Regional Trauma Triage Plan

Lord Fairfax EMS Council, Inc.
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www.lfems.vaems.org

Approved 02/2024

Revision History

Description of Change	Change Effective Date
Original Document	01/2006
Revised & Approved by Board of Directors	06/2006
Revised & Approved by Board of Directors	04/2007
Revised & Approved by Board of Directors	06/2008
Revised & Approved by Board of Directors	12/2009
Approved by Board of Directors w/ no revisions	10/2010
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A copy of the Virginia Statewide Trauma Triage Plan can be found at this website:
http://www.vdh.virginia.gov/emergency-medical-services/trauma-system/

or by contacting

Office of Emergency Medical Services
Virginia Department of Health
P.O. Box 2448 Richmond, VA 23218
(804) 864-7600

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Executive Summary

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 maintaining a Statewide Trauma Triage Plan. Emergency Medical Services (EMS) Agencies are required by EMS Regulation 12 VAC 5-31-390 to follow triage plans. This plan is to include pre-hospital and inter-hospital patient transfers. Regional EMS Council Trauma Triage Plans must be submitted to OEMS. OEMS shall utilize the Trauma System Oversight and Management Committee and the Medical Direction Committee to establish trauma triage plan approvals.

The Statewide Trauma Triage Plan establishes criteria for identifying trauma patients and the expectation that these patients shall enter the "trauma system" and receive rapid definitive trauma care at appropriate hospitals. Regional trauma triage plans may augment the Commonwealth's trauma triage standards by providing additional point of entry information such as hospital capabilities, air medical services and other vital information.

The Virginia Department of Health, OEMS, and the Trauma System Oversight and Management Committee endorses the 2021 American College of Surgeon's *National Guidelines for the Field Triage of Injured Patients.* The 2021 revision was based on a scientific literature review conducted by Oregon Health and Science University as well as the results from a broad stakeholder feedback tool, which aimed to capture the perspective from those in the field. A multidisciplinary expert panel led by the American College of Surgeons (ACS) undertook this revision with support from the National Highway Traffic Safety Administration (NHTSA), the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau, and EMS for Children Program.

The Virginia Trauma System is an inclusive system and therefore all hospitals are required to 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 serves to improve the delivery of emergency medical services and thereby decrease morbidity, hospitalization, disability, and mortality. This document will provide a uniform set of criteria for pre-hospital and inter-hospital triage and transport of trauma patients.

For further information regarding the care of a trauma victim in the Lord Fairfax EMS Council Region please refer to the most current set of Patient Care Protocols. These can be found at the Lord Fairfax EMS Council's website and in the Council's mobile phone application.

Definition of a Trauma Victim

A trauma victim is 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.

Two-Tiered System for the recognition of a trauma patient

- Initial triage in the pre-hospital setting
- Secondary triage or trauma patient recognition and appropriate timely triage by all Virginia hospitals

The purpose of the Statewide Trauma Triage Plan is to establish pre-hospital and hospital criteria for the purpose of identifying the trauma patient. **The Regional Trauma Triage Plan should identify the best plan for point of entry for these patients**. Many factors such as geography, hospital capabilities, air medical services, and others will help to guide where the identified trauma patient will be transported or transferred to.

Field Trauma Triage Scheme

National Guideline for the Field Triage of Injured Patients

RED CRITERIA
High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
• Penetrating injuries to head, neck, torso, and proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor or sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Active bleeding requiring a tourniquet or wound packing with continuous pressure	**All Patients** • Unable to follow commands (motor GCS < 6) • RR < 10 or > 29 breaths/min • Respiratory distress or need for respiratory support • Room-air pulse oximetry < 90% **Age 0–9 years** • SBP < 70mm Hg + (2 x age in years) **Age 10–64 years** • SBP < 90 mmHg or • HR > SBP **Age ≥ 65 years** • SBP < 110 mmHg or • HR > SBP

Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system

YELLOW CRITERIA
Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
• High-Risk Auto Crash – Partial or complete ejection – Significant intrusion (including roof) • >12 inches occupant site OR • >18 inches any site OR • Need for extrication for entrapped patient – Death in passenger compartment – Child (age 0–9 years) unrestrained or in unsecured child safety seat – Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height > 10 feet (all ages)	**Consider risk factors, including:** • Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy > 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric capable centers **If concerned, take to a trauma center**

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

Note- Pre-hospital 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

All transfers must be made in accordance with the Emergency Treatment and Active Labor Act (EMTALA) or the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA)

Each jurisdiction is unique in its availability of trauma resources, with consideration given to the hospital(s) available in the region and the resources available to trauma patients when developing a point of entry plan. Pre-planning for times when the primary hospital is not available to receive trauma patients because of multiple patients, diversion, and loss of resources such as power need to be made in advance of being on scene with a critical trauma patient.

Consideration should also be given to pre-hospital resources including the level of care available by the ground EMS crew and other conditions such as transport time and weather conditions. Use of Air Medical Services can assist with trauma patients reaching definitive trauma care in a timely fashion.

The Lord Fairfax EMS Council (LFEMSC) Regional Administrative and Pre-Hospital Standard Patient Treatment Protocols address treatment and transport considerations of trauma patients.

Field transports by helicopter of trauma patients as defined in this plan shall:

- Lessen the time from on scene to a hospital compared to ground transport.
- Bypass a non-trauma designated hospital to transport directly to a trauma center if not greater than 30 minutes transport time.
- Trauma patients transported by air should meet the clinical triage criteria for transport and be transported to the closest Level I Trauma Center, or when appropriate the closest Level II Trauma Center.
- Patient requires a level of care greater than can be expected by the local ground provider if the Medevac unit can be on scene in a time shorter than the ground unit can transport to the closest hospital.
- Extenuating circumstances such as safety, egress/access should be documented similar to other “extraordinary” care scenarios.

