BREMS

Blue Ridge Emergency Medical Services Council

FY 2022

Table of Contents

Executive Summary

State of Virginia

Under the *Code of Virginia* **§** *32.1-111.3*, The Office of Emergency Medical Services (OEMS) acting on behalf of the Virginia Department of Health has been charged with the responsibility of developing a Statewide Trauma Triage Plan. This plan is to include prehospital and inter-hospital patient transfers.

The *Code* states that the State Trauma Triage Plan shall incorporate, but not be limited to, the plans prepared by the regional emergency medical services councils. The *Code* further directs the collection of data through The PPCR Program and State Trauma Registry and protects its ability to be used by Trauma Committees that report to the Governors EMS Advisory Board.

In accordance with § 32.1-116.2. of the *Code*, any such data or information in the possession of or transmitted to the Commissioner (OEMS as the designee), the EMS Advisory Board, or any committee acting on behalf of the EMS Advisory Board, any hospital or pre-hospital care provider, or any other person shall be privileged and shall not be disclosed or obtained by legal discovery proceedings, unless a circuit court, after a hearing and for good cause shown arising from extraordinary circumstances, orders disclosure of such data.

The Virginia Trauma System is an inclusive system, but all hospitals participate in the Trauma Triage Plan. Establishing a comprehensive statewide emergency medical care system, incorporating healthcare facilities, transportation, human resources, communications, and other components as integral parts of a unified system that will serve to improve the delivery of emergency medical services and thereby decrease morbidity, hospitalization, disability, and mortality.

These goals can be achieved by reducing the period that acutely injured patients are identified and assisted in reaching definitive high quality trauma care. A coordinated effort between ground and air pre-hospital resources, as well as hospitals, whether trauma designated or not, can lead to getting the right patient to the right hospital, in the shortest amount of time possible, while maximizing resources.

This document will provide a uniform set of proposed criteria for prehospital and inter hospital triage and transport of trauma patients. The State Trauma Triage Performance and Improvement Committee perform the development and monitoring of these criteria, which is a sub committee of the Governors Advisory Board's Trauma System Oversight and Management Committee. The State Office of EMS is the enforcement body for the State Trauma Triage Plan.

Recognizing the complexity of Virginia's variability in demographics and geography, the State Trauma Triage Plan has been designed to set a template

for the Regional EMS Councils to develop, monitor and revise a regionalized trauma triage plan. Through regionalized Trauma Performance Improvement Committees issues in trauma care on scene, in transit and within hospitals can be addressed.

These improvements can be accomplished by conducting, promoting, and encouraging programs of education and training designed to upgrade the knowledge and skills of healthcare providers involved in trauma care. These criteria are not meant to supersede applicable laws such as EMTALA and HIPAA.

