J. VASCULAR DOPPLER DEVICE

1. PURPOSE

When pulses are difficult to detect, or when a blood pressure cannot be measured using a stethoscope, a vascular Doppler device can be utilized.

2. INDICATION

Inability to palpate a pulse.

3. CONTRAINDICATIONS

Patients who have not yet reached their 18th birthday.

4. POTENTIAL ADVERSE EFFECTS/COMPLICATIONS

None

5. PRECAUTIONS

When utilizing a Doppler device, avoid applying to much pressure with the device over the artery, as this may obliterate the pulse you are attempting to detect.

6. PROCEDURE

a) Identify the appropriate artery (e.g., carotid, brachial, radial, femoral, dorsalis pedis).
b) A large dollop of gel is applied to the site and to the device.
c) The device is held gently over the artery (too much pressure may obliterate the pulse), and the volume adjusted to hear the pulsation.
d) If the pulse is located, the area should be wiped clean, and the exact site should be marked with a pen or marker.
e) If blood pressure is being taken, the clinician finds the pulse and listens as the cuff is inflated. When the pulse sound disappears, you have identified the systolic pressure.
f) If no pulse is found, then sliding the device around the appropriate area or changing the angle of the device slightly may identify the location of the pulse. Be careful not to apply to much pressure on the skin.

7. TRAINING AND DOCUMENTATION

a) Clinicians must complete practical training.
b) Description of technique
c) Demonstration of device (features, operation, troubleshooting)
d) Documentation requirements (eMEDS®)
e) Scenario

K. PREHOSPITAL ULTRASOUND

1. PURPOSE

a) Many high-impact, high-mechanism trauma patients do not exhibit signs and/or symptoms of internal bleeding in the first hour of the event. Utilizing prehospital ultrasound technology allows an additional non-invasive exam to increase survival and decrease morbidity and mortality from internal hemorrhage. A FAST exam will be completed in the following order with at least a six-second recording of each exam. In addition, patients who have the possibility of abdominal aortic aneurysm can benefit from the prehospital ultrasound exam. Finally, anytime the Termination of Resuscitation Protocol is being utilized and prehospital ultrasound is available, it gives an additional non-invasive exam to confirm and record clinician's suspicion of the absence of cardiac activity.

b) For patients presenting with torso or abdominal pain or who present with high-impact, high-mechanism trauma, a prehospital FAST exam will be performed.
   (1) Morison's perihepatic view
   (2) Pelvic view
   (3) Perisplenic view
   (4) Cardiac view

c) For patients who have a high clinical suspicion for abdominal aortic aneurysm, an abdominal ultrasound will be completed.

d) Before termination of resuscitation, a cardiac ultrasound will be completed.

2. INDICATIONS

a) When a patient presents with either obvious or possible high-impact, high-mechanism torso or abdominal trauma

b) To confirm the presence or absence of wall motion in the cardiac arrest patient

c) When a patient exhibits severe abdominal pain with radiation to the back, flank, and/or groin area.

3. CONTRAINDICATIONS

a) Patients who have not reached their 15th birthday

4. PROCEDURE

a) Initiate General Patient Care.

b) Initiate appropriate trauma and or medical emergency protocol including all BLS/ALS interventions.

c) The trained clinician will complete the appropriate prehospital ultrasound exam recording for at least six seconds.

ALERT: AT NO TIME SHOULD A PREHOSPITAL FAST EXAM DELAY PATIENT TRANSPORT.

d) Exam will be interpreted and relayed to the consulting hospital. In some cases, for example trauma patients for whom time and distance play a significant factor (category Charlie and Delta), the consulting physician may change the hospital destination based on the results of the prehospital ultrasound exam.
e) Continue patient care as appropriate for either medical and or traumatic emergency.
f) Assure exam is transmitted to the receiving facility through closed, secure network with patient care report.

L. STABILIZATION CENTER (NEW ’20)

1. Inclusion Criteria

Patients eligible for entry into the Stabilization Center must be without an acute medical or traumatic complaint. If the patient is not requesting evaluation for an emergency medical condition and substance use is suspected, including suspected opioid patients who have improved with naloxone, patient must consent to be evaluated and transported to the Stabilization Center. Then the EMS clinician must complete the Stabilization Inclusion Checklist.

