WVEMS 2022 Protocol Updates

How to use:

Welcome to the WVEMS Protocols **2022**

- Think of this like a **tool box**, not a **cookbook**.
- You should **use several protocols** at the same time on every call.
- You may use any intervention marked for your level or lower.

Basic procedures are assumed for every call.

- Don't forget: scene safe, BSI, ABC's, call for **ALS**, notify the ED, etc.
- Every patient should have a full assessment including vital signs.
- Ask about **medical allergies** and **pregnancy** before giving meds.

Call for online **Medical Direction** at any time for advice on:

- Any questions, problems, or if uncertain for any reason.
- Getting permission to **deviate** from these protocols.
- If unable to contact, remember: **get the patient to the hospital**.

Protocols mean you **can**, but not always that you **should**.

- Use only enough to stabilize and/or improve. Don't follow blindly.
- Skip anything unnecessary. Not every box need to be completed.
- The listed **order suggests importance**, but is not absolute.

Severity is a **subjective judgement** that requires thought.

- Not all decisions are black and white. Use this text as a guide.
- **Reassess and restart** protocols as needed during a call.
- Use good clinical sense to decide what takes precedence.

Presume routine things when appropriate, like:

- SpO_2, EKG, $EtCO_2$, glucometer, phlebotomy, etc.
- Regular layperson **first aid** treatments like splinting & band-aids.
- Note: protocols may also include reminders (like "12-Lead").

Pediatric considerations are **included** in every protocol.

- Patients 14 y/o and over (14+) are generally given **adult** therapy.
- Children (1-13) and Infants (<1) are considered **peds**.
- Use Peds Reference or other approved source for peds dosing.

Critical Care is for credentialed **paramedics only**.

- Provider's responsibility to maintain **mandatory prerequisites**.
- Must be approved **for that specific protocol** by the agency OMD.
- All deadlines expire on the last day of the month (a grace period).

References are included. This text is not comprehensive.

- Medications may appear as **brand name**® or **generic**.

Reviewed: Apr 2022

WVEMS Protocols 2022

Protocols, Procedures, Policies & Medications
of the Western VA EMS Medical Direction Committee

Editors: Drs. Ekey, LePera, and Stanley

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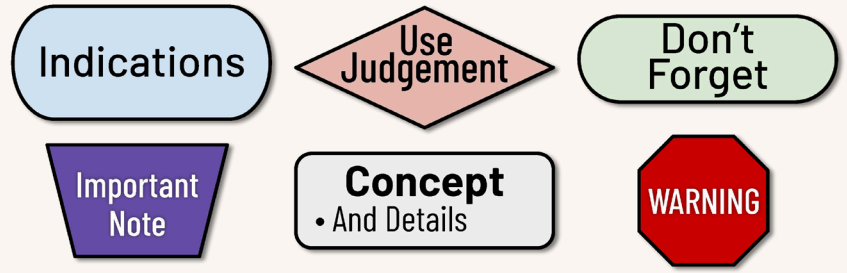
Protocol Flow and Intervention Symbols



Basic Life Support (**BLS**)

	EMR	E	EMT	A	AEMT

Advanced Life Support (**ALS**)

I	Intermediate	P	Paramedic	P	Critical Care Paramedic

Reviewed: Jan 2022

ADD NOTE

This presentation is for informational purposes only.

Please keep in mind you cannot function under or use the new 2022 protocol updates until you have been cleared by your agency, agency Operational Medical Director and all required documentation has been submitted to your agency's training staff.

Hypertension protocol:

No changes to the algorithm.

Added more causes in the note section

NEW-2022

AKA: HTN, Elevated Blood Pressure

Hypertension Imperatives

- Confirm elevated systolic BP with two reliable blood pressures.
- HTN is a frequent reaction to Pain and acute physiologic insult.
  - Investigate and **treat pain** & **underlying causes** first.
- Even mild HTN (SBP>160 mmhg) in late Pregnancy may be pathologic.
  - It may indicate **preeclampsia** and progress to Seizures.
- Inappropriate use of antihypertensives can **cause harm**.
  - Lowering BP during a stroke can **cause harm**.