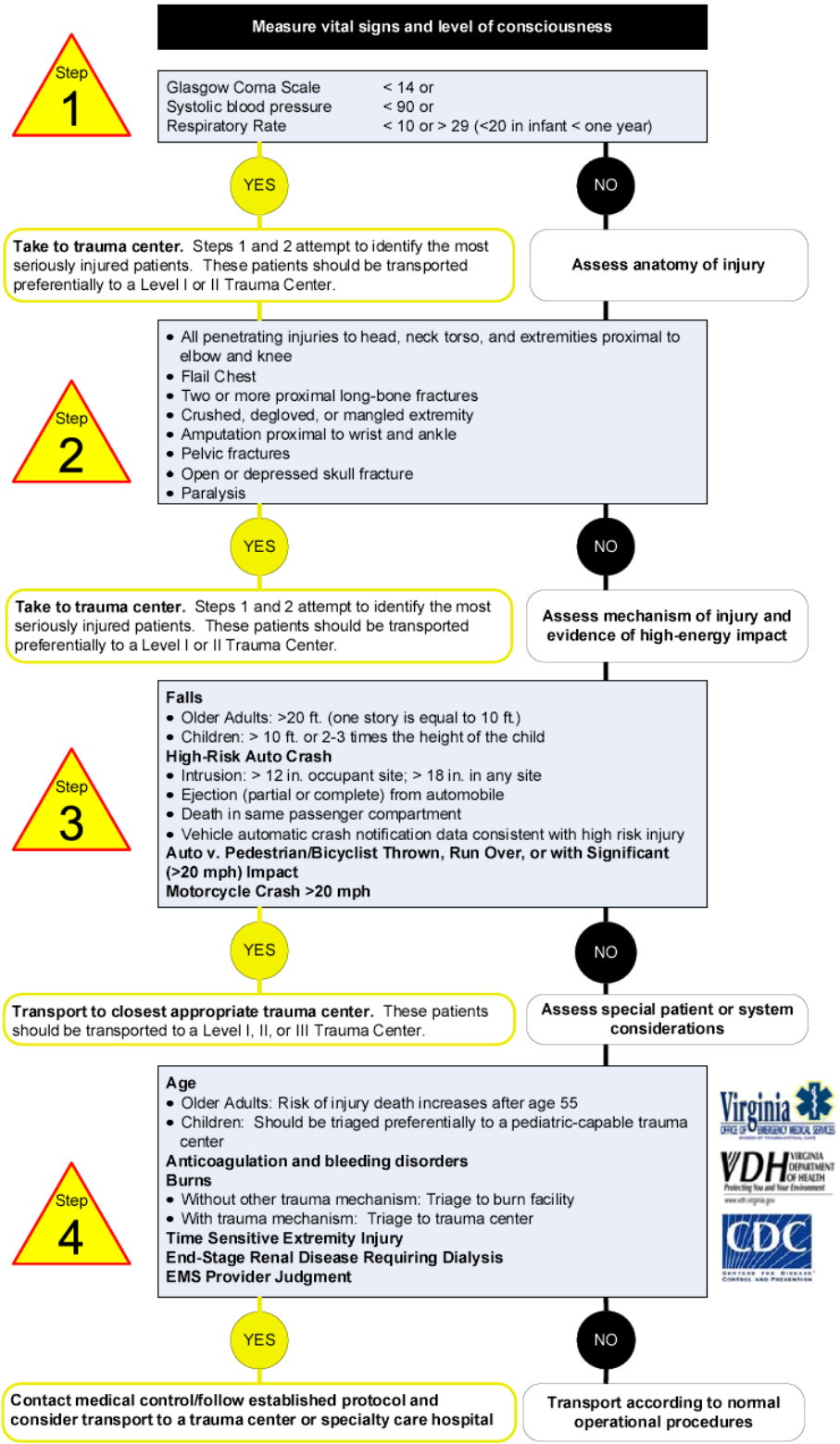
Blue Ridge EMS Region

Regional EMS councils are charged with the development of formal regional trauma triage plans (Code of Virginia, §32.1-111.3 B) to be implemented by July 1, 1999 as part of a statewide pre-hospital and inter-hospital Trauma Triage Plan. The purpose of the statewide plan is to "promote rapid access for pediatric and adult trauma patients to appropriate, organized trauma care through the publication and regular updating of information on resources for trauma care and generally accepted criteria for trauma triage and appropriate transfer." The regional plans "can incorporate each region's geographic variations and trauma care capabilities and resources, including hospitals designated as trauma centers."

The purpose of this trauma plan is to provide the BREMS region with a comprehensive provider outline to properly care for injured patients. This is an inclusive system of pre-hospital providers, communications systems, acute care facilities, and trauma centers that work together to provide optimal care for injured patients as prescribed by the state trauma plan, and in accordance with the identified Virginia Trauma Triage guidelines.

The BREMS council plan designed is to be a guide for the pre-hospital providers to facilitate the movement of the injured patient to definitive care as quickly as possible. In order to achieve this goal, all aspects and resources of the BREMS regional trauma system were considered. The first and foremost guiding principal to this plan is the consideration of what is best for the trauma patient.

Field Trauma Triage Decision Scheme



***Prehospital providers should transfer trauma patients with uncontrolled airway, uncontrolled hemorrhage, or if there is CPR in progress to the closest hospital for stabilization and transfer.**

Trauma Patient Transport Considerations

Pre-hospital Transport Criteria and Considerations

If it is determined that a patient meets one or more of the criteria below, he or she should be transported to the closest **LEVEL I** or **Level II** TRAUMA CENTER in the most expeditious manner.

Adult Patient	Pediatric Patient
Respiratory* •Respiratory Rate <8 or >30 • Assisted Ventilation • Partial or complete airway obstruction • Unable to establish or maintain airway • Intubation	**Respiratory*** • Requires constant observation for patency • O2 administration, or assisted ventilations • Partial or complete airway obstruction • Unable to establish or maintain airway • Intubation
CNS • Unconscious/Unresponsive Does not follow commands • Unable to move extremities	**CNS** • Unconscious/Unresponsive Unable to move extremities
Hemodynamics • Systolic blood pressure <90 (with signs & symptoms of shock) • Heart Rate >120 (with signs & symptoms of shock) • Uncontrolled Bleeding • Extremities with uncontrolled bleeding, loss of pulse and/or amputation	**Hemodynamics** • <10 Kg. (22#) - Systolic BP <50, Poor peripheral Pulses • 11-20 Kg. (24-44#) - Systolic BP <70, Poor peripheral Pulses • >20 Kg. (>40#) - Systolic BP <90, Poor peripheral Pulses • Poor perfusion • Uncontrolled Bleeding • Extremities with uncontrolled bleeding, loss of pulse and/or amputation
Penetrating Injury • Head • Neck • Chest, abdomen	**Penetrating Injury** • Head • Neck • Chest, abdomen
Special Considerations • Trauma in pregnancy (≥24 weeks gestation) • Geriatric • Bariatric • Special Needs Individuals	

Medical Control

In order to assist the attending emergency department physician with destination and transportation decisions for patients with major trauma, the following decision factors are provided:

Major Trauma Transport Considerations

Major trauma patient destination and mode of transport decisions made via on-line medical control should consider the following factors:

Major Trauma?

- (significant airway, CNS, hemodynamic or penetrating injury)

Accessibility of Patient for Transport

- Prolonged extrication time
- Remote location of patient (i.e. patient over embankment)

Using Helicopter Grounds to Meet a Helicopter

Pre-hospital care providers may select the grounds of a hospital facility as an air ambulance-landing site for the purpose of direct transfer of a patient from the pre-hospital agency ground ambulance to the air ambulance. Bedford Hospital and Farmville Hospital are most likely to use this method as they are not designated trauma centers in our region. In these cases, because of federal patient transfer regulations, the emergency department physician must be advised that a patient is being brought onto the hospital grounds, and given the option to assess the patient.

Centra One Stand-by

In situations when Centra One might be needed, an option is available to place the helicopter on “stand-by” status. This option gives advance warning to the flight crew of possible need for air transport and provides for the highest level of preparation short of take-off. Stand-by is initiated by calling Centra One, 866 - 924-7633. Stand-by will remain in effect for twenty minutes after which, if no word is received from the originator, the dispatcher will use the call back number for an update. If the helicopter is needed, call the 1-866-924-7633 number to request a launch. During stand-by, other requests for air transport will be triaged and accepted with scene requests generally given priority. If Centra One responds on another mission, the original stand-by requestor will be notified. Life Guard Ten from Roanoke and Pegasus from Charlottesville may be called in this case.

Inter-Hospital Triage Criteria

In general, the same transportation considerations as discussed in the pre-hospital Transport Criteria and Considerations section apply to inter-hospital transfer. In addition, certain EMTALA regulations may apply. This plan recognizes the EMTALA constraints placed on hospitals and referring physicians related to transfer, and transfers must be made in accordance with these laws. EMTALA is in the best interests of the trauma patient, who meets the criteria for transfer to a trauma centers, should be paramount and the utmost consideration must be given to the most appropriate facility which can meet the patient's needs.