EMS Mass Casualty Incident (MCI) Plans and Disaster/Weapons of Mass Destruction (WMD) Plans

Both pre-hospital and hospital providers shall become familiar with other related plans. These plans represent a tiered response to a growing number of patients:

- Mass Casualty Incident (MCI) Plan
- Disaster/Weapons of Mass Destruction (WMD) Plan
- Surge Capacity Plan

These plans build upon one another. The Trauma Triage Plan is intended to guide treatment for a smaller number of patients that can be managed by resources available during normal day to day EMS operations. MCI Plans provide additional guidance to agencies, municipalities, and medical facilities when their normal resources are being strained. Surge Plans are developed to meet the need of large scale events that may require caring for hundreds or even thousands of patients.

Inter-Hospital Triage Criteria

Hospitals not designated by the Virginia Department of Health as a Trauma Center should expeditiously transfer injured patients who meet physiological and/or anatomic criteria or when the physician in charge feels treatment of the injuries would exceed the capabilities of the medical center.

Adult Patient	Pediatric Patient
Based on Resources for Optimal Care of the Injured Patient: 1999 (American College of Surgeons, 1999) and adapted by the Trauma System Oversight & Management Committee (TSO&MC)	
	Pediatric Trauma Scores ≤ 6 • See pediatric trauma score Table 3
Respiratory • Bilateral thoracic injuries • Significant unilateral injuries in patients > 60 years (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 • Open skull fracture • Extra-axial hemorrhage on CT, or any intracranial blood • Paralysis • Focal neurological deficits • Unable to follow commands • GCS ≤ 12	**CNS** • Open skull fracture • Extra-axial hemorrhage on CT Scan • Focal neurological deficits
Cardiovascular • Hemodynamic instability as determined by the treating physician • Persistent hypotension, SBP- < 100 mmHg	
Injuries • Any penetrating injury to the head, neck, torso or extremities proximal to the elbow or knee without a surgical team immediately available. • Serious burns/burns with trauma (see Table 4) • 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 where the physician in charge feels treatment of injuries would exceed capabilities of the medical center. • 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	

Based on resources for Optimal Care of the Injured Patient: 1999 (American College of Surgeons, 1999) and adapted by the TSO&MC (Trauma System Oversight and Management Committee). Source: Guidelines for Field Triage of Injured Patients 2011. (https://www.facs.org/-/media/files/quality-programs/trauma/vrc-resources/6_guidelines-field-triage-2011.ashx)

Pediatric Trauma Determination

Pediatric Trauma Score

Assessment Component	SCORE		
	+2	+1	-1
Weight	Weight >20 kg (>44 lb)	10-20 kg (22-44 lb)	<10kg (<22 lb)
Airway	Normal	Oral or nasal airway, oxygen	Intubated, cricothyroidotomy, or tracheostomy
Systolic Blood Pressure	>90 mm Hg, good peripheral pulses and perfusion	50-90 mm Hg, carotid/femoral pulses palpable	<50 mm Hg, weak or no pulses
Level of Consciousness	Awake	Obtunded or any loss of consciousness	Coma, unresponsive
Fracture	None seen or suspected	Single, closed	Open or multiple
Cutaneous	None visible	Contusion, abrasion, laceration <7 cm not through fascia	Tissue loss, any gunshot wound or stab wound through fascia
Totals			
Adapted with permission from Tepas JJ, Molitt DL, Talbert JL, et al: The pediatric trauma score as a predictor of injury severity in the injured child. Journal of Pediatric Surgery. 1987;22(1)15.			

*PTS > 8 should have 0 % mortality.
All injured children with PTS < 8 should be triaged to an appropriate pediatric trauma center.

Burn Trauma Determination

The American Burn Association has identified the following injuries as those that usually require a referral to a burn center:

- Partial thickness and full thickness burns greater than 10% of the total body surface area (TBSA).
- Burns that involve the face, hands, feet, genitalia, perineum, or major joints.
- Third-degree burns in any age group.
- Electrical burns, including lightning injuries
- Chemical burns.
- Inhalation injuries.
- Burn injury in patients with pre-existing medical disorders that could complicate management, prolong recovery, or affect mortality.
- Any patient with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk morbidity or mortality. In such cases, if the trauma poses the greater immediate risk, the patient may be initially stabilized in a trauma center before being transferred to a burn unit. Physician judgement will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.
- Burned children in hospitals without qualified personnel or equipment for the care of children.
- Burn injury in patients who will require special social, emotional or rehabilitative intervention.

Transports by Helicopter

Any one or more of the following criteria be met in order to initiate transport by Helicopter EMS (HEMS):

- Trauma patients transported by air should meet the clinical trauma triage criteria for transport to the most appropriate level I of level II trauma center or burn center.
- Patient requires a level of care greater than can be provided by the local hospital.
- Patient requires time critical intervention, out of hospital time needs to be minimal, or distance to definitive care is long.
- Utilization of local ground ambulance leaves local community without ground ambulance coverage.

Lord Fairfax EMS Council Air Medical Guideline

Decision Making Process for Using Air Medical Transport

- EMS providers should pre-alert helicopters in advance of scene arrival due to dispatch information received per criteria listed below.
- If the ground-based EMS unit is uncertain as to the appropriate transport form, you should contact Medical Control.
- If a ground-based EMS unit determines that there is a need for Air Medical Transport, the requesting EMS unit will contact the appropriate 9-1-1 / Emergency Communications Center to request the appropriate service.
- Patient meets criteria for HEMS transport per this plan and/or LFEMSC Protocols

For further, reference the Administrative Policies and Procedures of the Lord Fairfax EMS Council's Pre-Hospital Standard Patient Care Treatment Protocols.