Notes

- Many other **underlying causes** can result in significant HTN.
  - Consider Cardiac if any chest pain.
  - Consider CHF and pulmonary edema if any dyspnea.
  - Consider Stroke if any acute focal neurologic deficits.
  - Consider OD/Tox if any recent stimulant or illicit drug use.
  - Consider Psych if overt anxiety from recent emotional triggers.
  - Consider Head Injury if any history of trauma or signs of injury.
- Ask about new or recent changes to cardiac or **BP medications**.
- Consider Malignant HTN if indicated & cleared for Critical Care.

Pediatrics

- Pathologic HTN is unlikely in peds. Treat underlying causes.

References

- ACLS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916 [Ver: 2020]
- PALS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000901 [Ver: 2020]
- Medscape Vitals: https://emedicine.medscape.com/article/2172054 [Ver: 11/18]
- Limmer D, O'Keefe MF. *Emergency Care* 14th Ed. Chapter 7

Reviewed: Apr 2022 NEMSIS: 9914123

Pain Mgmt Protocol:

No changes to the algorithm.
Emphasis on use of PO pain medications

AKA: Backache, Toothache, Migraine, Fibromyalgia

Pain Imperatives

- EMS pain control is indicated for recent injury or sudden pain:
  - Major Trauma, Obvious Fractures
  - Sudden Abdominal Pain or Chest Pain
- PO pain meds may be **beneficial** despite short transport times.
  - Consider **giving PO meds**, even for mild pain close to the ED.

Medications

- **Tylenol**® (Acetamin raindicated with liver disease
- **Ibuprofen** (Advil®, raindicated with GI bleeding
- **Fentanyl** (Sublimaze®): ated for non-acute pain like:
  - Toothache, Headache (mig tica, Fibromyalgia, etc.
- **Ketamine** (Ketalar®): cont for non-acute pain like:
  - Toothache, Headache (migra , Fibromyalgia, etc.
  - For IV/IO use: dilute in NS and **over 10 min**

NEW-2022

Notes

- Pain is subjective. Clinical judgment is
  - It is appropriate to try another med if ineffective.
  - Changes in pain scale are more useful te numbers.

Pediatrics

- Breaking tablets in half is appropriate. Do not b ak capsules.
- Withhold medications if unable to provide accurate dose.
- Use Peds Reference or other approved source for peds dosing.