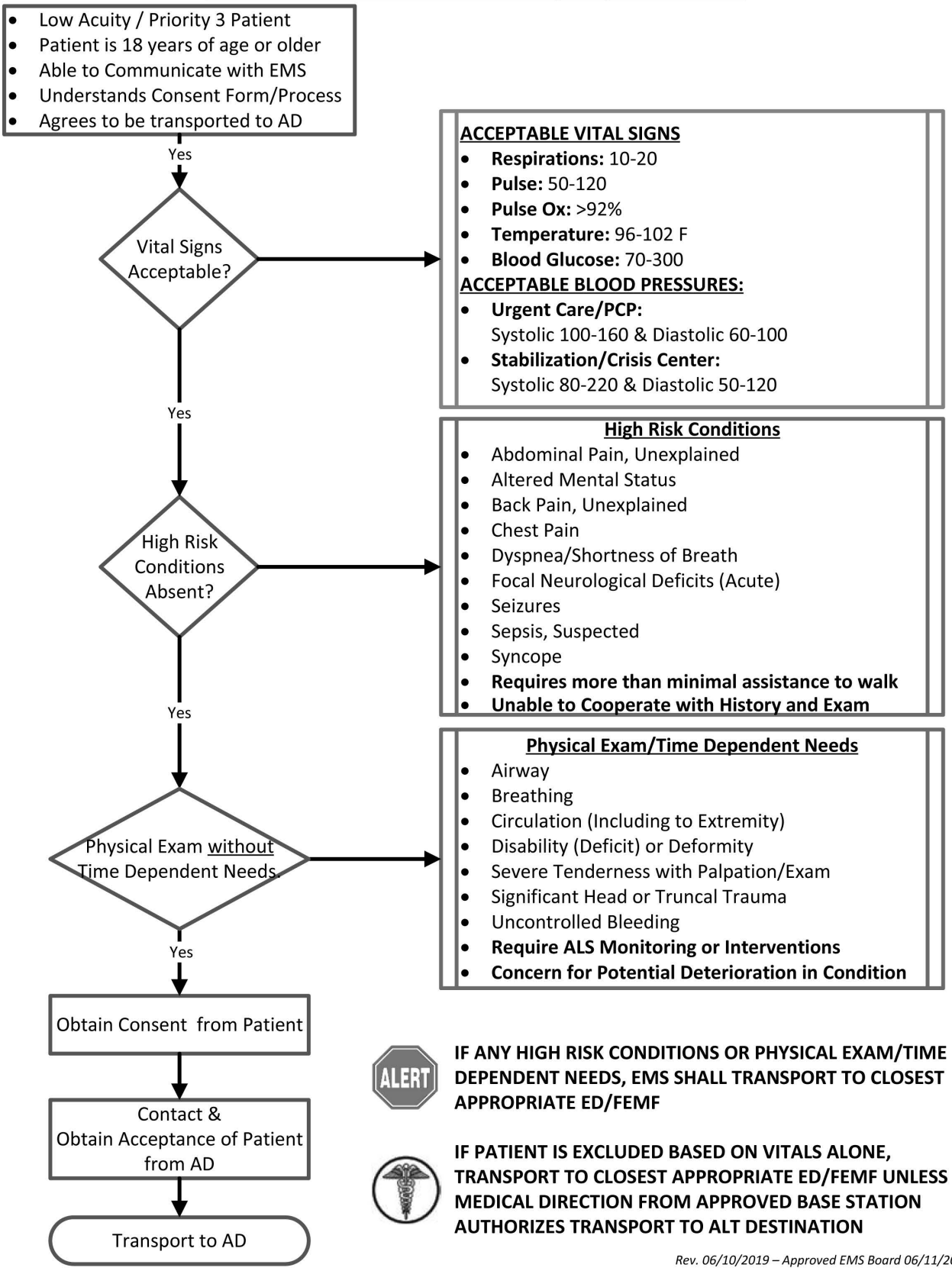
2. Treatment

Initiate patient screening. All answers must be "YES" for the referral protocol to continue. For any "NO" answers, consultation with an adult Base Station is required.

