Trauma Center Experience in the US and Maryland: *Parallels and Differences*

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My Trauma Care Background

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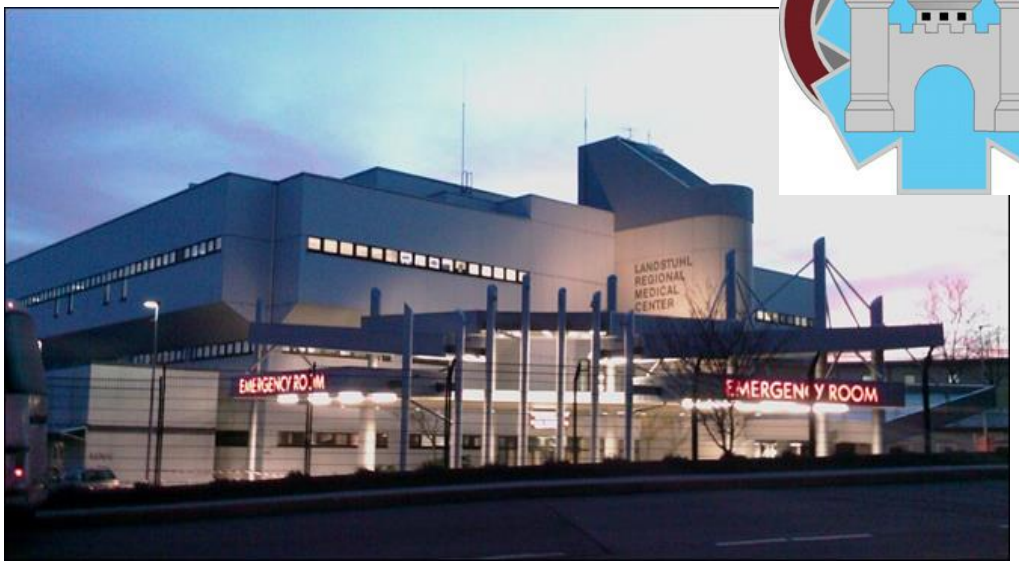
AF C-STARS
CENTER for SUSTAINMENT of TRAUMA and READINESS SKILLS