References

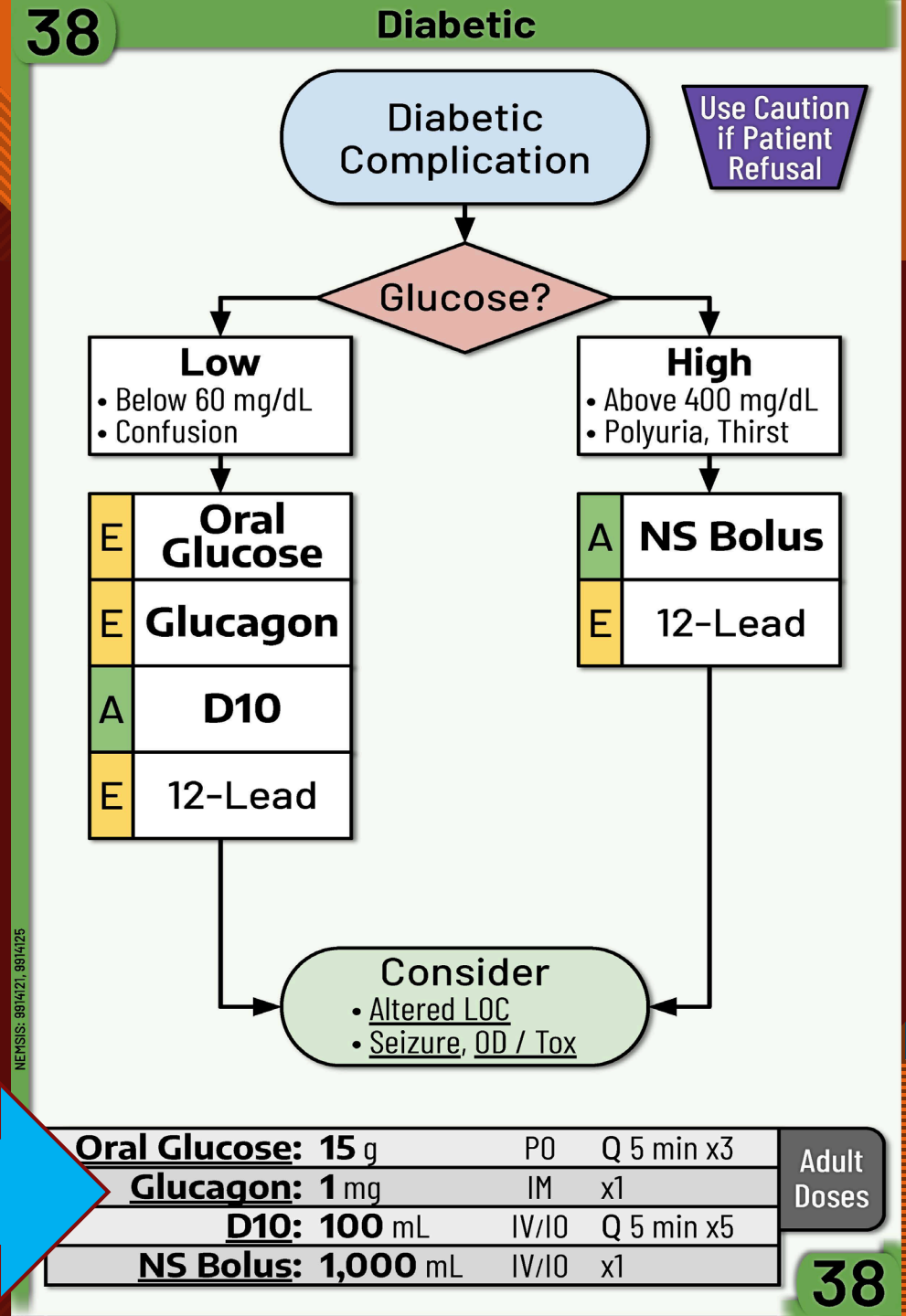
- ACLS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916 [Ver: 2020]
- PALS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000901 [Ver: 2020]
- Medscape Pain: https://emedicine.medscape.com/article/310834 [Ver: 1/20]
- Limmer D, O'Keefe MF. *Emergency Care* 14th Ed. Chapter 14, 26

Reviewed: Aug 2022 NEMSIS: 8914051, 8914071

Diabetic Protocol:

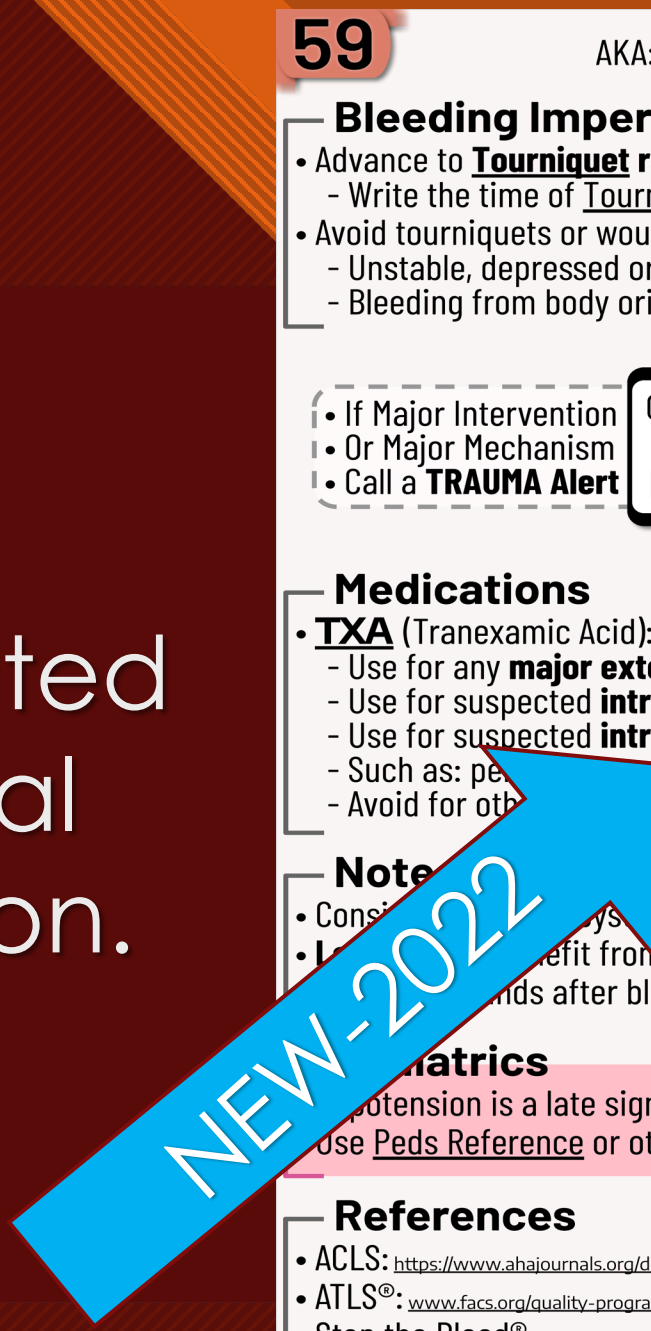
No changes to the algorithm.
Intranasal route of Glucagon removed.
EMT may give Glucagon IM to pts. 5 y/o+ using the entire vial.

NEW-2022



Bleeding Protocol

No changes to the algorithm.
May give TXA for suspected Intra-Thoracic/Abdominal Bleeding w/poor perfusion.



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AKA: Hemorrhage, Tourniquet, Wound Packing

Bleeding Imperatives

- Advance to **Tourniquet rapidly** for major arm / leg bleeding.
  - Write the time of Tourniquet application on the patient.
- Avoid tourniquets or wound packing for:
  - Unstable, depressed or open skull fractures; chest wounds
  - Bleeding from body orifices: vagina, rectum, ear, mouth, etc.

- If Major Intervention
- Or Major Mechanism
- Call a **TRAUMA Alert**

Call ER

Poor Perfusion

- Suspect if **several** of these:
  - **Altered Mental Status**
  - Skin Pale, Cool, Diaphoretic
  - Tachycardia, Hypotension
  - Dyspnea, Tachypnea

Medications

- **TXA** (Tranexamic Acid): Avoid if injury 3+ hours old or known PE.
  - Use for any **major external traumatic** bleeding.
  - Use for suspected **intra-abdominal bleeding** w/ poor perfusion.
  - Use for suspected **intra-thoracic bleeding** w/ poor perfusion.
  - Such as: pe… rigid abdomen, major contusions, SOB
  - Avoid for oth… suspected internal bleeding.

Note…

- Consi… …ys …nder dressings to investigate severity.
- I… …efit from repair within the first few hours.
  …nds after bleeding is controlled.

…iatrics

- …otension is a late sign of Shock in peds.
- …se Peds Reference or other approved source for peds dosing.

References

- ACLS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916 [Ver: 2020]
- ATLS®: www.facs.org/quality-programs/trauma/education/advanced-trauma-life-support/ [Ver: 2022]
- Stop the Bleed®: https://www.stopthebleed.org/ [Ver: 2022]
- Limmer D, O'Keefe MF. *Emergency Care* 14th Ed. Chapter 29, 34

Reviewed: Feb 2022 NEMSIS: 9914083

Head Injury Protocol:

Avoid Hyperventilation of the patient.