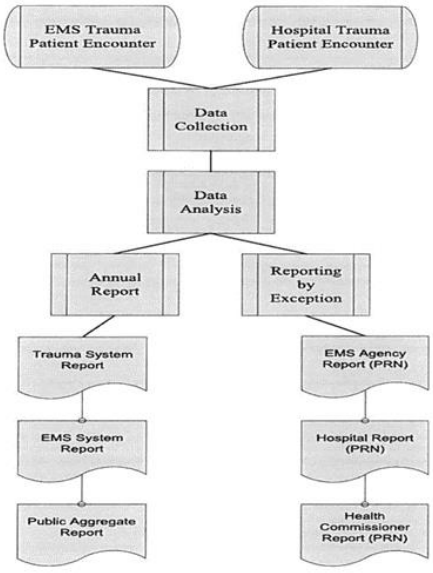
Trauma Triage Quality Monitoring

The Office of EMS is responsible for monitoring and ensuring the quality of trauma care and trauma triage in the Commonwealth. Quality monitoring and assurance is accomplished through several means including, but not limited to, the trauma center designation process, analysis of data from the Emergency Medical Services Patient Care Information System (EMS and Trauma Registries) and from other existing validated sources, the trauma performance improvement committee, feedback mechanisms, and performance improvement groups throughout the Commonwealth.

The Office of EMS, acting on behalf of the Commissioner of Health, will report aggregate trauma triage findings annually to assist the EMS and Trauma Systems to improve local, regional and statewide trauma triage programs. A 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 program will ensure that each emergency medical services director or hospital is informed of any patterns of incorrect pre- hospital or inter-facility missed triage, delayed or missed inter-facility transfer as defined in the regional plan, specific to the provider and will give the entity an opportunity to correct any facts on which such a determination is based, if the entity or its providers assert that such facts are inaccurate.

The Commissioner shall ensure the confidentiality of patient information, in accordance with §32.1-116.2 Confidential nature of information supplied; publication; liability protections.



Lord Fairfax EMS Council Trauma Performance Improvement Policy

The Trauma Performance Improvement Committee is comprised of experienced medical personnel within the LFEMSC region whose responsibility shall be to systematically review data of all agencies to improve the quality of patient care. This plan does not provide local EMS agencies the power to supersede the responsibility to comply with the "Virginia Emergency Medical Services Regulations" ***12 VAC 5-31-600 Quality Management Reporting.***

Membership
The Trauma Performance Improvement Committee (TPI) shall be comprised of an operational medical director, one nurse liaison from each hospital (non-trauma), Trauma Nurse Coordinator, one member of PHI Air Medical (AirCare), one career EMS member (non-fire based), one fire based EMS member, and one volunteer EMS member.

Responsibilities

- The TPI Committee has the responsibility of assuring that reasonable standards of care and professionalism are met within their respective EMS system. Members are given the following responsibilities:
    - Should participate in an ongoing Quality Management Program within their agency which should include PPCR review audits and data collection within their respective EMS agency. This information should be reported to their agency and the PI Committee.
    - Maintain strict confidentiality of patient and agency information.
    - Provide constructive feedback and training to their agency.
    - Provide technical assistance to all agencies.
    - Encourage and assist agencies to comply with State EMS Regulations related to quality management.
- The Chairperson of the TPI Committee responsibilities includes:
    - Schedule and conduct all quarterly meetings.
    - Coordinate with local OMDs all recommendations for the local EMS agencies.
    - Report findings of the PI analysis to Regional Medical Direction Board for review.
    - Recommend changes to policies, guidelines, and *Regional Administrative Guidelines and Medications* to Regional Medical Direction Board.
- The Trauma Performance Improvement Committee chair shall be appointed by the President of the Lord Fairfax EMS Council's Board of Directors.
- The Trauma Performance Improvement Committee shall:
    - Establish guidelines for the review of data pertaining to the treatment and medical care of patients.
    - Develop a yearly PI schedule of topics to include one trauma and system topic.
    - Review data submitted by EMS agencies on a quarterly basis.
    - Provide data to the Regional Medical Direction Board.
    - Be responsible for recommending all needed training to the Lord Fairfax EMS Council's Regional Field Coordinator.

Committee Confidentiality

- In order to maintain the integrity of the TPI Committee and protect patient and provider privacy, each member at all times will maintain strict confidentiality. However, communication with other entities of the system is essential. Specifically, when a problem is identified within the system such as: skills, critical thinking, documentation, equipment, protocol deviation or other general issues; it is the responsibility of this committee to inform the appropriate agency's Medical Director and elicit input for possible solutions. All reasonable efforts will be taken to sanitize records and maintain patient anonymity.

PPCR Reviews

- All Pre-Hospital Patient Care Reports should be reviewed by the local EMS agency's Trauma Performance Improvement program committee. Each agency should provide these results to their local medical director for reviews on a monthly basis.
- The regional template shall be used for all reviews. The worksheets provided are for internal agency use.
- The committee via the Executive Director or designee shall send out by mail and e-mail the quarterly templates used for each quarter's Trauma Performance Improvement review.
- All data shall be submitted electronically to the Lord Fairfax EMS Council's EMS Systems Coordinator by the last day of the month following the end of the quarter.
- An electronic record of personnel actively participating in EMS calls shall be submitted biannually with the PI data. *(As approved by Medical Direction Board in 2015)*

Medical Incident Review

- Each OMD is responsible for reviewing submissions sent to them each month as part of the ongoing improvement process.
- The OMD shall review submissions, converse with the agency or provider and report any significant issues to the Medical Direction Board and Trauma Performance Improvement Committee for discussion. Patient confidentially will be adhered to at all times.
- The Trauma Performance Improvement Committee shall have the responsibility to recommend all needed training to the Lord Fairfax EMS Council's Regional Field Coordinator.
- The OMD may take action that includes suspension of certification to practice in the region, remedial training, or require the provider to take written state exam in lieu of the test waiver.
- The OMD may report any findings in writing to the Virginia Office of EMS that they feel violates the requirements set forth by the "Virginia Emergency Medical Services Regulations" *12 VAC 5-31.*

Virginia Designated Trauma Centers and Designation Level Descriptions

https://www.vdh.virginia.gov/emergency-medical-services/trauma-critical-care/virginia-trauma-centers/ as of August 2023

Level I Trauma Centers

Level I trauma centers have an organized trauma response and are required to provide total 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.