SELFLESS SERVICE



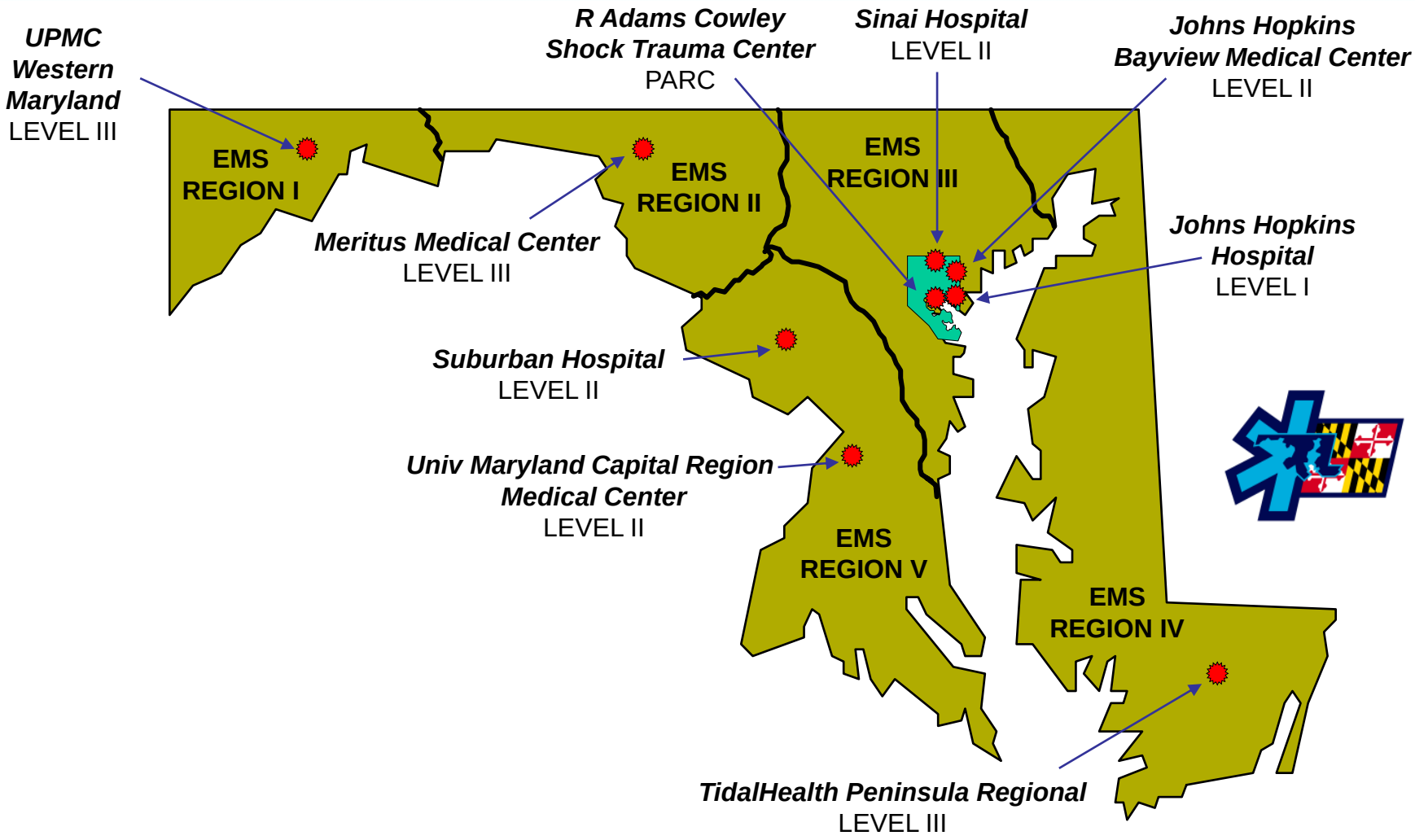
My Trauma Care Background

Chair, Maryland Trauma Center Network (TraumaNet)

Chair, Maryland American College of Surgeons Committee on Trauma

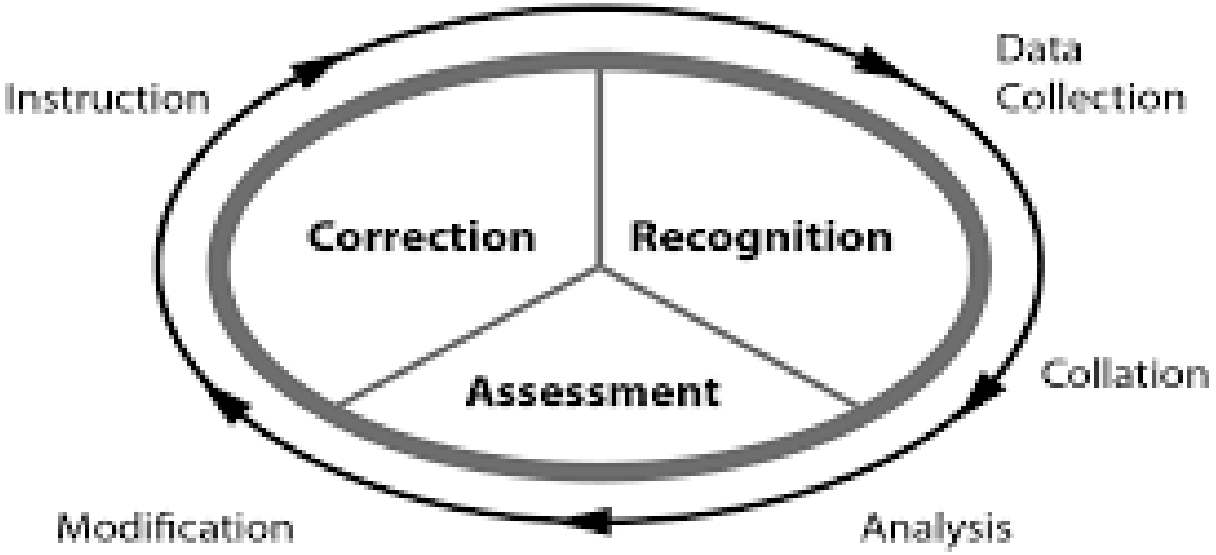
Since 2017,
American College of Surgeons Committee on Trauma Verification Program Site Reviewer
25 reviews including 12 Level 3 trauma centers