AKA: Concussion, Face / Neck / Eye / Nose / Mouth Trauma

Head Injury Imperatives

- Transport emergently if sudden changes in LOC.
- **Hypoxia** and **Hypotension** are associated with poor outcomes.
  - Investigate and treat for Hypoxia and Hypotension aggressively.
- Do not remove **impaled** objects. Splint object in position found.
- Intentional hyperventilation by EMS is not appropriate.
- **Lacerations** repair within the first few hours.
- **Mechanism** p erity.

- If Major Intervention
- Or Major Mechanism
- Call a **TRAUMA Alert**

Call ER

NEW-2022

- cause bruising behind ears or around both eyes.
- t pressure for brisk bleeding (unless skull crepitus/fx).
- penetrations should have a chest seal.
- ontamination benefits from copious flushing (NS or water).
- atch both eyes for any penetrating injury.
- **outh**: Monitor Airway. May skip BIAD if obvious complications.
- **Ear**: Check any discharge for CSF by dropping on white paper.
  - A yellow / clear halo suggests CSF leak from skull fracture.
- **Nose**: Do not attempt to reduce. Treat for Epistaxis.
- **Teeth**: Transport avulsed teeth in Hank's solution or NS.
  - Attempt replantation only in uncomplicated & isolated injury.
- **Concussion**: Usually does not require EMS intervention.

Pediatrics

- Do not attempt replantation for primary (baby) teeth.
- Use Peds Reference or other approved source for peds dosing.

References

- Medscape Head Injury: https://emedicine.medscape.com/article/1163653 [Ver: 10/18]
- Limmer D, O'Keefe MF. *Emergency Care* 14th Ed. Chapter 33

NEMSIS: 9914041, 9914057, 9914098, 9914101, 9914205
Reviewed: Oct 2021

Resuscitation Protocol:

Removed dual-sequential defibrillation from procedural list.

NEW-2022

Chest Compression

1. Confirm no pulse and not breathing.
2. Place hands on chest:
   - Adult (14+): Two hands w/ fingers interlaced over center of chest
   - Child (1-13): One hand over center of chest
   - Infant (<1): Two hands circling chest using thumbs
3. Push hard and fast. Compress about 1/3 the depth of the chest.
4. **Minimize interruption**. Compressions are the most important.
5. Switch personnel every 2 min or sooner if needed.

NOTE: Consider placing a mechanical device after the first 2 min.

Defib

1. Cut clothes to expose chest.
   - Consider shaving excessive hair.
   - Remove any medication patches. Wipe off residue.
2. Apply defibrillator pads. Avoid implanted devices or catheters.
3. When indicated, stop compressions and analyze cardiac rhythm.
   E Use AED "analyze" function. I May interpret directly.
4. If shock indicated: charge defibrillator while continuing CPR.
   - Follow manufacturer's or OMD's dosing guideline.
   - Use Peds Reference or other approved source for peds dosing.
5. **Assertively state "CLEAR!"** Visually confirm everyone is clear.
6. Defibrillate by pressing the SHOCK button.
   - Restart compressions immediately.

Note: "On the basis of the most recent evidence, routine use of double sequential defibrillation is not recommended." - 2020 AHA CPR & ECC Highlights: Adult Basic and Advanced Life Support

A IO

1. Prepare IO device and select site.
   - Consider pre-treating for Pain.
2. Insert IO following manufacturer's recommended procedure.
3. Secure well with bulky dressing or other device.
4. Consider admin of low-dose Lidocaine for local discomfort.

Lidocaine: 10 mg	IO	Q 5 min x3 PRN Pain	Adult

5. Consider using a pressure bag to increase fluid rates if needed.

Reviewed: May 2022

Refusal Policies:

14-17 y/o can refuse if:

1. No responsible party is reasonably available.
2. They can demonstrate capacity
3. Parent/guardian/POA may overrule the 14-17 y/o.