Carilion Roanoke Memorial Hospital
1906 Bellview Avenue Southeast, Roanoke, VA 24014

HCA Chippenham Hospital
7101 Jahnke Rd, Richmond, VA 23225

Inova Fairfax Hospital **
3300 Gallows Rd, Falls Church, VA 22042

Sentara Norfolk General Hospital
600 Gresham Dr, Norfolk, VA 23507

UVA Health System **
1215 Lee St, Charlottesville, VA 22908

VCU Health System
1213 E Clay St Ground Floor, Richmond, VA 23298

Level II Trauma Centers

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

Centra Lynchburg General Hospital
1901 Tate Springs Rd, Lynchburg, VA 24501

HCA Henrico Doctors' Hospital
1602 Skipwith Rd, Richmond, VA 23229

HCA Reston Hospital Center
1850 Town Center Pkwy, Reston, VA 20190

LewisGale Medical Center
1900 Electric Rd, Salem, VA 24153

Naval Medical Center Portsmouth
620 John Paul Jones Cir, Portsmouth, VA 23708

MWHC Mary Washington Hospital
1001 Sam Perry Blvd, Fredericksburg, VA 22401

Riverside Regional Medical Center
500 J Clyde Morris Blvd, Newport News, VA 23601

Valley Health Winchester Medical Center *
1840 Amherst St, Winchester, VA 22601

Virginia Hospital Center
1701 N George Mason Dr, Arlington, VA 22205

Level III Trauma Centers

Level III centers, through an organized trauma response, can provide prompt assessment, resuscitation, stabilization, emergency operations and also 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.

Ben Secours Southside Medical Center
200 Medical Park Blvd, Petersburg, VA 23805

Carilion New River Valley Medical Center
2900 Lamb Cir, Christiansburg, VA 24073

Inova Loudon Hospital
44045 Riverside Pkwy, Leesburg, VA 20176

LewisGale Hospital Montgomery
3700 S Main St, Blacksburg, VA 24060

Sentara Northern Virginia Medical Center
2300 Opitz Blvd, Woodbridge, VA 22191

Sentara Virginia Beach General Hospital
1060 First Colonial Rd, Virginia Beach, VA 23454

Burn Centers

HCA Chippenham Hospital
7101 Jahnke Rd, Richmond, VA 23225

Sentara Norfolk General Hospital
600 Gresham Dr, Norfolk, VA 23507

VCU Health Systems
1213 E Clay St Ground Floor, Richmond, VA 23298

Pediatric Trauma Centers

Carilion Roanoke Memorial Hospital
1906 Bellview Avenue Southeast, Roanoke, VA 24014

Childrens' Hospital of the King's Daughter
601 Children's Ln, Norfolk, VA 23507

VCU Health Systems
1213 E Clay St Ground Floor, Richmond, VA 23298

Non-Designated Trauma Center Hospitals

Non-designated Trauma Centers, can provide prompt assessment, resuscitation, stabilization, and arrange for transfer of the patient to a facility that can provide definitive trauma care.

Page Memorial Hospital
200 Memorial Drive, Luray

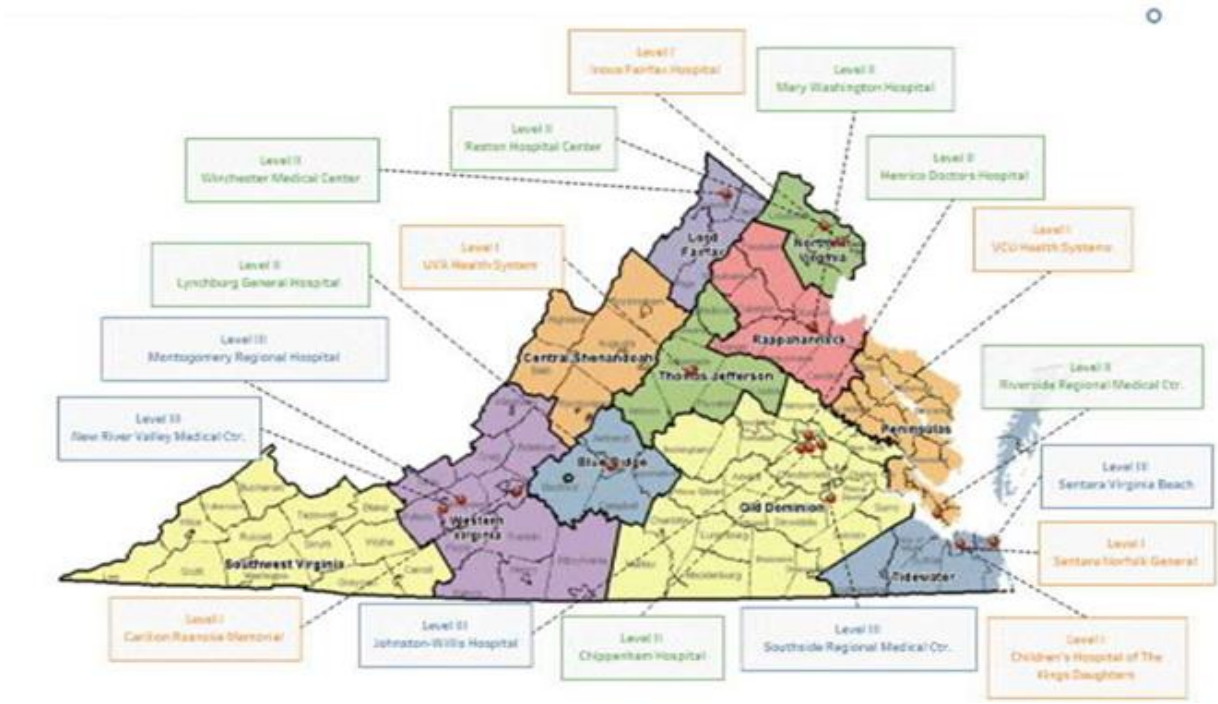
Sentara Rockingham Memorial Hospital
2010 Health Campus Drive, Harrisonburg

Shenandoah Memorial Hospital
759 South Main Street, Woodstock

Warren Memorial Hospital
1000 Shenandoah Avenue, Front Royal

LFEMS Primary Trauma Referral *
LFEMS Secondary Trauma Referral **

Virginia Trauma Center Levels Map



Minimum Surgical and 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 Surgery	**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**		

Source: Virginia Statewide Trauma Center Designation Program Hospital Resource Manual (Health, 2006)

Trauma Triage Related Resources

Lord Fairfax EMS Council Web page:
http://lfems.vaems.org

Virginia Office of EMS Trauma Web page:
https://www.vdh.virginia.gov/emergency-medical-services/trauma-critical-care/virginia-trauma-centers/

American College of Surgeons – Committee on Trauma FACS Trauma Triage page:
https://www.facs.org/media/rw4c5kb2/trauma-algorithm-vfinal-revise.pdf
http://www.facs.org/trauma/index.html

Virginia Regional EMS Councils

Blue Ridge EMS Council
1900 Tate Springs Road, Suite 14
Lynchburg, VA 24501

Central Shenandoah EMS Council
2312 West Beverley Street
Staunton, VA 24401

Lord Fairfax EMS Council
180-1 Prosperity Drive
Winchester, VA 22602

Northern Virginia EMS Council
7250 Heritage Village Plaza Drive
Gainesville, VA 20155

Old Dominion EMS Alliance
1463 Johnston-Willis Drive
Richmond, VA 23235

Peninsulas EMS Council
5222 George Washington Memorial Hwy, Suite C
Gloucester, VA 23061

Peninsulas EMS Council
5222 George Washington Memorial Hwy, Suite C
Gloucester, VA 23061

Rappahannock EMS Council
435 Hunter Street
Fredericksburg, VA 22401

Southwest Virginia EMS Council
306 Piedmont Avenue
Bristol, VA 24201

Thomas Jefferson EMS Council
400 Martha Washington Drive, Suite 100
Charlottesville, VA 22911

Tidewater EMS Council
1104 Madison Plaza, Suite 101
Chesapeake, VA 23320

Western Virginia EMS Council
1944 Peters Creek Road
Roanoke, VA 24017

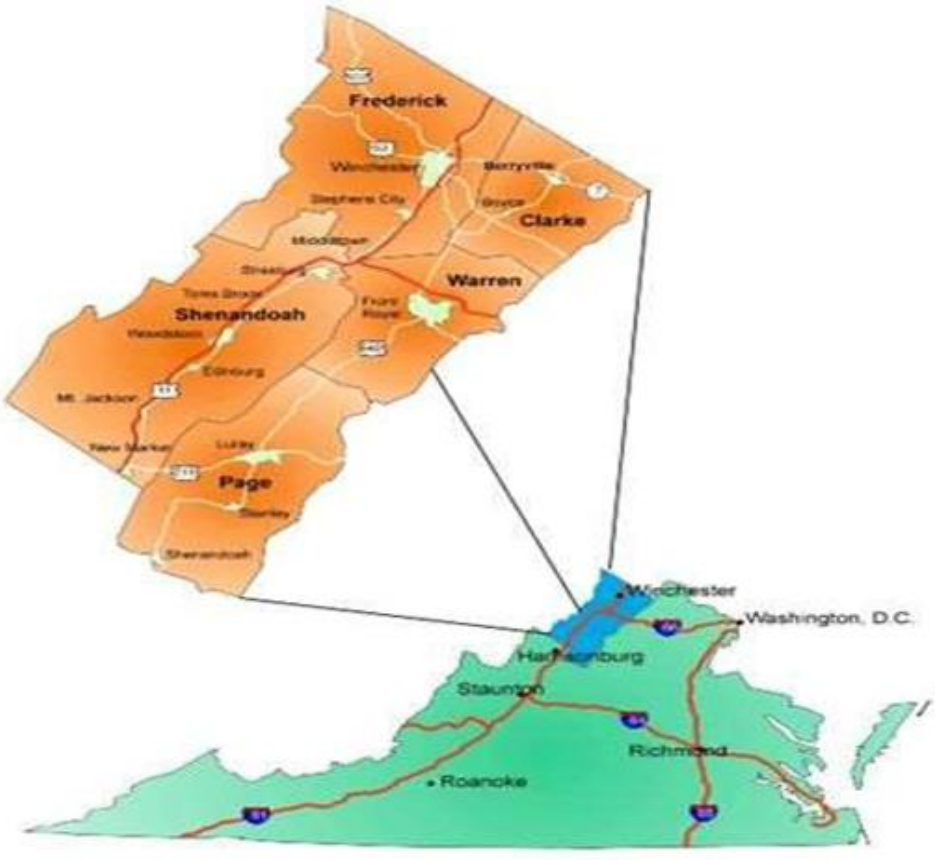
Additional information about each Council can be found at https://www.vaems.org/

Description of the Lord Fairfax EMS Council Area

Lord Fairfax EMS Council Region Defined

EMS regions are defined by the Virginia Board of Health, and the board enters into a contract with a private, non-profit regional EMS organization to provide various planning and coordination functions within each region. The Lord Fairfax EMS Council is the contracted agency within the Lord Fairfax Planning District. The Code of Virginia, §32.1-111.11 charges regional EMS councils with the development and implementation of an efficient and effective regional emergency medical services delivery system. Primary oversight of the Regional Trauma Care System Plan is the responsibility of a standing committee of the LFEMS Council that is approved by the Board of Directors in consultation with the Regional Operational Medical Director and the Medical Direction Board.

The Lord Fairfax EMS Council region encompasses the counties of Clarke, Frederick, Page, Shenandoah, Warren, and the independent City of Winchester. The region is one of the fastest growing areas in the Commonwealth of Virginia. The region includes a population of 243,882 and covers 1,652 square miles. Winchester Medical Center is a Level II Trauma Center; and Page, Shenandoah, and Warren Memorial Hospitals are all Critical Access hospitals.



Geography

The Lord Fairfax Emergency Medical Services Council is primarily a rural region, located in the Shenandoah Valley. The Council is 1,652 square miles, with a population of approximately 238,431 according to each County's population website. The region's population increased by 22.3% from 185,282 in 2000 compared to Virginia's growth of 14.3% over the same time horizon.

The Federal Government has relocated several of its departments to the Shenandoah Valley, i.e. FEMA and FBI, which has increased the number of personnel moving into this region and commuting from other localities to the Shenandoah Valley. The growth of individuals moving to the Shenandoah Valley has caused an increase in commuter traffic into the Northern Virginia Area.

The area has nine major transportation routes (Interstates 81 and 66, and Routes 7, 11, 50, 55, 211, 340, and 522) which bisect the region. The Shenandoah National Park runs the length of the region from Front Royal to Luray and attracts 2 million visitors a year. Besides the Shenandoah National Park there are many other recreational and tourist attractions that bring millions of people to the Valley each year. The Shenandoah River runs the complete length of the region and cuts through four (Clarke, Page, Shenandoah and Warren) of the region's six counties.
Three mountain ranges run through the region. The Blue Ridge Mountains on the east side of the region, the Massanutten range, which runs through the middle of the region, and the Appalachians which run along the west side of the region.

It is also noteworthy that two major railroad systems (CSX and Norfolk-Southern) pass through all jurisdictions in the EMS Region, and a local railroad also passes through Frederick County and the City of Winchester. The region also hosts the Winchester Regional Airport with a 5,500' x 100' runway. This airport has seen increased flight traffic after the Federal Government increased the restricted airspace around Washington, DC.

The climate in the region is moderate, but does have a history of blizzards and severe flooding in many areas and recently seen an increase in tornado activity.

Demography

Demography of individual municipalities served by the Lord Fairfax EMS Council is mostly rural with only one city and several small towns. This region is home to some of the fastest growing counties in the Commonwealth of Virginia. Rapid growth is expected in the next four (4) years due to the expansion of the Washington Metropolitan Statistical Area that incorporates Clarke, Frederick, and Warren Counties and the City of Winchester.

The region is served by volunteer, municipalities, and private EMS agencies. These agencies treat patients and arrange for transport to appropriate medical facilities according to regional medical guidelines established by the Medical Direction Board of the Lord Fairfax EMS Council.

The Council is surrounded by the Central Shenandoah EMS Council to the south, Rappahannock EMS Council to the south- east, Northern Virginia EMS Council to the east, and the West Virginia Office of EMS to the north and west.

Pre-Hospital EMS Response
All licensed agencies in the Lord Fairfax EMS Council region respond to "9-1-1" calls. These agencies include transporting rescue squads and fire department first response agencies. A private ambulance service with assigned staff at local hospitals occasionally assists with backup services.

Rotary wing transport in this region is provided, primarily, by AirCare with back up services provided by University of Virginia's (Pegasus), and the Washington Hospital Center (MEDSTAR).

Pre-Hospital Trauma Education
Trauma education is included as modules in the initial EMT-Basic, Advanced EMT, Intermediate, and Paramedic programs and all continuing education programs. Specialty trauma courses, such as International Trauma Life Support (ITLS), are sponsored regularly by the Lord Fairfax EMS Council.

The Lord Fairfax EMS Council's Regional Field Coordinator and Training Committee coordinate the training in the region. The Lord Fairfax Community College and the Lord Fairfax EMS Council have joined efforts to offer EMS training at the college for original certification classes through the Virginia Office of Emergency Medical Services.

Regional Trauma Diversion Guidelines
All acute care hospitals and licensed EMS agencies providing ground ambulance transportation, as defined in Virginia Department of Health regulations, work closely within the region to maintain an orderly, systematic, and medically effective distribution of emergency patients transported by ambulances during a single or multiple hospital diversion situations within the Lord Fairfax EMS Council region.

Reasons for Diversion
Acute care hospitals and their emergency departments may become overwhelmed with patients, exceeding the capacity for staff to adequately treat and monitor those patients. To relieve this temporary situation, after completing an established (internal) process, hospitals may declare diversion of acute patients, whereby ambulances are diverted to other area hospitals.

Diversion Policy in Lord Fairfax EMS Council Region
The Lord Fairfax EMS Council Region is unique in that hospitals may be located 20-60 miles from the next nearest acute care facility. Rescue squads will transport their patients to the closest appropriate facility. The receiving acute care facility, once the patient has been stabilized, will decide whether more appropriate care might be continued by an inter-facility transfer elsewhere.

Winchester Medical Center on Trauma Diversion
This means the Medical Center is not accepting inter-facility trauma transfers. Rescue squads should continue to transport patients to the ER as normal. When trauma patients are entrapped

with serious signs and symptoms, rescue squads should consider air transport and defer the decision on appropriate receiving facility to the flight crew.

Medical command may refer incoming ambulances to another facility providing more appropriate care may be provided. This may occur when medical command decides their facility cannot treat the patient for various medical reasons; such as the facility does not contain labor and delivery facilities, severe multi-trauma, no surgical facilities are available, or a kidney transplant patient is in distress and the receiving facility has no expertise in transplants or dialysis.

The transporting attendant in charge shall take a patient to the closest facility if the attendant believes that the patient's health is clinically deteriorating and care is beyond the provider's scope of practice. Attendants may take any patient in danger of immediate decompensation to the closest facility for stabilization.

Structural instability or physical plant failure makes the destination facility hazardous for the treatment of patients. This is not ambulance diversion but the inability of a facility to treat patients appropriately. Ambulances should take patients to the next closest facility in cases of physical plant failure. Hospitals should have their local Public Safety Access Point make a general announcement for all agencies informing them of any transportation issues.

When in doubt on what action to take in diversion situations, pre-hospital providers should always consult with online Medical Control about appropriate patient destinations and make the decision that is in the best interest of the patient!
Facilities may refer inappropriate decisions to the Lord Fairfax EMS Council Medical Direction Board for review for educational action with the pre-hospital provider and/or EMS agency.

EMS Agencies
Daily pre-hospital emergency care in the region is provided by a combination of municipal and volunteer EMS services. Three types of services predominate:

- Combination, career and volunteer, municipal fire and EMS departments
- Volunteer rescue squads with career or wage personnel support provided by a county volunteer system
- Career municipal fire and/or EMS departments

EMS Personnel
Adequate numbers of qualified emergency physicians, emergency and critical care nurses, allied health personnel, and over 850 pre-hospital personnel are generally available throughout the region to deliver a complete, responsive emergency medical service on a 24-hour basis.

The Lord Fairfax EMS Council region participates in a statewide effort to ensure the availability of critical incident stress management (CISM) for emergency personnel. The regional team consists of professional mental health care providers and peer debriefers (EMS, fire, dispatchers, and law enforcement personnel) who volunteer for this duty and are available on a 24-hour basis. Operational policies have been developed by the team, and all members participate in standardized CISM training programs. The team typically sponsors at least one basic training course per year that is used as a recruitment tool.

EMS Vehicles
The Lord Fairfax EMS Council region has over 125-ground ambulances, and relies on Medical Air Services from within and from adjoining regions to meet emergency patient transportation needs. All ambulances conform to required design and equipment standards and are licensed by the OEMS; ambulances undergo periodic inspections to assure compliance with these standards. In addition to EMS vehicles, there are fire apparatus who respond to calls and other vehicles throughout the region licensed for wheelchair transportation. Although geographic distribution of ambulances is generally adequate, occasional pockets of under-coverage exist.

EMS Communications
There are two systems utilized in the region for medical communications. The VHF radio system is used by all ambulances for patients receiving basic or routine advanced life support care. The UHF system is utilized for more critical patients requiring physician communication for consultation, orders and refusals. All ambulances in the region have the VHF system; mobile radios have the four frequencies of the Virginia Office of EMS VHF Initiative. These frequencies are also the foundation of the regions' hospital-to-hospital, ambulance-to-ambulance, and scene-to-hospital mass casualty communications plan.

All advanced life support ambulances in the region have the UHF mobile radio system, with access to the ten MED channels. The UHF system is a back-up system in the mass casualty communications plan, and could be promoted if the VHF system becomes overloaded during major incidents. In 2009, with the financial support of the Virginia Rescue Squad Assistance Fund, the Med radio base stations, remotes, and antennas were upgraded. Thus, the region has current, reliable VHF that can be reasonably expected to continue to service the region for years. The Lord Fairfax EMS Council is responsible for the med radios and associated equipment and maintenance.

EMS Regulations

12 VAC 5-31. Virginia Emergency Medical Services Regulations. 12 VAC 5-31-390. Destination to specialty care hospitals.

An EMS agency shall follow specialty care hospital triage plans established in accordance with § 32.1-111.3 of the code of Virginia

12 VAC 5-31-600. Quality Management Reporting.

An EMS agency shall have an ongoing Quality Management (QM) program designed to objectively, systematically, and continuously monitor, assess and improve the quality and appropriateness of patient care provided by the agency. The QM program shall be integrated and shall include activities related to patient care, communications, and all aspects of transport operations and equipment maintenance pertinent to the agency's mission. The agency shall maintain a QM report that documents quarterly PPCR reviews, supervised by the operational medical director (OMD).

§ 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, update, and publish the Plan triennially, making such revisions as may be necessary to improve the effectiveness and efficiency of the Commonwealth's emergency medical care system. Publishing through electronic means and posting on the Department website shall satisfy the publication requirement. 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. Ensuring performance improvement of the Emergency Medical Services system and emergency medical care delivered on scene, in transit, in hospital emergency departments and within the hospital environment;
    6. Working with professional medical organizations, 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, including expanding the availability of paramedic and

advanced life support training throughout the Commonwealth with particular emphasis on regions underserved by personnel having such skills and training;

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. Maintaining a comprehensive emergency medical services patient care data collection and performance improvement system pursuant to Article 3.1 (§ 3 2.1-116.1 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.);
13. Establishing and maintaining a process for crisis intervention and peer support services for emergency medical services and public safety personnel, including statewide availability and accreditation of critical incident stress management teams;
14. Establishing a statewide emergency medical services for children program to provide coordination and support for emergency pediatric care, availability of pediatric emergency medical care equipment, and pediatric training of medical care providers;
15. Establishing and supporting a statewide system of health and medical emergency response teams, including emergency medical services disaster task forces, coordination teams, disaster medical assistance teams, and other support teams that shall assist local emergency medical services at their request during mass casualty, disaster, or whenever local resources are overwhelmed;
16. Establishing and maintaining a program to improve dispatching of emergency medical services including establishment of and support for emergency medical dispatch training, accreditation of 911 dispatch centers, and public safety answering points;
17. Identifying and establishing best practices for managing and operating agencies, improving and managing emergency medical response times, and disseminating such information to the appropriate persons and entities; and
18. Ensuring that the Department of Criminal Justice Services and the Virginia Criminal Injuries Compensation Fund shall be contacted immediately to deploy assistance in the event there are victims as defined in § 1 9.2-11.01.

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 maintaining the statewide Trauma Triage Plan through formal regional trauma triage plans that 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 reviewed triennially.
    2. A uniform set of proposed criteria for prehospital and inter-hospital triage and transport of trauma patients 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 performance improvement 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 (§ 3 2.1-116.1 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 Emergency Medical Services 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. 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 Emergency Medical Services Advisory Board or its designee 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 Emergency Medical Services Advisory Board, any committee acting on behalf of the Emergency Medical Services Advisory Board, any hospital or prehospital care provider, any regional emergency medical services council, licensed emergency medical services agency, or group or committee established to monitor the quality of care pursuant to this subdivision, 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. The Board of Health shall also develop and maintain as a component of the Emergency Medical Services Plan a statewide prehospital and inter-hospital Stroke Triage Plan designed to promote rapid access for stroke patients to appropriate, organized stroke care through the publication and regular updating of information on resources for stroke care and generally accepted criteria for stroke triage and appropriate transfer. The Stroke Triage Plan shall include:
    1. A strategy for maintaining the statewide Stroke Triage Plan through formal regional stroke triage plans that incorporate each region's geographic variations and stroke care capabilities and resources, including hospitals designated as "primary stroke centers" through certification by the Joint Commission or a comparable process consistent with the recommendations of the Brain Attack Coalition. The regional stroke triage plans shall be reviewed triennially.
    2. A uniform set of proposed criteria for prehospital and inter-hospital triage and transport of stroke patients developed by the Emergency Medical Services Advisory Board, in consultation with the American Stroke Association, the Virginia College of Emergency Physicians, the Virginia Hospital and Healthcare Association, and prehospital care providers. The Board of Health 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.
D. 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. 8 99; 1997, c. 3 21; 1998, c. 3 17; 1999, c. 1 000; 2005, cc. 6 32, 6 86; 2006, c. 4 12; 2007, c. 1 5; 2008, cc. 6 6, 5 67; 2009,
cc. 2 22, 2 69.)

§ 32.1-116.2. Confidential nature of information supplied; publication; liability protections.

A. The Commissioner and all other persons to whom data is submitted shall keep patient information confidential. Mechanisms for protecting patient data shall be developed and continually evaluated to ascertain their effectiveness. No publication of information, research or medical data shall be made which identifies the patients by names or addresses. However, the Commissioner or his designees may utilize institutional data in order to improve the quality of and appropriate access to emergency medical services.

B. No individual, licensed emergency medical services agency, hospital, Regional Emergency Medical Services Council or organization advising the Commissioner shall be liable for any civil damages resulting from any act or omission preformed as required by this article unless such act or omission was the result of gross negligence or willful misconduct.

(1987, c. 480.)

Commonwealth of Virginia Civil Immunity

§ 8.01-581.19. Civil immunity for physicians, psychologists, podiatrists, optometrists, veterinarians, nursing home administrators, and certified emergency services personnel while members of certain committees.

A. Any physician, chiropractor, psychologist, podiatrist, veterinarian or optometrist licensed to practice in this Commonwealth shall be immune from civil liability for any communication, finding, opinion or conclusion made in performance of his duties while serving as a member of any committee, board, group, commission or other entity that is responsible for resolving questions concerning the admission of any physician, psychologist, podiatrist, veterinarian or optometrist to, or the taking of disciplinary action against any member of, any medical society, academy or association affiliated with the American Medical Association, the Virginia Academy of Clinical Psychologists, the American Psychological Association, the Virginia Applied Psychology Academy, the Virginia Academy of School Psychologists, the American Podiatric Medical Association, the American Veterinary Medical Association, the International Chiropractic Association, the American Chiropractic Association, the Virginia Chiropractic Association, or the American Optometric Association; provided that such communication, finding, opinion or conclusion is not made in bad faith or with malicious intent.

B. Any nursing home administrator licensed under the laws of this Commonwealth shall be immune from civil liability for any communication, finding, opinion, decision or conclusion made in performance of his duties while serving as a member of any committee, board, group, commission or other entity that is responsible for resolving questions concerning the admission of any health care facility to, or the taking of disciplinary action against any member of, the Virginia Health Care Association, provided that such communication, finding, opinion, decision or conclusion is not made in bad faith or with malicious intent.

C. Any emergency medical services personnel certified under the laws of the Commonwealth shall be immune from civil liability for any communication, finding, opinion, decision, or conclusion made in performance of his duties while serving as a member of any regional council, committee, board, group, commission or other entity that is responsible for resolving questions concerning the quality of care, including triage, inter-facility transfer, and other components of emergency medical services care, unless such communication, finding, opinion, decision or conclusion is made in bad faith or with malicious intent.

(1978, c. 541; 1987, c. 713; 1989, c. 729; 1993, c. 702; 1996, cc. 9 37, 9 80; 2006, c. 4 12.)