Maryland Trauma System



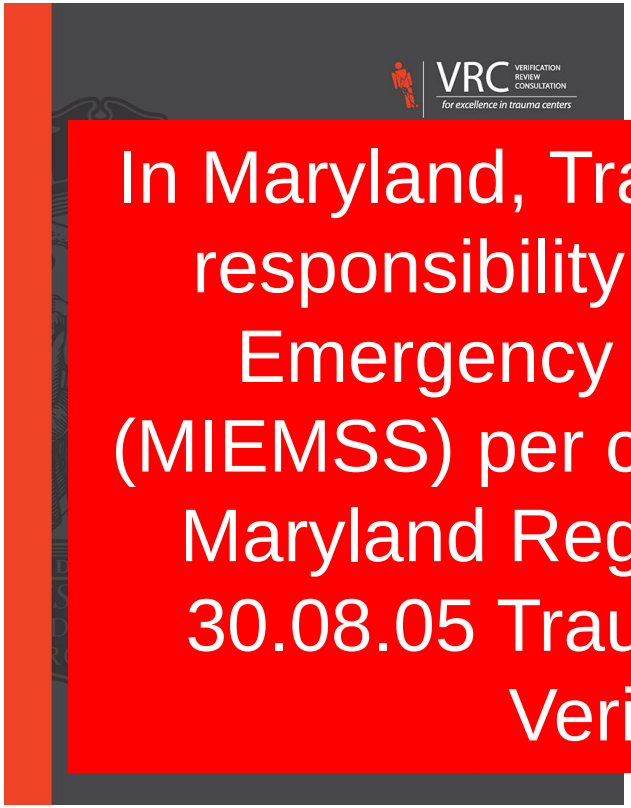
What distinguishes a trauma center?

A continuous focus on performance improvement…



American College of Surgeons

Trauma Center Verification



- **What?**
  - Peer-reviewed assessment of trauma care to standards defined by the American College of Surgeons

In Maryland, Trauma Center verification is the responsibility of the Maryland Institute for Emergency Medical Services Systems (MIEMSS) per criteria specified in the Code of Maryland Regulartions (COMAR) Chapter 30.08.05 Trauma Center Designation and Verification Standards