Patient Refusals

- Refusals represent a unique medical risk. EMS should complete a formal refusal with **at least one witness signature** for any patient who declines any intervention and / or transport.
- EMS should encourage treatment and transport for every patient.
  - EMS may not refuse transport if requested.
- All patients who wish to refuse must be **eligible** to make their own decisions. Eligible patients include:
  - Legal Adults (18 y/o and older)
  - Minors (< 18 y/o) who are married, divorced or emancipated
- The Code of Virginia (§54.1-2969 C,D) allows any **minor 14-17 y/o** to direct treatment **only if no responsible party** is reasonably available. This includes the ability to refuse treatment / transport.
- The Code of Virginia (§) allows **pregnant minors** to direct treatment **only rel delivery of their baby**.
- A responsible party (p , medical POA etc.) may have the authority to refu who is not eligible on their own.
- Any patient (or re) who wishes to refuse must also demonstrate **ca** equires them to be awake, oriented, and able to d derstanding of the potential risks.
  - Patients OC lack capacity and cannot refuse.
  - Suicid capacity and cannot refuse.
- Call **M** **l** and enlist law enforcement help for any pati pts to refuse, but should not be allowed to do so.

Patient?

for whom EMS is specifically summoned should be ed a patient. Every patient should have a full report eted with a transport or a refusal documented.

every person on scene of an emergency needs to be onsidered a patient. EMS is not obligated to document a refusal for a person who declines EMS assessment, **and** is acting normally without obvious distress, **and** for whom EMS was not specifically summoned.

- A refusal should be documented if there is any doubt.

NEW-2022

Reviewed: Oct 2021

HANDTEVY:

1. Age is the primary reference
2. Start preparation enroute
3. Age range: Newborn-13y/o
4. EMTs can still give some meds but cannot do Peds Med-math
5. ALS can do dose-calculating by using Peds reference or the HANDTEVY app.

HANDTEVY Pediatric Emergency Standards

- WVEMS uses the **Handtevy** Standard.
  - **Age is the primary** reference.
  - This allows **preparation en route**.
- Length / color tape is also an option.
  - Use tape if very small / very large.
  - Use tape if age is unknown.
- Weight based dosing is secondary.
  - Many meds are dosed by IBW.
  - Estimating weight is not advised.
- Vitals may be lower while sleeping.

133	Premie
134	0-3 mo
135	4-5 mo
136	6-11 mo
137	1 year
138	2 years
139	3 years
140	4 years
141	5 years
142	6 years
143	7 years
144	8 years
145	9 years
146	10 years
147	11 years
148	12 years
149	13 years

E EMT Peds Dosing

- Peds med math is **not in EMT scope**.
- May give regular adult dose for ages:
  - **Afrin**® (oxymetazoline): ≥ 6 y/o
  - **Albuterol** (Ventolin®): ≥ 2 y/o
  - **Atrovent**® (ipratropium): ≥ 5 y/o
  - **Glucagon** (Glucagen®): ≥ 5 y/o
  - **Oral Glucose** (Glutose®): ≥ 2 y/o
  - **Narcan**® (naloxone): all ages
  - **Zofran ODT**®: ≥ 11 y/o
- May give **EpiPen Jr**® for 3-8 y/o, or adult **EpiPen**® for ≥ 9 y/o.
  - May also use color coded / dose limiting administration systems.
- May **follow the directions** on the OTC box and give OTC doses of:
  - **Benadryl**, **Ibuprofen**, and **Tylenol**

References

- PALS: https://www.ahajournals.org/doi/10.1161/CIR.0000000000000901 [Ver: 2020]
- Handtevy - Pediatric Emergency Standards: https://handtevy.com [Ver: 5/22]
- Limmer D, O'Keefe MF. *Emergency Care* 14th Ed. Chapter 18

Reviewed: May 2022

RED-DOT Scope of Practice

- Consult your agency's training officer
- RED-DOT skills are reviewed on the WVEMS 2022 Protocol Update Rollout video

Critical Care Protocols:

- Credentialed Paramedics ONLY
- Paramedics cleared by agency, protocol and agency OMD
- Recognize that extra medications in in CC protocols, are NOT included in the Regional drug-boxes.
- Subject to OMD review