Patient without acute medical or traumatic complaint	YES	NO
Patient is age 18 or older	YES	NO
Patient is willing and able to cooperate with examination	YES	NO
Systolic BP greater than 80 mmHg and less than 220 mmHg	YES	NO
Diastolic BP greater than 50 mmHg and less than 120 mmHg	YES	NO
Pulse less than 120	YES	NO
Pulse greater than 50	YES	NO
Respiratory rate less than 22	YES	NO
Respiratory rate greater than 10	YES	NO
Blood glucose less than 300 mg/dl	YES	NO
Blood glucose greater than 70 mg/dl	YES	NO
Pulse oximetry greater than 92% and no supplemental oxygen required	YES	NO
Patient accepts transport to Stabilization Center	YES	NO
NO evidence of significant head or truncal trauma	YES	NO
NO evidence of new head trauma (ecchymoses, hematomas)	YES	NO
NO evidence of uncontrolled bleeding	YES	NO
Patient can walk with no more than minimal assistance →No assistive devices (cane, walker permitted) →No assistance/stabilization of more than one limb required	YES	NO

3. **Medical consultation is required for any “NO” response.**
4. **If all answers are “YES” or medical consultation approves if a “NO” occurs, the patient shall be transported to the Stabilization Center.**

M. ALTERNATIVE DESTINATION PROGRAM (NEW '20)



Rev. 06/10/2019 – Approved EMS Board 06/11/2019

Examples of Low Acuity Chief Complaints

- Allergy or hay fever
- Back pain, mild; able to walk without assistance
- Contusions or abrasions, minor
- Cough, mild; without hemoptysis or respiratory impairment
- Non-traumatic dental problems
- Diarrhea, without dizziness or other signs of dehydration
- Dizziness, chronic (recurrent or known history)
- Dysuria, mild; female
- Ear pain
- Ingrown toenails
- Itching without systemic rash
- Eye irritation without signs of active infection, minor
- Fracture, distal extremity (forearm, lower leg), isolated injury, not open, With neuro/ vascular intact
- Headache, minor without neurological impairment
- Injury follow-up (minor injury, treated previously)
- Joint pain
- Mouth blisters
- Muscle aches
- Nausea, vomiting
- Neck pain (no history of acute trauma)
- Nosebleed (resolved)
- Painless urethral discharge
- Physical exam requests (except patients with diabetes, CHF, kidney failure, cancer)
- Plantar warts
- Rectal pain/itching, minor
- Sexual disease exposure
- Simple localized rash
- Sinusitis, chronic
- Skin infection or sores, minor
- Sore throat without stridor
- Sunburn (localized without blisters)
- Vaginal discharge
- Vaginal bleeding (Hx non-pregnant, not postpartum, and requires less than one pad in 5 hours)
- Upper respiratory infection
- Work release or disability
- Wound checks

N. MINOR DEFINITIVE CARE NOW, BALTIMORE CITY FIRE DEPARTMENT

Note: This document does not contain all of the material approved by the EMS Board. For the entire text of the protocol, contact the Office of the Medical Director.

1. PURPOSE

The objective of this pilot program is to assess the impact, accuracy and safety of providing low-acuity patients, identified as Alpha patients by IAED criteria (Basic Life Support), with immediate on-scene care by a two-person team composed of a BCFD Minor Definitive Care Now (MDCN) paramedic clinician, and one of the following Advanced Level Clinicians (ALP): a UMMC Nurse Practitioner (NP), a Maryland-licensed physician affiliated with UMMC with board certification in emergency medicine ("Physician"), or UMMC Physician Assistant (PA). This will be referred to as the MDCN Team.

2. INDICATIONS

a) Low-acuity patients, identified by the IAED™ MPDS® protocol as an 'Alpha determinant code Basic Life Support,' who meet additional criteria outlined in the MDCN protocol below; AND
b) Patients with an incident address that falls within the geographic boundaries of the UMMC, Midtown Campus or Grace Medical Center catchment areas; AND
c) Patients who consent to participate in the MDCN Pilot Program.

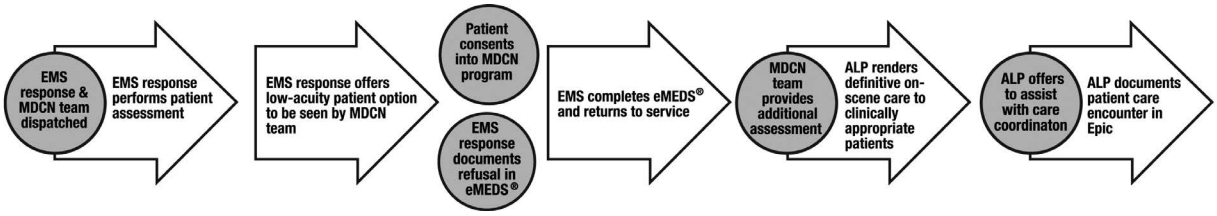
3. CONTRAINDICATIONS

a) Patients who decline enrollment in MDCN Pilot Program;
b) Patients who are deemed clinically inappropriate for on-scene treatment by the MDCN Team following assessment;
c) Individuals who refuse participation by revoking written consent, verbal refusal of care at time of visit;
d) Patients who possess a language or communication barrier that inhibits the MDCN Team's ability to appropriately address the patient's needs at the scene;
e) Patients who are not able to or lack the capacity to understand the informed consent process; and
f) Patients who have not yet reached their 18th birthday.

