocols	SP 06
Special Patients	

Introduction: To provide good trauma care for children you must have the proper equipment, know how to interact with frightened parents, know the normal vital signs for various ages and be familiar with the injuries that are more common in children. Fortunately the assessment sequence is the same for children as for adults. If you perform your assessment well, you will obtain the information needed to make the right decisions in management.

COMMON MECHANISMS OF INJURY IN CHILDREN:

1. Falls – from a height usually land on their heads because it is the largest/heaviest part of their body.
2. Motor vehicle crashes
3. Auto – pedestrian: Waddell’s triad – a combination of left femur, spleen and right head Injuries. Because we drive on the right side of the road, bumper of the car generally hits the child’s left femur while the fender hits the spleen area. The child flies through the air and lands on the right side of the head.
2. Burns
3. Airway obstruction, from a foreign body
4. Child abuse

Normal Pediatric Vital Signs:

Age	Weight (Kg)	Respirations	Pulse	Systolic BP
Newborn	3-4 kg	30-50	120-160	>60
6 Mo - 1 Year	8-10 kg	30-40	120-140	70-80
2 - 4 Years old	12-16 kg	20-30	100-110	80-95
5 - 8 Years old	18-26 kg	14-20	90-100	90-100
8 - 12 Years old	26-50 kg	12-20	80-100	100-110
> 12 Years old	> 50 kg	12-16	80-100	100-120

- **C-SPINE STABILIZATION:**

- Most children (8 years and under) require padding under their back and shoulders to keep cervical spine in neutral position.

- **BAG – VALVE – MASK:**

- **The** rates are 40 per minute for a child less than a year of age, 20 per minute for greater than 1 year of age, and 15 per minute for an adolescent. Make sure that your BVM does not have a pop-off valve.

- **INTUBATION:**

- Blind nasotracheal intubation is difficult, if not impossible, in the child less than 8 years old, as the larynx is too far anterior. Choose an endotracheal tube size that slips through the child's nose (about the size of the little fingernail). Another guide is $4 + \text{Age in years} = \text{Size of tube (mm)}$.

4

- **CIRCULATION:**

- Capillary refill may be used along with other methods to assess the circulation but do not depend on it alone to diagnose shock. At the present time the capillary refill test is considered controversial. Mottled skin is a normal finding in an infant less than six months of age, but it also may be a sign of poor circulation, so note it. A weak, rapid pulse with a rate over 130 is usually a sign of shock in all children except neonates.

- **VOLUME REPLACEMENT:**

- The initial bolus should be 20 cc/kg of with Normal Saline or Lactate Ringers if NS is unavailable, given as rapidly as possible. If there is no response, another 20 cc/kg can be given. If the child is in late shock and you cannot see/feel a vein, or cannot start an IV in two attempts or 90 seconds, perform intraosseous infusion. Remember that the child's blood volume is about 80 to 90 cc/kg, so a 10 kg child has less than 1 liter of blood. 3 or 4 lacerations can cause 200 cc blood losses, which is about 20% of the child's total volume.

Washington County EMS	Special Trauma Considerations - Pregnant Female
Clinical Practice - Standing Protocols	SP 07
Special Patients	

Introduction: In order to adequately care for the mother and unborn child that have been traumatized, one must be aware of the following facts. Any significant trauma to the pregnant patient could result in significant injury to the unborn fetus. The attending paramedic should initiate IV access and monitor patient appropriately (ECG, SpO₂, and EtCO₂ when indicated):

1. The average maternal heartbeat will increase by 10 to 15 beats per minute when compared to the non-pregnant.
2. The systolic and diastolic blood pressure of the pregnant patient will often decrease by 10 to 15 mm Hg in the second trimester of pregnancy and then return to normal by term.
3. The pregnant patient undergoes a significant increase in circulating blood volume about 40 to 50%. This presents an increase in both plasma and red blood cells. However, there is usually a greater increase in plasma compared to the increase in red blood cells, thereby resulting in a relative state of anemia for many pregnant patients.
4. The pregnant patient may lose 30 to 45% of her circulating blood volume before hypotension develops.
5. When the pregnant patient is lying flat on her back, the enlarged uterus can cause significant compression of the inferior vena cava, thereby reducing venous return to the heart by up to 25 to 30%. This can then result in hypotension. Therefore, when possible, pregnant patients should be transported in the left lateral recumbent position. If it is necessary to immobilize the patient supine, then the backboard should be tilted upward 20 to 30 degrees towards the patient's left side. This will help to "roll" the pregnant uterus away from the inferior vena cava.
6. Gastric emptying and motility are decreased during pregnancy. This, combined with the compression of the enlarged uterus on the stomach, increases the risk of aspiration in patients with a decreased level of consciousness.
7. Trauma to the pregnant patient can result in very significant amounts of OCCULT bleeding – either intrauterine or retroperitoneal.
8. Abruptio placenta is the leading cause of traumatic fetal death. Vaginal bleeding is seen in about 75% of these cases.
9. Maternal hemorrhage that does not result in decreased blood pressure can still reduce fetal blood flow by 20 to 25%. Trauma significant enough to cause shock in the mother is associated with a fetal mortality of about 75%.