A physician may choose not to transfer a specific patient if special circumstances exist that include the immediate availability of hospital facilities and medical personnel to allow appropriate medical care for that specific patient. Variance from the criteria would require documentation of the circumstances, and that the specific situation presented all the appropriate resources to provide a higher level of care than their trauma designation would indicate. An example would be a trauma patient who needs neurosurgical intervention delivered to a non-designated hospital, but a neurosurgeon and operating room is available within thirty minutes. The flexibility designed into this plan is to accommodate the specific strengths of every hospital in our region.

Resources—the ability of local hospital to handle the trauma patient

- Operating Room
- Physicians
- Other staff
- Equipment
- ED status and capability

Adult Patient	Pediatric Patient
	Any pediatric patient with a Pediatric Trauma Score ≤ 6. * See pediatric trauma score below
Respiratory • Bilateral thoracic injuries • Significant unilateral injuries in pt's >60 (e.g. pneumothorax, hemo-pneumothorax, pulmonary contusion, >5 rib fractures). • Significant unilateral injuries in patients with pre-existing cardiac and/or respiratory disease. • Respiratory compromise requiring intubation. • Flail chest.	**Respiratory** • Bilateral thoracic injuries • Significant unilateral injuries in patients with pre-existing cardiac and/or respiratory disease. • Flail chest.
CNS • Unable to follow commands • Open skull fracture • Extra-axial hemorrhage on CT, or any intracranial blood. • Paralysis • Focal neurological deficits • GCS ≤ 12	**CNS** • Open skull fracture • Extra-axial hemorrhage on CT. • Focal neurological deficits
Cardiovascular • Hemodynamic instability as determined by the treating physician. • Persistent hypotension. • Systolic B/P (<100) without immediate availability of surgical team.	
Injuries • Any penetrating injury to the head, neck, torso or extremities proximal to the elbow or knee without a surgical team immediately available*. • The combination of trauma with burns. • Significant abdominal to thoracic injuries in patients where the physician in charge feels treatment of injuries would exceed capabilities of the medical center.	**Injuries** • Any penetrating injury to the head, neck, chest, abdomen, or extremities proximal to the knee or elbows without a surgical team immediately available. • Combination of trauma with burn injuries • Any injury or combination of injuries where the physician in charge feels treatment of the injuries would exceed the capabilities of the medical center.
Special Considerations • Trauma in pregnancy (≥ 24 weeks gestation) • Geriatric • Bariatric • Special Needs Individuals	

Pediatric Trauma Score

COMPONENT	-1	+2	+1
Size	Child/adolescent, >20 Kg.	Toddler, 11-20 Kg.	Infant, <10 Kg.
Airway	Normal	Assisted O2, mask, cannula	Intubated: ETT, EOA, Cric
Consciousness	Awake	Obtunded; loss of consciousness	Coma; unresponsiveness
Systolic B/P	>90 mm Hg; good peripheral pulses, perfusion	51-90 mm Hg; peripheral pulses, pulses palpable	<50 mm Hg.; weak pr no pulses
Fracture	None seen or suspected	Single closed fracture anywhere	Open, multiple fractures
Cutaneous	No visible injury	Contusion, abrasion; laceration <7 cm; not through fascia	Tissue loss; any GSW/Stabbing; through fascia

BURN Related Injuries

BREMS follows the following GUIDELINES from The American Burn Association. The American Burn Association has identified the following injuries that usually require referral to a burn center.

- Partial thickness and full thickness burns greater than 10% of the total body surface area (BSA) in patients under 10 or over 50 years of age.
- Partial thickness burns and full thickness burns greater than 20% (BSA) in other age groups.
- Partial thickness and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia or perineum of those that involve skin overlying major joints.
- Full-thickness burns greater than 5% (BSA) in any age group.
- Electrical burns, including lightning injuries; (significant volumes of tissue beneath the surface may be injured and result in acute renal failure and other complications).
- Significant chemical burns.
- Inhalation injuries.
- Burn injury in patients with pre-existing illness that could complicate management, prolongs recovery, or affects mortality.
- Any burn patient in whom concomitant trauma poses an increased risk of morbidity or mortality may be treated initially in a trauma center until stable before transfer to a burn center.
- Children with burns seen in hospitals without qualified personnel or equipment for their care should be transferred to a burn center with these capabilities.
- Burn injury in patients who will require special social and emotional or long-term rehabilitative support, including cases involving child abuse and neglect.

Inter-Hospital Transport by Helicopter

Land or Air Transport

- Nearest trauma center
- Weather and other variables
- Availability of air transport
- Effects of transport time on patient's condition
- Level of training and experience of pre-hospital providers *Re-evaluate*

A severely injured patient, who meets one or more of the criteria, should be transferred to the closest **LEVEL I** or **LEVEL II** TRAUMA CENTER in the most expeditious manner.

Trauma Triage Quality Monitoring

(Utilizing Regional Performance Improvement Committees)

The Office of EMS will coordinate a program for monitoring the quality of trauma care. This program will provide for the collection and analysis of data on emergency medical and trauma services from existing validated sources, including but not limited to the Pre-hospital Patient Data Reporting (PPDR) Program and the Trauma Registry. An effective quality improvement process is essential to improve trauma patient outcomes.

The State Trauma Performance Improvement (TPI) Committee will also review such data on a quarterly basis and report its findings to the Health Commissioner and the EMS Advisory Board. The program for monitoring and reporting the results of trauma services data analysis will be the sole means of encouraging and promoting compliance with the trauma triage criteria. The Office of EMS, acting on behalf of the Commissioner of Health, will report aggregate findings of the analysis annually to each Regional EMS Council. The findings of the report shall be used by the Councils to improve their Regional Trauma Triage Plan, including triage, transport and trauma center designation criteria. de-identified version of the report will be available to the public and will include, minimally, as defined in the statewide plan, the frequency of (i) incorrect triage in comparison to the total number of trauma patients delivered to a hospital prior to pronouncement of death and (ii) incorrect inter-facility transfer for each region.