4. GENERAL PROCEDURES

a) When a 9-1-1 call response for EMS service is dispatched, the MDCN Team will respond to the scene concurrently with the typical BCFD EMS response unit to Alpha-level calls within the UMMC, Midtown Campus and Grace Medical Center patient catchment areas.
b) If a patient refuses EMS care and transport, a patient refusal form and eMEDS® should be completed per *The Maryland Medical Protocols for Emergency Medical Services* while on scene.
c) If the patient is determined to be a low-acuity candidate for MDCN program (as defined in Section VI below), the BCFD EMS response personnel will offer the patient the option to be seen by the MDCN Team.
d) The MDCN Team will request patient consent (see MDCN Consent Form) to provide minor definitive treatment on scene.

e) Once consent is provided, patient information, including information collected by the EMS response personnel can be shared with the ALP.
f) The EMS response personnel will return to service. If the MDCN Team determines that the patient needs to be transported and the patient decides they want to be transported, or if for any reason, the patient decides they want to be transported, the MDCN Paramedic will radio PSAP for an EMS transport unit. After requesting the unit, the BCFD MDCN Paramedic will perform any advanced life support skills, as defined by the MIEMSS Protocols for EMS Clinicians, to provide all necessary care within their scope of practice, until additional EMS clinicians arrive on scene and assume patient care and transport to the closest appropriate hospital. Any care rendered under the MIEMSS Protocols will be documented in eMEDS.
g) The MDCN Team performs any additional assessment and if indicated, the ALP will render treatment (see 12. Formulary, below). The MDCN Paramedic may assist with patient assessment (e.g., vital signs, pulse oximetry), the ALP will provide treatment associated with the MDCN Pilot Program.
h) The ALP may also offer to assist patients with setting up clinic appointments. The Operations Center, located at UMMC, may call and connect patients to appropriate care, either inside or outside of the University of Maryland Medical System (UMMS), depending on need, preference, and insurance status of the patient.
i) The MDCN Team documents the patient care encounter in the UMMC electronic health record system ("Epic"). If at any time during the encounter the patient refuses further assessment or treatment, the refusal must be documented in Epic.



j) The UMMC ALP and BCFD MDCN Paramedic clinicians will be restricted to their respective scopes of practice set by the Maryland Board of Nursing, Maryland Board of Physicians and MIEMSS.

5. ADVANCED LEVEL PRACTITIONER PROCEDURES

a) This protocol may only be used by the Advanced Level Practitioner (ALP).
b) MDCN Paramedics will follow *The Maryland Medical Protocols for Emergency Medical Services*.
c) Under the MDCN Pilot Program, all eligible patients will be offered the choice to "opt in" to receive on-scene definitive care. Participation in this pilot program is voluntary and will require patients to provide signed, informed consent. The on-scene treatment provided by the ALP will be in accordance with the medication and procedure list detailed in 11. Formulary and 12. Supply List (366-17).
d) Inclusion Criteria: the patient must provide consent and must not have any of the following exclusion criteria:

(1) A chief complaint consistent with evaluation that would indicate a need for the capabilities of a full service ED
   (a) High risk chief complaints are currently defined as dyspnea, altered mental status, syncope, chest pain, focal neurological deficits, unexplained back or abdominal pain, seizures, and sepsis (see vital sign criteria listed in 8. Medical Consultation (366-14).
(2) Physical findings consistent with time-dependent needs for emergent assessment or stabilization
   (a) Signs on exams that indicate a threat to airway, breathing, circulation, circulation to an extremity, disability (deficit) or deformity, as well as severe tenderness (as indicated by an assessment of airway, breathing, circulation, disability, exposure (ABCDE), etc.).
(3) Reasonably foreseeable signs or suspicion of any deterioration of condition (e.g., airway, breathing, hemodynamic, or neurologic compromise)
(4) Any requirement for any advance life support (ALS) monitoring or ALS interventions

e) In order to include the patient in the MDCN Pilot Program, the MDCN Team will obtain a complete set of vital signs, medical history, and the ALP will obtain a signed MDCN Pilot Program Consent Form.
f) If the patient is stable and deemed by the ALP to meet the criteria of the MDCN protocol, and has an injury or disease process, which can be safely treated on-scene:
   (1) The consenting patient will receive definitive on-scene care by the ALP member of the MDCN Team.
   (2) If the patient refuses to participate in the MDCN Pilot Program, the patient's condition deteriorates, or while on scene the patient changes their mind and declines to participate, the patient will be taken to the closest appropriate ED via ambulance. See 4. General Procedures above for response steps.
g) The MDCN Team will provide discharge instructions for each patient who participates in the MDCN Pilot Program.
h) In the event that the MDCN Team evaluates the consented patient and recommends ED transfer but the patient refuses, see 4. General Procedures (366-11) for appropriate actions.

6. MEDICATION MANAGEMENT

The ALP is authorized to manage drugs and devices under the following protocols:

a) The management of drugs or devices includes evaluating, initiating, altering, discontinuing, furnishing and ordering of prescriptive and over-the-counter medications.
b) Medication evaluation includes assessment of:
   (1) Other medications being taken
   (2) Prior medications used for current condition
   (3) Medication allergies and contraindications, including appropriate labs and exams

c) The drug or device is appropriate to the condition being treated, and:
   (1) Accepted dosages per references.
   (2) Generic medications are ordered if appropriate.
d) A plan for follow-up is written in the patient's chart and provided to the patient.
e) The prescription must be written in patient's Epic chart, including name of drug, strength, instructions and quantity, and signature of the ALP.

7. DISPENSING MEDICATIONS

The ALP may dispense prescription drugs and devices, under the following protocols:

a) They have current prescriptive authority, including Maryland CDS registrations.
b) All drugs and devices ordered are limited to the Formulary OR are per the recommendations in the Resources listed in this document.
c) The drugs and devices ordered are consistent with the ALP's educational preparation or for which clinical competency has been established and maintained.
d) The drug or device ordered is appropriate to the condition being treated.
e) Patient education is given regarding the drug or device.
f) The name, title, and licensing number of the ALP is written on the transmittal order.
g) A physician affiliated with the MDCN Pilot Program is available during hours of operation for in person or telephone medical consultation.
h) The drug or device utilizes required pharmacy containers and labeling.
i) All appropriate record keeping practices of the dispensary are performed.
j) All other applicable Standardized Procedures in this document are followed during health care management.
k) All General Policies regarding Review, Approval, Setting, Education, Evaluation, Patient Records, Supervision and Consultation in these Standardized Procedures are in force.

8. MEDICAL CONSULTATION

While it is the intent of MDCN Pilot Program to respond to low-acuity calls, if immediate patient deterioration should occur, EMS transport resources shall be utilized.

MDCN Medical Director notification and/or emergent ALS transport to the closest appropriate ED with the following being examples of patients and scenarios that shall generate ALS transport:

a) Acute myocardial infarction (AMI) or symptoms consistent with AMI
b) Acute central nervous system or focal neurologic deficits
c) Severe CHF
d) Severe respiratory distress
e) O_2 Saturation < 90% on room air, if acute
f) Hypotension
g) Acute altered mental status, unless intoxicated
h) Adult heart rate > = 140
i) Emergency hypotension
j) Moderate to severe CHF

k) SBP > = 240 or DBP > = 140 at presentation (asymptomatic) with preexisting hypertension history
l) Adult heart rate > = 110 at time of disposition
m) The MDCN Team responds in < 14 days for same acute complaint *Does not apply to chronic recurrent complaints unless there is a change in the complaint*
n) Elevated BP or heart rate in pregnancy or < = 6 weeks post-partum
o) Pregnancy complications
p) Chest pain (potentially consistent with angina or angina equivalent symptoms)
   (1) Nonspecific chest pain age > = 30 with history of:
      - Hypertension
      - Diabetes
      - Smoking
      - Coronary artery disease
      - Hyperlipidemia
      - Family history of coronary artery disease by age of 60; OR

      Nonspecific chest pain age > = 50 without risk factors
      - Abdominal pain
      - Requiring analgesic

      Nonspecific chest pain age > = 70
      - Diabetic
      - Uncertain diagnosis

   (2) Lab Criteria:
      - D-Stick –low less than 70 or greater than 300
      - O2 Sat 2% less than chronic levels

   (3) Vital sign and age consult criteria
      - Heart rate/minute
        - Adult heart rate > = 110
      - Hypertension
        - Adult asymptomatic hypertension of SBP > 220 or DBP > 120 at time of disposition with history of hypertension
        - Adult asymptomatic SBP > 195 or DBP > 115 at disposition without history of hypertension