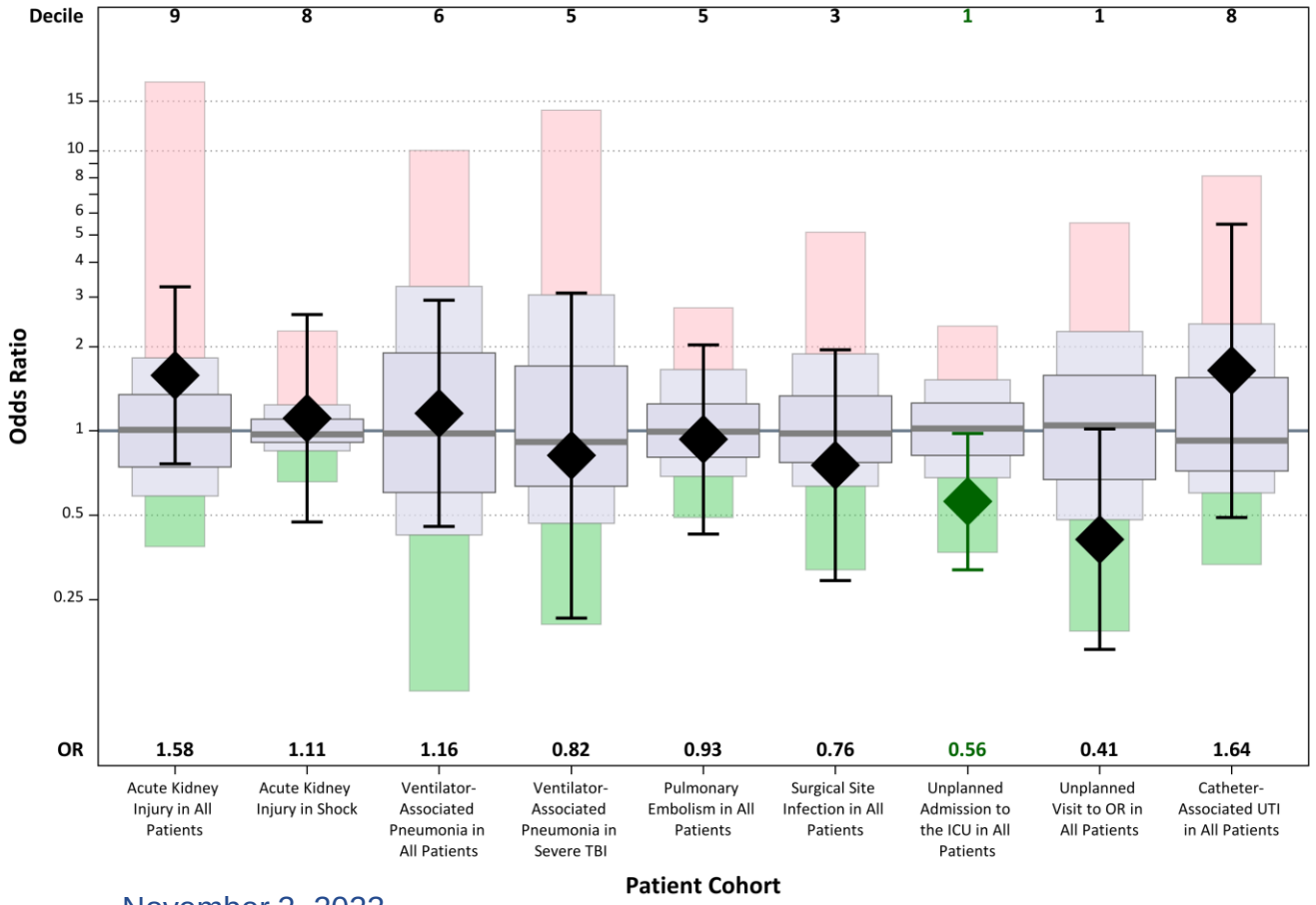
  - Education and training offerings

Trauma Center Requirements (COMAR)

Differences in Standards Based on Physician Availablity and Dedicated Resources	PARC	Level I	Level II	Level III
Attending surgeon who is fellowship-trained and is in the hospital at all times	X			
Dedicated facilities (Resuscitation Unit, Operating Room, and Intensive Care Unit) 24 hours	X			
Facilities (Resuscitation Unit, Operating Room, and Intensive Care Unit) available at all times	X	X	X	X
Trauma Surgeon available in the hospital at all times		X	X	
On-call Trauma Surgeon available within 30 minutes of call				X
Anesthesiologist in the hospital at all times and dedicated to trauma care	X			
Anesthesiologist in the hospital at all times but shared with other services		X	X	
On-call Anesthesiologist with CRNA who is in the hospital				X
Orthopedic Surgeon in the hospital at all times and dedicated to trauma care	X			
Orthopedic Surgeon in the hospital at all times but shared with other services		X		
On-call Orthopedic Surgeon available within 30 minutes of call			X	X
Neurosurgeon in the hospital at all times and dedicated to trauma care	X			
Neurosurgeon in the hospital at all times but shared with other services		X		
On-call Neurosurgeon available within 30 minutes of call			X	X
Fellowship-trained/board certified surgical director of the Intensive Care Unit	X	X		
Physician with priveleges in critical care on duty and the Intensive Care Unit 24 hours a day	X	X	X	
Comprehensive Trauma Research Program	X	X		
Education - Fellowship Training in Trauma	X			
Surgical Residency Program	X	X		
Outreach Professional Education	X	X	X	

Trauma Quality Improvement Program

Figure 5: Risk-Adjusted Specific Hospital Events by Hospital Event/Cohort



Provides validated, risk-adjusted benchmarking to track outcomes and to improve patient care.

Trauma Center Readiness Costs

Trauma Center Readiness Costs

How much green does it take to be orange? Determining the cost associated with trauma center readiness. J Trauma Acute Care Surg. 2019;86:765-773.

"These are nonpatient care costs which the hospital would not have to pay if it were not a trauma center and are incurred before the first patient is seen or treated."

1. Administrative/Program Support Staff
2. Clinical Medical Staff
3. In-house OR
4. Education and Outreach

Average readiness cost in Georgia (2016 data):

Level I Center - $10.1 M

Level II Center - $4.9 M

Trauma Center Readiness Costs

Assessing trauma readiness costs in level III and level IV trauma centers. J Trauma Acute Care Surg. 2023;94:258-263.

"…levels III and IV trauma centers vary from levels I and II centers in that they are typically nonteaching centers and have lower acuity and lower overall volumes of injured patients. However, some resources remain the same regardless of trauma center level."

1. Administrative/Program Support Staff
2. Clinical Medical Staff
3. In-house OR
4. Education and Outreach

Average readiness cost in Georgia (2019 data):

Level III Center - $1.7 M

Level IV Center - $81.6 K

Maryland's unique medical reimbursement environment

Maryland Medicare Waiver

- Instead of following federal Medicare rules for payment, hospitals in Maryland follow Maryland-specific rules. Maryland is the only state with a Medicare waiver.
- Every payer, whether an individual, Medicare, Medicaid or a private insurer, pays the same charge for the same care. In other states, cost-shifting, the practice of charging some payers higher amounts to compensate for Medicare's and Medicaid's low reimbursement rates, is common.

Global Budget Revenue

- Regulated by the Maryland Health Services Cost Review Commission
- Global Budget Revenue imposes a "cap" on annual hospital revenues regardless of admissions. Hospitals are incentivized to minimize admissions and length of stays.
- Individualized hospital rates set to promote cost containment, access to care, equity, financial stability and hospital accountability.

Maryland Trauma Physicians Services Fund *(Trauma Fund)*

- Created by the Maryland General Assembly in 2003 to stabilize the trauma system
- "Trauma physicians are at financial risk when attending to patients that are not insured"
- Financed by a $5 surcharge on motor vehicle registrations
- Provides:
  - Payments to offset the costs of uncompensated and undercompensated care at Maryland's designated trauma centers
  - Stipends to trauma centers of offset on-call and standby expenses
  - Grant funding to trauma centers for trauma care-related equipment

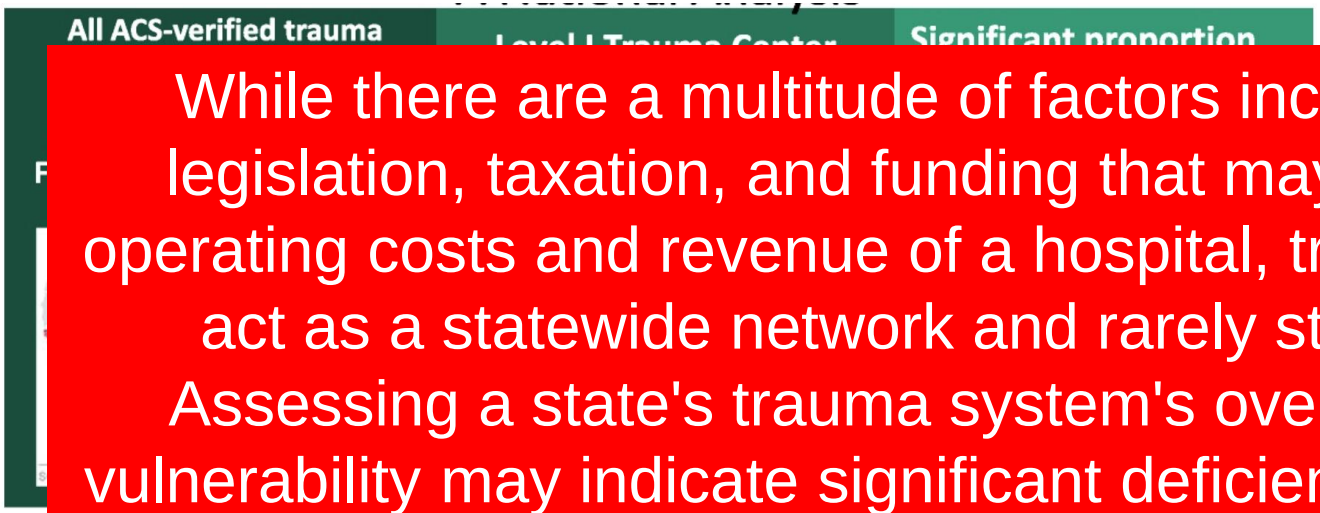
Trauma Activation Fees

Assessment of trauma activation fees by US region and hospital ownership. JAMA Network Open. 2023;6:1-11.

- First approved in 2002 to recuperate trauma readiness costs
- Healthcare Common Procedure Coding System code G0390 and revenue code 068 plus trauma center certification level
- Prearrival notification required
- **Not standardized** - For 523 ACS-verified centers, median fee $9500 and mean fee $13,349 (range $1000 to $61,734)

Financial Vulnerability

Financial vulnerability of trauma centers: A national analysis. J Trauma Acute Care Surg. 2023;94:637-642.



While there are a multitude of factors including state legislation, taxation, and funding that may impact the operating costs and revenue of a hospital, trauma systems act as a statewide network and rarely stand alone. Assessing a state's trauma system's overall financial vulnerability may indicate significant deficiencies that need to be addressed. This can better focus state funding or guide further legislation or reformation.

3. *Days cash-on-hand*
4. *Days in net accounts receivable*
5. *Outpatient share of revenue*
6. *Percentage of unreimbursed and uncompensated care share*

FRANK BUTLER'S LAWS

1. Nothing gets a pass because "That's the way we've always done it".
2. It doesn't matter how good the plan is – if nobody's using it.
3. If what you are doing is not working, do something else.
4. Pick a team that knows trauma care and is strongly motivated to keep improving it.
5. Maintain an active search for good ideas – wherever they can be found – and process them as though lives depend on it. Because, indeed, they do.
6. Make needed corrections quickly as additional evidence and experience is gained.
7. Improve the methodology for reaching decisions on battlefield trauma care recommendations.
8. Effective strategic messaging is needed to inform and inspire decision makers.
9. Evidence does not drive advances in trauma care. People do that.
10. Lessons learned are not really lessons learned – unless we actually learn them.