The Commissioner shall ensure the confidentiality of patient information, in accordance with § 32.1-116.2. Such data or information in the possession of, or transmitted to the Commissioner, the EMS Advisory Board, or any committee acting on behalf of the EMS Advisory Board, any hospital or pre-hospital care provider, or any other person shall be privileged and shall not be disclosed or obtained by legal discovery proceedings as is written in the *Code of Virginia*, unless a circuit court, after a hearing and for good cause shown arising from extraordinary circumstances, orders disclosure of such data.

Methodology:
The Office of EMS biostatistician will provide a retrospective analysis of the previous calendar year's trauma triage activities to the EMS Advisory Board, by the Board's August quarterly meeting. This same report will be provided to the Regional Councils for use in satisfying their obligation to provide TPI initiatives for the fiscal year.

Medical Provider Education Initiatives

- Development and distribution of a Trauma Triage Plan videotape or other instructional/informative presentation
- Seminars/Update sessions for EMS leadership, Operational Medical Directors, surgeons, Emergency Nurse Managers, ED groups obtain/incorporate CME and CEU where possible
- Development/distribution of laminated cards and/or posters
- Newsletter articles
- Web site information
- Incorporation of regional trauma triage information in ATLS, BTLS, TNCC, EMS and other curricula

Possible Public Education Initiatives

- Effective utilization of media
- Focus on availability of “trauma centers” and development of plan to address the “Expectations for the care of trauma patients in the BREMS region”
- Encouragement for hospitals and other agencies with public web sites to include trauma center and trauma plan information such as “what is a trauma center” and “if you have injuries, here is what you should do and expect…”
- Provide third party payers (medical directors with trauma plan information)

BREMS Continuous Quality Improvement Committee

BREMS Trauma Review Committee
FY 2019 *Updated*

Purpose

The Performance Improvement Committee *(PI),* under direction of the Regional Operational Medical Director is responsible for assuring and improving the quality of pre-hospital care within EMS systems that are served by the Blue Ridge Emergency Medical Services Council *(BREMS).* These committees will work under the provisions of this Performance Improvement Plan *(PIP)*.

Definitions

1. ***Quality Assurance*** is the retrospective review or inspection of services or processes that is intended to identify opportunities for improvement.
2. ***Quality Improvement*** is the continuous study and improvement of a process, system or organization.
3. ***Performance Improvement (PI)*** -- A systematic process of discovering and analyzing human performance improvement gaps, planning for future improvements in human performance, designing and developing cost-effective and ethically-justifiable interventions to close performance gaps, implementing the interventions, and evaluating the financial and non-financial results.
4. ***Medical Incident Review (MIR) –*** A process by which an EMS provider, EMS agency, Operational Medical Director and any hospital personnel can review a questionable incident and report that incident to BREMS. The incident will be reviewed by the Regional Operational Medical Director (OMD), and help close the loop hole between the agency, the agency's OMD and the hospital.
5. ***Trauma Quality Review (TQIR) –*** A process by which an EMS provider, EMS agency, Operational Medical Director and any hospital personnel can review a questionable incident and report that incident to BREMS. The incident will be reviewed by the Regional Operational Medical Director (OMD), and help close the loop hole between the agency, the agency's OMD and the hospital.

Primary Objectives

1. Collect patient care statistics to evaluate system effectiveness and identify trends *(PI).*
2. Conduct Trauma Reviews *(QA)* with the help of core measures in the pre-hospital and hospital environment.
3. Provide constructive feedback on performance improvement efforts to all EMS professionals and EMS agencies within the BREMS Region.
4. Make recommendations to the BREMS Training Coordinator & OMD Committee based on the evidence found during the year for future Regional Skills Review.
5. This committee shall meet at least quarterly.

Membership

The PI Committees shall be comprised of a representative/or their designee from:

- Each jurisdiction (5): Amherst Co: Sam Bryant , Appomattox Co.: Susan Walton , Bedford Co./Bedford City: Janet Blankenship, Campbell Co.: Michelle Turner, Lynchburg City: Robert Lipscomb/Ricky Bomar
- Regional Operational Medical Direction Committee (1): Dr. Marilyn McLeod
- Air Medical (1): Robert Conner
- Accredited education program (1): Jason Ferguson/Lisa Aiken
- Commercial Transport Agency (1): Jeff Tanner – Centra Transport, Tom Walton – Delta Response Team
- Hospital Representative (2): Kelly Brown
- All members are entitled to assign their own designee in the event they are unable to attend
- Any EMS provider in the BREMS region is invited to attend and encouraged to speak and ask questions

Virginia Designated Trauma Centers & Designation Level Description

Level I Trauma Centers

Level I trauma centers have an organized trauma response and are required to provide definitive care for every aspect of injury, from prevention through rehabilitation. These facilities must have adequate depth of resources and personnel with the capability of providing leadership, education, research and system planning.

Level II Trauma Centers

Level II trauma centers have an organized trauma response and are expected to provide initial definitive care, regardless of the severity of injury. The specialty requirements may be fulfilled by on call staff that is promptly available to the patient. Due to some limited resources, Level II centers may have to transfer injuries that are more complex to a Level I center.

Level II centers should also take on responsibility for education and system leadership within their region.

Level III Trauma Centers

Level III centers, through an organized trauma response, can provide prompt assessment, resuscitation, stabilization, emergency operations and arrange for the transfer of the patient to a facility that can provide definitive trauma care.

Level III centers should also take on responsibility for education and system leadership within their region.

Virginia has 14 designated Trauma Centers

5 - Level I Centers (highest Level)
Carilion Roanoke Memorial Hospital
Inova Fairfax Hospital
Sentara Norfolk General Hospital
University of Virginia Health System (Charlottesville)
Virginia Commonwealth University Health Systems (Richmond)

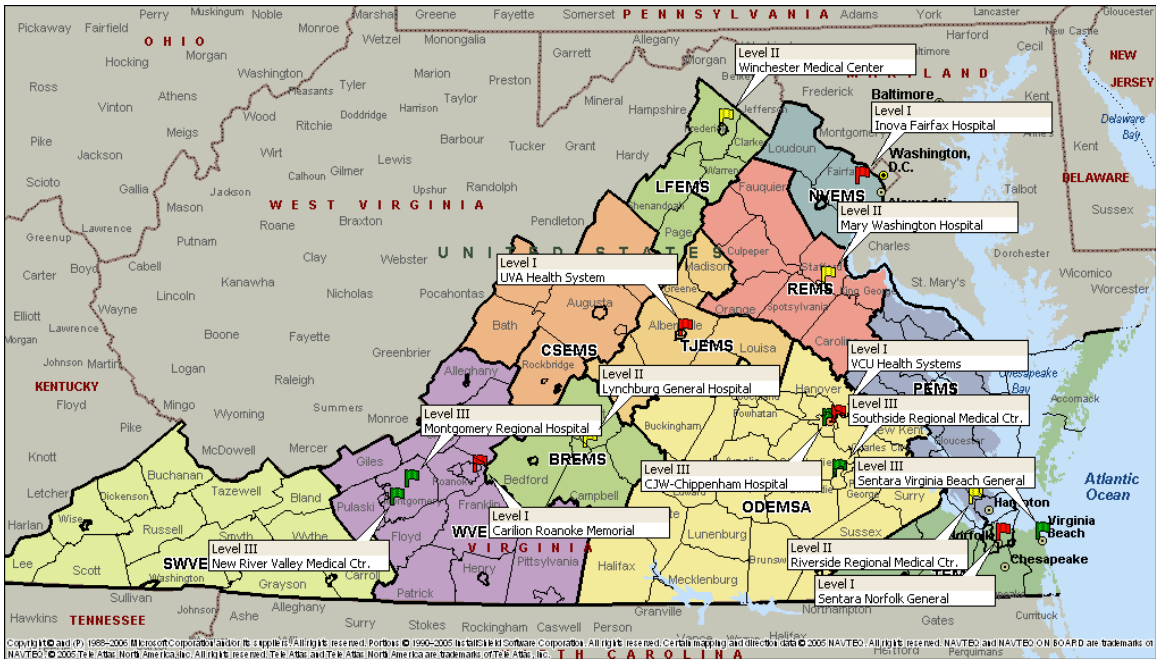
4 – Level II Centers
Lynchburg General Hospital
Mary Washington Hospital (Fredericksburg)
Riverside Regional Medical Center (Newport News)
Winchester Medical Center

5 – Level III Centers
Carilion New River Valley Medical Center (Christiansburg)
CJW Medical Center – Chippenham Campus (Richmond)
Montgomery Regional Hospital (Blacksburg)
Sentara Virginia Beach General Hospital
Southside Regional Medical Center (Petersburg)

In Virginia the process of designation is entirely voluntary on the part of the hospitals. It is meant to identify those hospitals that will make a commitment to provide a higher level of care for the multiple injured patients and who welcome public acknowledgment of that capability. Knowledge of trauma care capabilities, with improved field categorization and prehospital capabilities through trauma triage plans will help all those involved in the trauma care delivery system make decisions that are in the best interest of the patient.

Virginia Trauma Center standards are based upon national standards put forth by the American College of Surgeons and the American College of Emergency Physicians. The Virginia standards are reviewed and updated based on changes in the national standards as well as the evolving needs of the Trauma System in Virginia.

Map of Virginia Trauma Centers



List of Trauma Centers & Address

Level I Trauma Centers

Carilion Roanoke Memorial Hospital
Bellevue @ Jefferson Streets, Roanoke

Inova Fairfax Hospital
3300 Gallows Road, Falls Church

Sentara Norfolk General Hospital
600 Gresham Drive, Norfolk

UVA Medical Center
1224 West Main Street, Charlottesville

VCU Medical Center
12th & Marshall Streets, Richmond

Level II Trauma Centers

Lynchburg General Hospital
1901 Tate Springs Road, Lynchburg

Mary Washington Hospital
1001 Sam Perry Boulevard, Fredericksburg

Riverside Regional Medical Center
500 J. Clyde Morris Boulevard, Newport News

Winchester Medical Center
1840 Amherst Street, Winchester

Level III Centers

Carilion New River Valley Medical Center
2900 Lamb Circle, Christiansburg

CJW Medical Center, Chippenham
7101 Jahnke Road, Richmond

Montgomery Regional Hospital
3700 South Main Street, Blacksburg

Sentara Virginia Beach General Hospital
1060 First Colonial Road, Virginia Beach

Southside Regional Medical Center
801 South Adams Street, Petersburg

Minimum Surgical & Medical Specialties for Trauma Designation

Surgical Clinical Capabilities: (On call and promptly available)	**Level of Designation**		
	I	**II**	**III**
Trauma/General Surgery	X	X	X
Anesthesiology	X	X	X
Orthopedic Surgery	X	X	X
Thoracic Surgery	X	X	
Cardiac Surgery	X		
Pediatric Surgery	X		
Hand Surgery	X		
Microvascular/Replant Surgery	X		
Neurological Surgey	X	X	
Plastic Surgery	X	X	
Maxillofacial Surgery	X	X	
Ear, Nose & Throat Surgery	X	X	
Oral Surgery	X		
Ophthalmic Surgery	X	X	
Gynecological Surgery/Obstetrical Surgery	X	X	

Medical Clinical Capabilities: (On call and promptly available)	**Level of Designation**		
	I	**II**	**III**
Cardiology	X	X	
Pulmonology	X		
Gastroenterology	X		
Hematology	X		
Infectious Disease	X		
Internal Medicine	X	X	X
Nephrology	X		
Pathology	X	X	X
Pediatrics	X		
Radiology	X	X	X
Interventional Radiology.	X		

Trauma Triage Related Resources

Implementation of the BREMS and Local MCI Plan

When there are multiple victims, which may over run the system a quick overview of the incident should be made. The BREMS or local MCI Plans should be activated through local PSAP's. MEDICAL CONTROL should be advised as soon as possible of the potential of mass casualty transports. Give an estimate of the numbers of red, yellow and green patients and the time of expected transport of the first patients

Hospitals:

The following information was provided by the state Office of EMS from hospital licensure data. Complete hospital resource information can be found in *Virginia Trauma Care Resources, Virginia Department of Health, Office of Emergency Medical Services, June 2005*

Within the BREMS EMS region, there are four full-service hospitals facilities.

The focus of this plan will be on those facilities offering 24-hour emergency room facilities. All four hospitals are affiliated with the non-for-profit Centra Health System.

- Bedford County Memorial Hospital in Bedford
- Lynchburg General Hospital in Lynchburg
- Farmville Southside Community Hospital
- Centra Gretna Medical Center
- *Virginia Baptist Hospital in Lynchburg will not be focused upon, as it does not have a 24-hour emergency department.*

The region includes one designated Level II trauma center: Centra Health's Lynchburg General Hospital in Lynchburg (Planning District 11).

Hospitals in the BREMS Region
(Operating 24-hour emergency departments)

Hospital	***Location***
• Lynchburg General Hospital	Lynchburg
• Bedford County Memorial Hospital	Bedford
• Farmville Southside Community Hospital	Farmville
• Gretna Medical Center	Gretna

Point of Entry

All EMS Agencies within the region should consider the following definition of a patient who is defined as a trauma patient:

A person who has acquired serious injuries and/or wounds brought on by either an outside force or an outside energy. These injuries and/or wounds may affect one or more body systems by blunt, penetrating or burn injuries. These injuries may be life altering, life threatening or ultimately fatal wounds.

The patient with these identified injuries should be immediately taken to the nearest trauma center providing the level of care needed. If the crew is in the 25-mile radius of Lynchburg General, a Level II Center, the patient should be transfer there. If the patient's injuries are consistent with a Level I Center's capabilities efforts to transfer to a level one center should take place. Consider an air transport request from the scene or if not available advise the hospital of the patient condition and ask for a trauma alert for the level one needs patient.

Agencies in upper, Western Bedford County should transport patients to Roanoke Memorial Hospital a ***Level I Trauma Center***.

BREMS AMBULANCE PATIENT DESTINATION POLICY

SCOPE: This policy pertains to licensed EMS agencies providing Basic and Advanced Life Support.

PURPOSE: To provide for a defined, consistent policy for the destination of ambulance patients consistent with quality patient care and regional medical protocol.

POLICY ELEMENTS:

1. All ambulance patients (resulting from 911-initiated or other emergency requests for assistance which result in transport) will normally be transported to the closest appropriate hospital emergency department unless redirected by the Medical Control Physician. The closest appropriate hospital is defined as the hospital closest to the location of the patient that can provide the level of care needed by the patient. The Medical Control Physician is defined as the attending emergency department physician at the hospital contacted by radio, cellular phone, or other means by the prehospital provider attending to the patient to be transported. 911 initiated requests for assistance which result in patient transports by emergency medical services (EMS) personnel are to be transported to hospital based emergency departments only or freestanding 24-hour emergency departments that meet the requirements adopted by the Operational Medical Directors.

2. Patients may be transported to a free standing ED, provided that the free standing facility meets the following criteria:
a. Provides 24 hour operations
b. Consistently staffed with ABEM / AMBO Board Certified Emergency Medical Physicians
c. On site Pharmacy
d. On site advanced imaging capabilities
e. On site laboratory
f. Ability to provide up to 23 hour observation of patients
g. Identify what ambulance staffing and equipment requirements exist and may be required for interfacility transfer of critical care patients (specialty care transport) and that there should be written plans for patient transfer to another hospital.

3. Stable patients with minor medical needs may be transported to the patient's destination of choice if allowed by local EMS agency policies and available resources.

4. Patients that meet certain criteria as severe trauma patients, as defined in the Blue Ridge Regional Trauma Triage Plan, will normally be transported directly to a Level I or Level II Trauma Center unless redirected by the Medical Control Physician as defined in the trauma triage plan.

Virginia EMS Regulation on Trauma Triage Compliance
12 VAC 5-31-390. Destination/trauma triage.
An EMS agency shall participate in the Regional Trauma Triage Plan established in accordance with § 32.1-111.3 of the Code of Virginia.

Code of Virginia § 32.1-111.3. Statewide emergency medical care system.
A. the Board of Health shall develop a comprehensive, coordinated, emergency medical care system in the Commonwealth and prepare a Statewide Emergency Medical Services Plan which shall incorporate, but not be limited to, the plans prepared by the Regional Emergency Medical Services Councils. The Board shall review the Plan triennially and make such revisions as may be necessary. The objectives of such Plan and the system shall include, but not be limited to, the following:

1. Establishing a comprehensive statewide emergency medical care system, incorporating facilities, transportation, manpower, communications, and other components as integral parts of a unified system that will serve to improve the delivery of emergency medical services and thereby decrease morbidity, hospitalization, disability, and mortality;

2. Reducing the time period between the identification of an acutely ill or injured patient and the definitive treatment;

3. Increasing the accessibility of high quality emergency medical services to all citizens of Virginia;

4. Promoting continuing improvement in system components including ground, water and air transportation, communications, hospital emergency departments and other emergency medical care facilities, consumer health information and education, and health manpower and manpower training;

5. Improving the quality of emergency medical care delivered on site, in transit, in hospital emergency departments and within the hospital environment;

6. Working with medical societies, hospitals, and other public and private agencies in developing approaches whereby the many persons who are presently using the existing emergency department for routine, non urgent, primary medical care will be served more appropriately and economically;

7. Conducting, promoting, and encouraging programs of education and training designed to upgrade the knowledge and skills of health manpower involved in emergency medical services;

8. Consulting with and reviewing, with agencies and organizations, the development of applications to governmental or other sources for grants or other funding to support emergency medical services programs;

9. Establishing a statewide air medical evacuation system, which shall be developed by the Department of Health in coordination with the Department of State Police and other appropriate state agencies?

10. Establishing and maintaining a process for designation of appropriate hospitals as trauma centers and specialty care centers based on an applicable national evaluation system;

11. Establishing a comprehensive emergency medical services patient care data collection and evaluation system pursuant to Article 3.1 (§ 32.1-116.1 et seq.) of this chapter;

12. Collecting data and information and preparing reports for the sole purpose of the designation and verification of trauma centers and other specialty care centers pursuant to this section. All data and information collected shall remain confidential and shall be exempt from the provisions of the Virginia Freedom of Information Act (§ 2.2-3700 et seq.); and

13. Establishing a registration program for automated external defibrillators, pursuant to § 32.1-111.14:1.

B. The Board of Health shall also develop and maintain as a component of the Emergency Medical Services Plan a statewide prehospital and inter-hospital Trauma Triage Plan designed to promote rapid access for pediatric and adult trauma patients to appropriate, organized trauma care through the publication and regular updating of information on resources for trauma care and generally accepted criteria for trauma triage and appropriate transfer. The Trauma Triage Plan shall include:

1. A strategy for implementing the statewide Trauma Triage Plan through formal regional trauma triage plans developed by the Regional Emergency Medical Services Councils which can incorporate each region's geographic variations and trauma care capabilities and resources, including hospitals designated as trauma centers pursuant to subsection A of this section. The regional trauma triage plans shall be implemented by July 1, 1999, upon the approval of the Commissioner.

2. A uniform set of proposed criteria for prehospital and inter hospital triage and transport of trauma patients, consistent with the trauma protocols of the American College of Surgeons' Committee on Trauma, developed by the Emergency Medical Services Advisory Board, in consultation with the Virginia Chapter of the American College of Surgeons, the Virginia College of Emergency Physicians, the Virginia Hospital and Healthcare Association, and prehospital

care providers. The Emergency Medical Services Advisory Board may revise such criteria from time to time to incorporate accepted changes in medical practice or to respond to needs indicated by analyses of data on patient outcomes. Such criteria shall be used as a guide and resource for health care providers and are not intended to establish, in and of themselves, standards of care or to abrogate the requirements of § 8.01-581.20. A decision by a health care provider to deviate from the criteria shall not constitute negligence per se.

3. A program for monitoring the quality of care, consistent with other components of the Emergency Medical Services Plan. The program shall provide for collection and analysis of data on emergency medical and trauma services from existing validated sources, including but not limited to the emergency medical services patient care information system, pursuant to Article 3.1 (§ 32.1-116.1 et seq.) of this chapter, the Patient Level Data System, and mortality data. The Emergency Medical Services Advisory Board shall review and analyze such data on a quarterly basis and report its findings to the Commissioner. The first such report shall be for the quarter beginning on July 1, 1999. The Advisory Board may execute these duties through a committee composed of persons having expertise in critical care issues and representatives of emergency medical services providers. The program for monitoring and reporting the results of emergency medical and trauma services data analysis shall be the sole means of encouraging and promoting compliance with the trauma triage criteria.
The Commissioner shall report aggregate findings of the analysis annually to each Regional Emergency Medical Services Council, with the first such report representing data submitted for the quarter beginning July 1, 1999, through the quarter ending June 30, 2000. The report shall be available to the public and shall identify, minimally, as defined in the statewide plan, the frequency of (i) incorrect triage in comparison to the total number of trauma patients delivered to a hospital prior to pronouncement of death and (ii) incorrect inter-facility transfer for each region. The Advisory Board shall ensure that each hospital or emergency medical services director is informed of any incorrect inter-facility transfer or triage, as defined in the statewide plan, specific to the provider and shall give the provider an opportunity to correct any facts on which such determination is based, if the provider asserts that such facts are inaccurate. The findings of the report shall be used to improve the Trauma Triage Plan, including triage, and transport and trauma center designation criteria.

The Commissioner shall ensure the confidentiality of patient information, in accordance with § 32.1-116.2. Such data or information in the possession of or transmitted to the Commissioner, the Advisory Board, or any committee acting on behalf of the Advisory Board, any hospital or prehospital care provider, or any other person shall be privileged and shall not be disclosed or obtained by legal discovery proceedings, unless a circuit court, after a hearing and for good cause shown arising from extraordinary circumstances, orders disclosure of such data.

C. Whenever any state-owned aircraft, vehicle, or other form of conveyance is

utilized under the provisions of this section, an appropriate amount not to exceed the actual costs of operation may be charged by the agency having administrative control of such aircraft, vehicle or other form of conveyance. (1996, c. 899; 1997, c. 321; 1998, c. 317; 1999, c. 1000.)

Trauma Alert Criteria for Lynchburg General Hospital- updated January 2018

Level 1- Full Team Response:

- Clinical evidence of shock following trauma (adult BP < 90 or HR < 50 or > 130)
- Airway compromise / respiratory distress (includes needle decompression)
- All intubated trauma patients
- Significant penetrating trauma to head, neck or torso (torso is above the inguinal ligaments, including genitalia)
- Unresponsive (GCS 8 or less with significant MOI)
- Uncontrolled hemorrhage or vascular injury (life or limb threatening)
- Amputations proximal to the wrist / ankle
- Blunt and penetrating traumatic arrest with signs of life in the field

Level 2- Partial Team Response:

- Suspected vascular injury (includes crushed, degloved, mangled extremity) EXCLUDES injuries to digits
- Second or third degree burns with >20% TBSA, significant inhalational injury or high voltage electrical injury (>600 volts)
- GCS 9-13 with significant MOI
- Clinical evidence of spinal cord injury (paralysis, numbness, loss of sensation)
- Femur, pelvic or spinal injury (excludes ground level fall with isolated hip/femur injury)
- Pregnancy > 20 weeks (or fundal height above the umbilicus) with significant MOI or abdominal pain, vaginal bleeding or absence of fetal movement.
- Ejection (partial or complete) from enclosed vehicle
- Open vehicle crash with significant injuries
- 2 or more long bone fractures
- Automobile vs. pedestrian/bicyclist thrown, run over or with significant impact
- Injured patients transferred by air

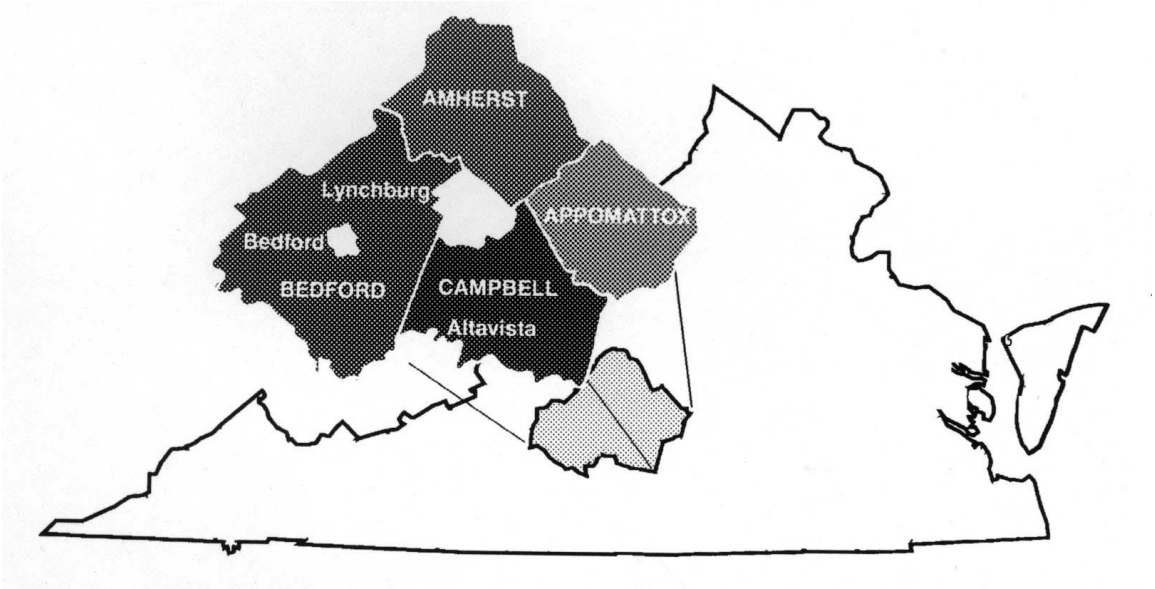
Level 3- Partial Team Response:

- GCS 14 with significant MOI
- Fall > **20** feet
- Significant penetrating injury to an extremity
- Suspected Multiple Injuries
- Open fracture WITH exposed bone, significant soft tissue injury or grossly soiled wound. This criterion EXCLUDES injuries to digits.
- 2nd and 3rd degree burns isolated to hands, feet, genitalia, perineum or major joints <20% TBSA
- Patients 75 and older with evidence of head injury
- Evidence of multiple facial injuries / fractures without airway compromise

Notes:

- **Have a low threshold to alert or upgrade a minor trauma with known anticoagulant use**
- **Isolated tib/fib fractures and radius/ulna fractures do NOT represent "2 or more long bone fractures"**
- **The criteria above are guidelines, not absolutes. Please consult the lead physician if there are concerns about the appropriateness of an alert**
- **Document in the EMR any reason for deviation from the above guidelines**

BREMS Demographics & Trauma Triage Related Resources



11th HEALTH PLANNING DISTRICT

2500 SQUARE MILES

POPULATION 250,000

BREMS EMS AGENCIES

The BREMS Region includes 40 licensed agencies and one federal unlicensed agency (Blue Ridge Parkway), located within the 11th Health Planning District. The agencies are a mix of government, volunteer, part paid, industrial, law enforcement, college and hospital based operations. We have one Helicopter Service with one aircraft. One specialized neonatal transport service with four units.

The region's EMS agencies transport about 60,000 patients a year but due to the central location of our region's Level Two Trauma Center, they see about 55,000 patients...

EMS AGENCIES IN THE REGION

- **Air Ambulance 1**
- **Ground – ALS 29**
- **Ground- BLS 2**
- **Neonatal Ambulance 1**
- **Non-Transport- First Response- BLS 3**
- **Hospital 4**
- **Industrial 3**
- **College 2**

Other Related Resources

Virginia Office of EMS Trauma Web page: http://www.vdh.virginia.gov/OEMS/Trauma/index.htm

Centers for disease Control and Injury Prevention
CDC Field Triage Main page: http://www.cdc.gov/fieldtriage/
CDC National Trauma Triage Protocol Podcast: http://www2a.cdc.gov/podcasts/player.asp?f=10649
CDC Field Triage PowerPoint:
http://search.msn.com/results.aspx?q=CDC+Trauma+triage&FORM=CBPW&first=1

American College of Surgeons – Committee on Trauma
http://www.facs.org/trauma/index.html