Washington County EMS	BISD Medically Fragile Patients
Clinical Practice - Standing Protocols	SP 08
Special Patients	

Introduction: This protocol is designed to help guide Washington County EMS staff in the treatment of Medically Fragile Patients from Brenham Independent School District. This protocol will be utilized in the rare event that WCEMS employees are required to staff the Medically Fragile Students bus and/or classroom. Most of these children already have standing orders from their personal care physician for treatment of certain emergency situations. WCEMS should familiarize themselves with these orders. Obviously this protocol can-not address all emergencies so the staff should rely on clinical judgment for any other issues not covered in the standing orders. This protocol refers specifically to those paramedics or EMT's that have been trained to staff the Special Needs bus or classroom however, can be authorized by EMS Command Staff in certain circumstances. These protocols are supplement to the protocols and standards found in the standard protocol manual.

Note: In certain situations patient treatment modalities may necessitate change. The following are some acceptable changes in patient treatments for the specially trained WCEMS staff or authorized personnel.

WCEMS staff should follow the patient's primary care physician's orders if they apply to the current situation of the patient. This may include treatments that are not in WCEMS protocols. If any medications are administered then EMS command staff should be notified.

If the primary care physician's orders do not apply to the current situation then WCEMS staff should follow the appropriate protocol. WCEMS staff should contact medical control if there is any question about the treatment of these patients.

Appendix





Accident Report

Date reporting accident:

Name: Last

First

MI

Social Security Number:

Date of birth:

Home phone:

Mailing address:

Marital status: ☐ Married ☐ Single ☐ Separated ☐ Divorced

Race: ☐ White ☐ Black ☐ Asian

Ethnicity: ☐ Hispanic ☐ Native American ☐ Other

Number of dependent children:

Spouse's name:

Doctor's name:

Doctor's mailing address:

Date of injury:

Time of injury:

AM

PM

Date time loss began:

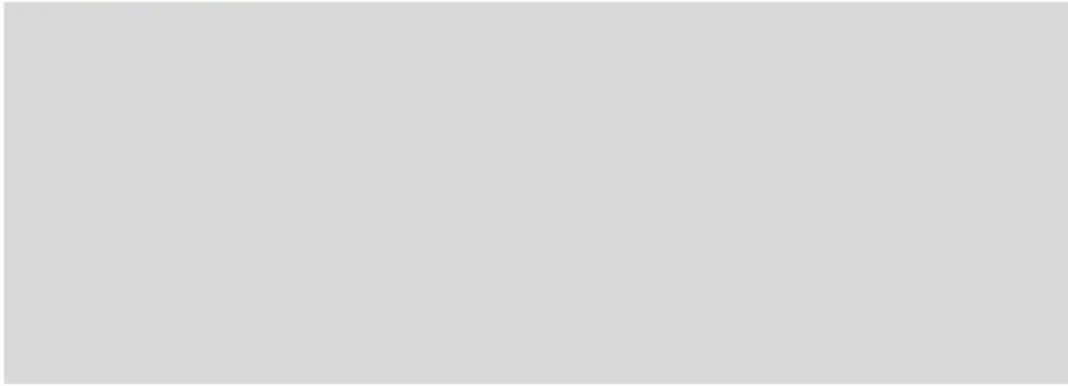
Nature of injury (fall from scaffold, contact with radiation, etc.):

Part of body injured or exposed (chin, upper left arm, etc.) (If more than one body part affected, list each part):

Were you performing your regular job?

List witnesses:

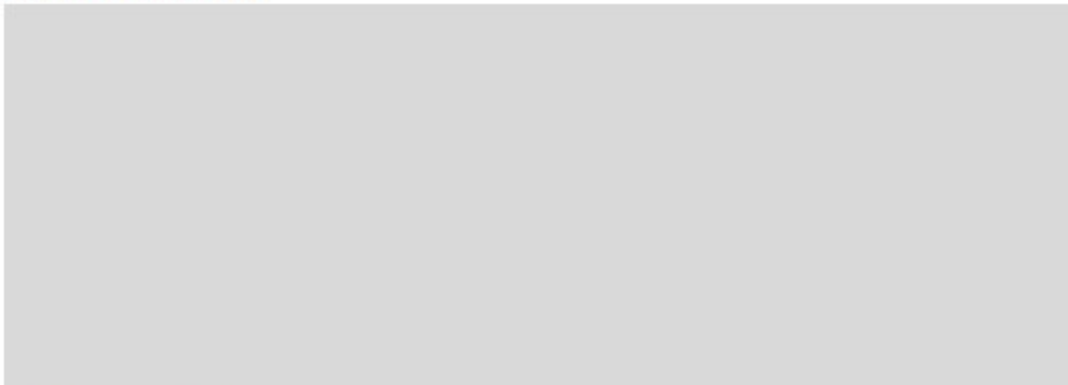
Employee comments:



Employee signature:



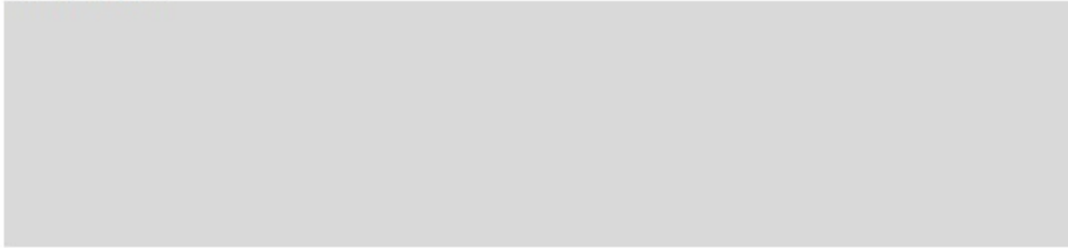
Supervisor comments:



Supervisor signature:



Plan of action:





Incident Report

Employee Name:

Incident Type: ☐ Clinical ☐ Operations ☒ Other

Category: ☒ Internal ☐ External

Date Occurred: Time:

On Duty Supervisor:

Incident Location:

Incident Cost:

Any Injuries:

Description of Incident (Be very descriptive):

Employee Comments:

On Duty Supervisor Comments:

Resolution Summary:

Status: ☒ Closed ☐ Open ☐ In progress ☐ Escalated

Resolved on (date):



Safe Baby Site Program

Dear Parent:

Thank you for bringing your baby to a Safe Baby Site. You have taken the first step in assuring that your child will be safe and well taken care of.

We are asking that you help your baby by providing some health information that may be important for your child to know in his/her future. You may not know all the answers; that's okay. Please just provide your child with as much information as you know.

Birth Information

Baby's date of birth:

Mother's medical history:	
Age: <input type="text"/>	
Race: <input type="text"/>	
<input type="checkbox"/> Diabetes <input type="checkbox"/> Hepatitis <input type="checkbox"/> Asthama <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Seizures	<input type="checkbox"/> Cancer <input type="checkbox"/> Heart disease <input type="checkbox"/> High blood pressure <input type="checkbox"/> Mental illness <input type="checkbox"/> Drug use: <input type="text"/>
Additional information: <input type="text"/>	

Father's medical history:	
Age: <input type="text"/>	
Race: <input type="text"/>	
<input type="checkbox"/> Diabetes <input type="checkbox"/> Hepatitis <input type="checkbox"/> Asthama <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Seizures	<input type="checkbox"/> Cancer <input type="checkbox"/> Heart disease <input type="checkbox"/> High blood pressure <input type="checkbox"/> Mental illness <input type="checkbox"/> Drug use: <input type="text"/>
Additional information: <input type="text"/>	



Washington County EMS Employee Warning Report

Employee's Name: Last First MI

Date of warning:

Shift:

Type of violation:

- ☐ Attendance
- ☐ Safety
- ☐ Carelessness
- ☐ Tardiness
- ☐ Disobedience
- ☐ Work Quality
- ☐ Other:

Warning:

Violation date: Violation time: AM ☒ PM ☐

Place violation occurred:

Employer statement:

Employee statement:

Check proper box:

- ☒ I agree with the Washington County EMS statement.
- ☐ I disagree with the Washington County EMS statement for the following reasons:

I have entered my statement of the above matter
Employee signature:

Date:

Warning decision:

Approved by: Name Title Date

Employee warning report

List all previous warnings below (when warned and by whom):

Previous warning (1st warning):

Date:

Warning from: Director ☐ Captain ☐ Lieutenant ☐

☐ Verbal

☐ Written

Previous warning (2nd warning):

Date:

Warning from: Director ☐ Captain ☐ Lieutenant ☐

☐ Verbal

☐ Written

Previous warning (3rd warning):

Date:

Warning from: Director ☒ Captain ☐ Lieutenant ☐

☐ Verbal

☐ Written

Written: I have read this "Warning decision" and understand it.

Employee signature date

Employee signature date

Employee signature date

Employee signature date

Copy distribution:

☐ Employee

☐ Supervisor

☐ Treasurer's office

☐ Other: