DPM NEWS

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Zap

Starting at the bottom of this page, Dr. Rueckmann breaks down current understanding of the life-saving intervention of defibrillation.

RTFs

John Smith provides an excellent breakdown of the local state of MCI/MPI/ADB training and response and where EMS fits into the picture on *page 4*.

College EMS

I give some thoughts and life lessons from time spent volunteering at a local college EMS organization on *page 11*.

The ceremony for 2023 MLREMS awards was held prior to the May council meeting. Congratulations to all of the deserving winners and nominees, many of whom will now be considered for state-wide awards! Furthermore, thank you to everyone who took the time to provide a nomination.

ALS Provider of the Year: **Rebecca Henry**
BLS Provider of the Year: **Daniel O'Connell**
EMS Communications Specialist of the Year: **Charles Vitale**
EMS Educator of Excellence: **Amy Niespodzinski**
Harriet C. Weber EMS Leadership Award: **Mark Philippy**
Physician of Excellence: **Dr. Maia Dorsett**
Paramedic Rookie of the Year: **Sierra Chouinard**
EMS Agency of the Year: **Pittsford Volunteer Ambulance**

Eric Rathfelder
Editor-In-Chief

Defibrillation

Erik Rueckmann MD

Defibrillation has been a hot topic in recent years. Where should I place the pads? Are two defibrillators better than one? Is it joules or amps? Do I have to get a PhD in electrical theory? The answer to these questions is complicated and so we'll start with a simple question -**how does defibrillation work?**

The answer to this question lies in your favorite field of science, physics. We must look at how electricity works and interacts with itself. Remember - it's electricity that both keeps the heart beating and comes out of the defibrillator's pads. Voltage = (current X resistance). Current is measured by amperage and resistance (Ohms) is the barrier to that current.

Upcoming Events

Melinda Johnston

For more information about any event listed below, please visit the training calendar at MLREMS.org

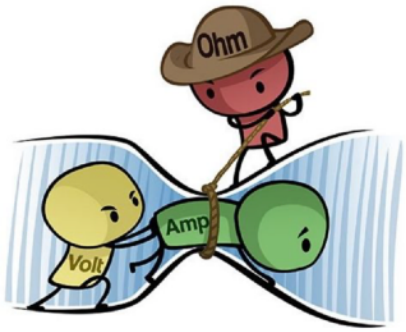
June

27, 28 - EMS Leadership

August

27 - PALS (Gates EMS)

29 - ACLS (Gates EMS)



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Let's looks at this brief article from JEMS:

"Defibrillator settings are displayed as joules, but "joules" don't actually defibrillate the heart; it's current (amps) applied over time that accomplishes this task. Here's how it happens. The defibrillator shock creates a voltage gradient through the tissues between the patient's two electrode pads (i.e., high voltage on one end, and low voltage on the other). Sustaining this voltage gradient for a sufficient time interval is what ultimately "pushes" enough current across the heart, resulting in defibrillation."

The **magnitude** of the current, in turn, depends on the **resistance** between the two pads. This resistance is related to electrode size and skin contact, along with the resistance of the overlying body mass/bone between the electrodes.

Anything that increases resistance along the path of this voltage gradient results in a smaller current. For example, if the interface between the patches and skin creates an usually high resistance, much of the energy from the defibrillator will be dissipated in the patches or at the skin level, with little current making its way to the heart.

This often occurs because of poor electrical contact between the pads and skin. **Resistance-not energy-is often the major roadblock to effective defibrillation**. Although applying higher energy can partly compensate for the problem, if resistance itself isn't addressed, the effort will usually be self-defeating.

Suboptimal defibrillator pad location is yet another correctable obstacle to successful defibrillation. **Defibrillator pads that fail to encompass the heart completely (by being located too high, too low, or too medially in relation to the heart) may misdirect needed current surrounding organs instead of to the heart itself, resulting in a failed shock regardless of its strength.**

If placed too close together, the current will take the path of least resistance and be shunted between the patch electrodes themselves, bypassing the heart completely.

The direction of current flow across the heart can also be a factor in defibrillation success. Biphasic defibrillation takes advantage of this by changing the direction of the shock in midstream, resulting in a current that heads in one direction, followed by taking the opposite direction.

"Defibrillation also has an element of chance."

Similarly, changing pad location (e.g., from anterolateral to anterior-posterior) creates a differently oriented shock. Because this shock traverses the heart from an alternative direction, it **might** more effectively reach different regions of fibrillating myocardium.

This explains why, all other things being equal, an identical energy shock may defibrillate on one occasion but not on another!

Some important points here:

- Defibrillation pad placement needs to be considered based on your patient's body shape.
- The pads need to be placed in a way that energy traverses the left ventricle.
- Think about resistance - the more energy that gets to the heart muscle to "reset" the system, the better.
    - Bone, skin, clothing, and artificial parts can acts as barriers to electricity
    - Make sure that pads aren't touching each other - too close together
    - Make sure that the pads have good skin contact
- **The data for placement of pads on your patient is lacking —**
    - Does anteroposterior (AP) work best?
        - Evidence for prehospital resuscitation is lacking
        - Still need to ensure that the pads are located over the left ventricle of the heart — location matters regardless of placement
- Are two defibrillators better than one?
    - Dual sequential defibrillation has the same issues as pad placement
    - The success frequently attributed to dual defibrillator shocks may be due to differences in pad location and the altered direction of the second shock compared to the first, rather than to the effects from the dual shock itself. In fact, the occasional apparent efficacy of a double shock doesn't necessarily mean mean that another standard shock wouldn't have worked just as well.

Take home points:

- ✶ Defibrillation is a key ingredient for success in out-of-hospital cardiac arrest. It does not replace high quality CPR, airway, ventilation, or other key ingredients.
- ✶ Pad placement needs to be emphasized. Ensure the pads "cradle" the left ventricle and minimize barriers to the electrical current. Think about another lead placement, anteroposterior (front/back).

The Case for Rescue Task Force in Mass Casualty Events

Jonathan Smith EMT-P

An MCI is a high-intensity event, and fortunately also a low-frequency occurrence. From an early stage in our EMS training, we learn about the potential for Mass-Casualty Incidents (MCI). These incidents require us to exercise skills we use infrequently, and independently. Coordinated command and risk/threat mitigation, assessment and treatment of victims to address immediate life threats, active sorting and triage of victims based on acuity of risk to life, and mass-transport to hospitals become concurrent necessities. As a result we learn and infrequently exercise the tools needed to manage an MCI, and then shelve these skills in the same space in our brains where we hide other low-frequency knowledge, like where in Wegmans you might find champagne vinegar.

The unfortunate reality is that infrequency does not mean we're exempt from MCI events; the question for us is not if, but when. We see these most often in two forms: the Multi-Patient Incident (MPI), and the Aggressive Deadly Behavior (ADB) event. These are defined below:

> **MCI:** An incident involving multiple patients requiring medical care and transport, which exceeds the reasonable capability of available responders and resources, even when considering mutual-aid.
>
> **MPI:** An incident involving multiple patients requiring medical care and transport, which can be managed and resolved with available responders and resources. The available responders and resources may respond from multiple jurisdictions through coordinated application of mutual aid.
>
> **ADB:** An attack that uses deadly force on other persons. The deadly force could be, but is not limited to, a bomb, gun, fire, or vehicle being used as a weapon. Also synonymous with Active Shooter, Active Killer. Frequently associated with more than one victim / patient requiring medical care and transport.

The definition of an MCI and an MPI is somewhat overlapping. In general terms we can recognize the MPI as an event with multiple patients, and adequate resources to address the immediate need. As an example, a school bus rollover with 10 total patients might be mitigated with the available resources in the affected and surrounding communities – this is an MPI. When the resources needed to manage this incident exceeds the available resources, we have reached the level of an MCI. Similarly, if the resources needed to manage an MPI and the other concurrent emergencies throughout our EMS system exceed available resources, we've reached MCI status. Based on the scope and nature of these events, any MPI / MCI, and all ADB events will be extended and evolving incidents. There are many factors that may cause these events to evolve over time, all focused on mitigating the incident, investigations, and restoration of the community to 'normal' (as best possible). Dynamic management of these events is essential to meet the objectives necessary to mitigate an incident, match the needs of responders, and meet time-bound objectives for restoring community norms.

Managing MCI / MPI events requires early activation of Law Enforcement, Fire, and EMS resources, and early coordination of resources. Expanding incidents and management techniques are taught in our NIMS / ICS training, and before anyone's eyes glaze over, I'm not going to cover this here. The main

point I want to make here is the presence of EMS within this management structure. In many areas of public safety management, the Medical Branch is understated, and through years of diligent growth and demonstrated value, EMS is slowly gaining recognition as an essential component of managing major incidents. Remember those skills (realistically translated to objectives) identified above? Three of the four are specifically within our area of responsibility, and we prove with greater frequency our value in supporting these objectives.

As a subset of the MPI / MCI theme, we are also faced with ADB events. These are unique in that they come with a known threat of indiscriminate violence, including potential deadly risk to responders. The concepts of management in an ADB event are consistent with MPI / MCI. As we gain experience with more ADB and MPI events throughout our nation, we're confirming the value of coordinated response, including the criticality of both regular training, and near-immediate tactical action. As our Law Enforcement colleagues will say: **"Stop the Killing, Stop the Dying."**

One of the new tools we've begun to rely on when managing an ADB or MPI / MCI event is the Rescue Task Force, conveniently referred to as 'RTF.' In Monroe County, RTF is defined as a team, or multiple teams, consisting of at least two specially trained fire personnel with ballistic protective equipment and medical supplies paired with law enforcement (LE). LE provides security for the rescuers, while the RTF is rapidly consolidating casualties, treating immediate life threats, triaging, and extracting patients from the Warm Zone to the Cold Zone for transport by EMS. EMS primarily focuses on transport of patients (with additional care provided in transit), while a small team of specially trained EMS personnel assist in the coordination of EMS resources that support both the RTF and the ongoing emergencies within all surrounding communities.

RTF started in Monroe County as a coordinated LE / Fire response. Adding EMS onto the team has transformed our capability, bringing our medical background into the training process, helping us to connect our response to our receiving hospitals, and ensuring our EMS teams (responding ambulances) are aware and broadly prepared to quickly integrate into the necessary coordination structure. This evolution has also allowed us to evolve our RTF teams into a well-organized and trained force-multiplier for MPI and MCI events. Current planning anticipates use of RTF teams as part of our MCI / MPI planning:

Patient Count	Ambulances	County Fire Incident Assignment
Up to 6	4	One RTF Company
7-12	8	Two RTF Companies
13-18 (MCI)	12	Three RTF Companies One RTS Bus
19+ (MCI)	16	Four RTF Companies Two RTS Buses

This modular approach modulates resource deployment into the scene of an incident involving multiple patients, and preserves capacity to respond to other emergencies that routinely occur. Notice our plan delineates MPI as up to 11 patients, and transitions to an MCI at 12+ patients. Each "level" of this plan is capable of handling up to 6 patients believed to require treatment / transport, and shall consist of four ambulances (ALS or BLS) and one Rescue Task Force (RTF) Company.

For our EMS crews responding in the ambulance, take note – we're counting on you to accept and transport two patients of any acuity. That means arriving at a designated staging area, clearing your stretcher and bench seat, rapidly loading two patients with the direct assistance of an RTF, and then providing all the care you are able to while transporting to the hospital you are directed to. These events remove much of the discretion we are accustomed to when operating the ambulance under ideal conditions. This is entirely due to the need for increased coordination in order to quickly bring large-scale incidents under control, and restore normal system capability. This coordination extends beyond the responding ambulances; we also seek to coordinate resources arriving from outside of our normal areas, load-balance patients and the demand on health-systems, and simultaneously mitigate the baseline risks and needs within all affected communities.

An ADB or active killer event is likely the most dynamic MPI / MCI event we might encounter. The cause and mechanism of these events can be very different, and can include everything from edged weapons, firearms, bombs, chemical attacks, vehicles, other weapon of opportunity, and any combination. Interestingly, the lethality of these events, in terms of total injuries in relation to fatalities, is also evolving. Much of this shift is a result of enhanced public training and safety infrastructure, and stronger small-unit and combined-disciplines responses (LE, Fire, EMS). The chart on the next page is a sample of active killer events throughout the past 60 years, which identifies key factors and assessment, duration of violence, and a breakout of injuries and fatalities.

Event	Event Year	Fatalities	Injuries	Duration of Violence	Key Factors	Notes
University of Texas Tower Shooting	1966	31	18	114 minutes	Shooter targeted densely populated pathways, timed for class change, from elevated position. Victim confusion (time needed to appreciate what was happening), shooter's military training and superior position, and time needed for LE to access shooter's location extended duration event.	Majority of victims shot within the first 20 minutes. Separate killing event occurred before this shooting (stabbing death of mother and spouse), more than 8 hours before shooting event began.
Stockton Schoolyard Shooting	1989	6	32	3 minutes	Shooter discharged 106 rounds in 3 minutes, shooting victims on a playground. Victims had no effective cover or concealment, all rapidly moving to escape. Mass chaos and movement likely confounded the shooter's effectiveness.	All victims shot within 3 minutes.
Columbine	1999	21	15	49 minutes	Shooters targeted densely populated school spaces. Police tactics not designed to pressure shooters. Combination increased opportunity for killing.	Majority of victims injured within first 22 minutes
Virginia Tech Shooti	2007	33	23	155 minutes	Shooter was able to kill one student and disengage without being captured, and re-enter a nearby area to begin a second killing event in densely populated classroom spaces. Second event quickly pressured by SWAT, and mitigated.	Two distinct killing events spread out over 155 minutes, with each event lasting up to 10 minutes.
Sandy Hook	2012	28	2	5 minutes	Shooter targeted elementary students, capitalizing on youth behaviors, and densely populated classrooms and hallways. All permitted high lethality in limited time.	Shooter expended significant volume of ammunition, and demonstrated poor reloading and ability to address weapons failures, which may have resulted in a limitation to the killing in this event.
Pulse Nightclub	2016	50	58	33 minutes	Shooter concludes active violence within 33 minutes, and is confined within the nightclub with hostages. Dynamic threat mitigation and life-saving is not well coordinated, resulting in delayed care that might have been possible to expedite. Responding law enforcement note their tactics would have been more aggressive after the initial barage of violence, had another wave of violence or shooting begun; negotiation was used in the absence of active killing.	Violence restricted within 33 minutes, with remaining hostages 2 hours 40 minutes later. LE prepared for hostage rescue if shooter has escalated after initial containment.
Las Vegas Shooting (Music Festival)	2017	61	867	10 minutes	Shooter used an elevated firing position and a very dense crowd to generate a high injury and fatality count. Shooter confronted and injured by security within 5 minutes, active shooting on crowd ended within 10 minutes. Shooter engaged LE for 65 minutes after ceasing violence against the crowd.	Of the 867 injured, 413 were gunshot wounds, and 454 were from other causes. This event is a mixed ADB / MCI based on scope of event, and blended violent and non-violent mechanisms of injury.
New York City Truck Attack	2017	8	12	5 minutes	Perpetrator used a vehicle on a protected bike lane to target and ram bicyclists and pedestrians, and struck a bus transporting special needs students.	Perpetrator attempted to exploit the mass of his vehicle in a pedestrian space; the superior menauverability of his intended targets reduced his ability to inflict casualties.
Parkland HS	2018	17	17	6 minutes	Shooter able to exploit densely populated halls in between class periods, and confusion on evacuation / shelter procedures. On-scene LE official failed to rapidly engage shooter despite opportunity, resulting in unrestricted killing. Additional killing was possible if weapons used had not failed.	Despite confusion around evacuation / shelter, rapid sheltering did quickly reduce available targets for the shooter, undoubtedly reducing injuries and fatalities.
Pittsburgh Synagogue Shooting	2018	11	7	40 minutes	Shooter attempted to exploit gathered congregants (massed targets). Group and self-evacuation, and use of concealment reduced the shooter's effectiveness. Application of force by law enforcement restricted shooter's capability.	Dynamic scene with progressive restriction on the killer's ability to commit violence.
Uvalde	2022	18	22	82 minutes	Initial pressure from officials on scene likely resulted in shooter containment. Ineffective LE coordination and confrontation of shooter contributes to shooter's ability to continue violence within his confined area over time.	Some immediate confrontation with officials, shooter contained within two rooms throughout. Unrestricted violence permitted in this space through duration of event.
Nashville Shooting	2023	1	7	15 minutes	Initial LE arrival within 5 minutes of the first shots fired, resulting in rapid lockdown and facilitated evacuation where necessary. All action restricts available targets, quickly pressures shooter to reduce operating area, and threat mitigation.	Responders employed dynamic threat mitigation and life-saving tactics in their response to this event.
UNLV Shooting	2023	4	3	10 minutes	Shooter able to gain access to campus, with unrestricted movement for 15 minutes before he began shooting. Shooting caused a fire alarm to activate, resulting in confusion that drew some people into hallways, increasing target availability. Law enforcement response was rapid.	Use of coordinated LE / FD as RTF is noted, with prompt deployment into warm zones for casualty collection and life-saving intervention. Casualty evacuation was effective and highly coordinated. Advanced integrated training and pre-planning contributed to effectiveness of response.

From this we can see a few things:

- Killers often share a common objective – maximum violence. Many effectively plan, and identify target-rich areas.
- The amount of unpressured time an active killer has to inflict harm translates to greater potential for injuries and deaths. Evolving responder tactics are important to address this threat.
- The duration of time from injury to application of life saving intervention, and then the interval from injury to transport and definitive care, correlate to the ratio of injuries to fatalities. Based on timeline trends, care may need to begin before all threats are mitigated.
- If care is provided in a hot or warm zone (before full threat mitigation), specialized and highly trained teams are necessary, as is effectively coordinated resource utilization. Absent these tactics, attempts at early care will result in responder injuries and fatalities.
- While the threats and risks at a non-violent MPI / MCI are different than those at an ADB event, the management objectives and tactics are much the same. The tactics we use for MPI / MCI and ADB should be common, with adjustment made to account for unique risks or scene conditions

Long before we've defined the points above, these changes were underway – all driven from lessons learned at MPI / MCI and ADB events, including events not considered in the previous table.

Law Enforcement tactics began to change after the Columbine shooting in 1999. At Columbine, responding officers were trained to assemble as a team, contain the shooter to a fixed area, and confront the shooter when sufficient forces were available. This tactic restricted the shooter to only those 'targets' that are fixed in the same space as the shooter. In the larger context this is threat containment... but for the folks now stuck with the shooter, this is hell. And many of us saw the effects in chilling detail on the evening news. We've since shifted. The first arriving officers will now directly and rapidly confront the shooter with counter-lethal force. This places exceptional risk on the initial responding officers, and also immediately refocuses the killer's violence away from innocent bystanders. This tactic also significantly reduces the killer's containment area, further restricting the killer's access to potential victims. While risky for the officers, this tactic is effective.

In the previous table, take a moment to look at the Pulse Nightclub shooting. The new tactics of 'pressing the threat' were applied here, which stopped the killing. At that time, the law enforcement officials identified they did not press harder after the killer was contained, as there wasn't an active threat against the hostages. There was not a focus on using available personnel to affect coordinated rescue of victims. Put in other words this effort 'stopped the killing,' but didn't 'stop the dying.' Another paradigm shift was needed, emphasizing the need to exploit threat containment coupled with law enforcement as security, to create corridors where an RTF could operate to move and consolidate casualties in a defensible space. This permits the RTF to assess for and address life threats, and make triage decisions, while forward controllers coordinate resources needed to transport patients to definitive care.

This concept of 'Stop the Killing, Stop the Dying' is a fundamental objective of our teams.

Increased coordination with co-responders, including Law Enforcement, Fire and EMS, has allowed for much more rapid application of life-saving intervention, and coordinated patient extraction for rapid transport. Our RTF teams are the mechanism for us to accomplish this locally. Our local experience with

RTF deployment has been on small-scale MPI events (3-6 patients), and not active violence. We've proven our concept is effective and can be scaled – so if we're called for larger or more dynamic events, we have the plans and tools we need.

So why the focus on ADB? Reading the points above, much focuses on the ADB response as the risk to the public and responders, and the tactics needed to address and mitigate that risk are complex; not all of the security and risk factors translate to other forms of MPI / MCI. For example, a multi-vehicle crash, or a building filled with noxious gas may each generate multiple patients. In these situations, the risk to responders, and our tactics are different, matched to the risk or threat. What is common for us is the deployment of all disciplines (law enforcement, fire, EMS), the recognition of the role each discipline plays, and the coordination of our actions. An MPI or MCI will still result in deployment of RTFs, along with all of the other expected resources. RTF will still deploy into the heart of the event to address life threats, congregate patients in casualty collection points (CCPs), and move patients to ambulance exchange points. Therefore, the concepts are the same. We're building our tactics, and training our skills based on worst-case scenarios, which prepares us to work in any environment we're asked to operate in.

So what will a response to an MPI / MCI or ADB event look like? These all start with stimulus – someone reports an incident (either via 911 or a field responder via the radio), which generates a 'job,' resulting in the dispatched-assignment of resources. And as our information about the situation builds, we recognize the scope of the reported event is greater than what we normally respond to. Once we begin to appreciate a scope that fits into the MPI / MCI stratification in Figure 1, additional resources begin to accumulate through pre-planned activation, and interdisciplinary coordination needs to occur. Things now start to get interesting... Communication gets tricky as more people begin to try to collaborate via phone and radio, and this is the point where we often see comms systems fail. Historically this is also the point where we see freelancing and 'siloing,' creating a situation where interdisciplinary is strained or impossible, and information becomes bottlenecked. We have tried to anticipate this with our planning – here is what we need from you:

1. When you hear the escalating incident (MPI / MCI / ADB) in progress, simply get yourself ready. Don't call the 911 center (ECD), don't call on the radio to offer help, don't call command officers to share your support. Simply be ready – you will have a role to play.

2. When you are dispatched, pay attention for communications assignments. You should expect not to use the radio unless in a command role, or unless communicating an urgent message (you are in danger, or relaying urgent information under explicit direction). Plan to communicate via your MDT for all non-urgent needs.

3. Your initial assignment when responding into these events is likely to report to staging, and your radio communication will be directed to a Fire Ops channel for staging. We're working on updated radio programming to make this much easier for you to accomplish. See above – still plan to communicate via MDT, and receive instruction via the radio.

4. Once in staging, the staging officer will provide you with pertinent instruction. Expect to clear your stretcher and bench seat, in preparation to receive two (2) patients.

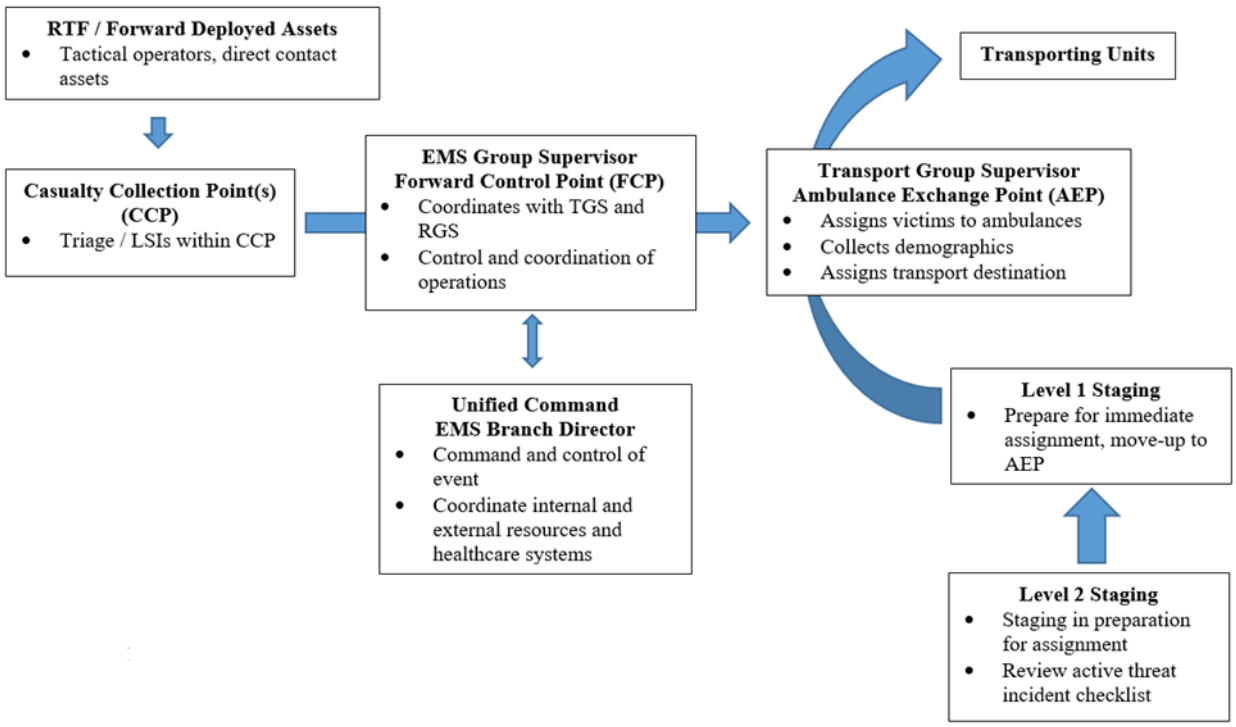
5. Once directed into the scene, MPI / MCI and ADB will be managed by use of an Ambulance Exchange Point (AEP). This is where you will be sent, and your patients will be loaded into your ambulance. You will receive your patients and instruction on where to transport these patients.

Your transport destination is not negotiable – we're giving you instruction to align your patients with available services, in consideration of total system capability and capacity. Your discretion in this case is not helpful.

6. When you receive your patients, expect to have limited or no information. A hand-off report may not be feasible as the RTF that moves your patients to you may have only been assigned the task of patient-movement. They aren't lazy or apathetic – they just don't have information to give you. WHICH MEANS: fully assess each patient, address life-threats, re-triage, and then provide any care you are able with the time and resources available.

7. After you discharge your patients at the assigned hospital, quickly reset your ambulance, and place yourself back in service. Once shown as available the dispatchers will assign you where needed. This may be back to the MPI / MCI / ADB, may be back to your home territory, or may be to calls in any other territory. These events are an all-hands situation, don't be surprised if you travel.

This diagram shows how patients and resources are coordinated to affect transport of victims from an MPI / MCI / ADB event.



What we've learned from building and training these teams is incredible. We've embraced SALT triage, due to the simplicity of operation and considerable fit with our need. Integrated command and control, using a small group of trained EMS personnel, has significantly improved our system capability. Pulling the EMS system into tight coordination in times of stress is essential, and has proven in multiple occasions that we can support major incidents while responding to the needs of our communities. Breaking down simple tasks like how an RTF moves a patient on a mega-mover and places the patient on a stretcher, and training this repeatedly has helped us create safe and rapid techniques that facilitate loading multiple casualties (and sometimes multiple ambulances) in under one minute. The expectations

defined previously all contribute to the success of these lessons, as they support integration of the entire EMS system into the management of an event, while permitting coordination of all other ongoing emergencies in area communities. And while these changes could seem discordant through the lens of normal EMS deployment, they are fundamentally applicable in everyday practice, and essential in an MPI / MCI / ADB event.

The most important role our EMS practitioners play in these events is simple: patient care during transport. That may not fulfill your desire to wear the tactical kit, rush into danger, or solve the crisis. Completely understood. Take a moment to reflect on what you do and how unique it is – you will be the only responders who arrive with the capability to take the injured to a point of definitive care, while providing sustained care enroute. It's what you already do every day, and that routine skill is what helps us do the most good possible in these major events. Everyone at an MCI / MPI and ADB event is counting on your inherent capability.

Our foundational training provides very basic awareness of what we'll really experience in an MPI / MCI event, and insufficient insight into our local plans. The skills you are expected to perform on the ambulance, and the integration desired are already within your scope of daily practice. So to be most effective we need more frequent training, with an emphasis on resource coordination, and high-quality life-saving interventions and trauma care. Periodically there are opportunities to participate in RTF training, wherein law enforcement, fire service, and ambulance teams can observe the RTF concepts in action. For EMS this may focus on triage and trauma care concepts, along with practicing receiving patients from RTFs. A clear secondary (and equally important) benefit of these sessions is the opportunity for relationship-building. Knowing the many responders in all disciplines who you will work incredibly closely with is critical, and these relationships should be built before you are called to respond. For EMS agencies, these training opportunities can be invaluable, and incredibly difficult to replicate solely at the local level. I strongly encourage you to attend, to learn, share your experience, and help us prepare for some of the most difficult responses we can be called to make. If you are interested in participating, please reach out to your agency leadership; we'll keep pushing the opportunities out to agencies, who are encouraged to engage to the extent they are capable.

Lessons from a College EMS Agency

Eric Rathfelder MS, EMT-P

I recently had the honor of being invited to celebrate the 50th anniversary of the existence of SUNY Geneseo First Response (GFR), the student-run EMS agency at SUNY Geneseo. Colleges are replete with organizations loosely identifying as service organizations many of which are fun or useful - but it might be a stretch to describe their primary function as service. Not so for collegiate EMS agencies which truly embody the spirit of the term "service organization". During GFR's celebration, they asked me to provide some remarks about my time serving in, and leading, the organization with an emphasis on lessons learned and how things have changed since I was there. I've reworked some of those remarks and I am sharing below some of the valuable life lessons I was fortunate to learn through my time volunteering which I hope might be interesting, amusing, or useful to readers of this newsletter. Thank you to all of you who work in EMS but especially to you volunteers.

The Value of Persistence

This is what my Catholic wife, Tegan, refers to as "the old Protestant work ethic" (which, by the way, she is not always referencing in a positive manner). A snapshot of GFR in 2001-2002: within the ebbs and flows was an organization that at times had 3-5 crew chiefs and fewer than 20 members. We moved about campus in a powder blue Ford Econoline work van outfitted with a rotating amber light bar, dispatched at the whim of University Police as "Unit 50", sometimes simply being bypassed for response to calls that the Geneseo FD or Rural/Metro 871 came to.

Isaac Newton is credited with the comment, "If I have seen further it is because I stood on the shoulders of giants" - in this case we certainly did benefit from previous leaders and members of the organization but I also had the opportunity to stand shoulder-to-shoulder with giants including my fellow officers, Kyle Heassler, Floyd Feather, and Chief Ewanow along with some guardian angels who worked in the administration including Dr. Heidi Levine, head of Student Health Services and Jim Stenger, the Chief of University Police. The other officers and I set some goals that we believed were crucial to our continued existence and to carry the organization into the future, which included: becoming integrated into the county 911 dispatch work flow, obtaining a "new" fly car that actually appeared to be an emergency response vehicle, developing a consistent funding structure that did not require begging Student Association for any purchase greater that $200, and having staffing that would allow us to be in-service every hour that the college was in regular session.

These were big goals which brought with them big obstacles but we were able to accomplish them all through shear tenacity, or persistence, or grit, or whichever synonym you prefer. And, without that lesson none of the remaining ones would have been feasible.

Consistency is Key

When we look at what value-add we provided to the college community, we realized being consistently in-service was an absolute must so that we would be viewed as reliable and necessary. This required a lot of sacrifice on behalf of a core group of crew chiefs (as I alluded to earlier - in my years here I don't think we ever had a double digit number of EMTs/crew chiefs). The importance of this consistency can be demonstrated by two anecdotes:

1. There was a particular Lieutenant at UPD who was a bit of a traditionalist and who did not always see the value of GFR being in the response scheme for EMS calls. This led to many conversations between us, not all of which were cordial, but I think all of which involved a level of mutual respect. One weekend night, I was the on-duty Resident Assistant (RA) for Jones Hall when the duty crew responded to an EMS call. Shortly after, a second EMS call came in (probably for a drunk), and dispatch was notified that GFR wasn't available. This Lt called me on the phone and I explained that we weren't able to respond and the reason. He replied, "well, I would really feel a lot better about this if you guys came and did an evaluation." Consistency had created the expectation that we were part of the response, and the person who a year or two earlier didn't wish to see us at an EMS scene, was now asking me to find a way to respond to this call. So, I got a fellow RA to cover for me and walked down to Monroe Hall with a jump bag.

2. In the two years I led the organization, we were only out of service when school was in regular session for four hours. It was a Saturday morning and every driver was going to attend an Emergency Vehicle

Operations Course at the Livonia Ambulance base. This was a tough decision to make but one that we thought was worth the trade off. As we finished up at the class and were leaving Livonia, a call came in for a rugby player with an ankle injury. Now, I don't know how many of you have watched or played college rugby but I had the opportunity to spectate at many matches and these are some tough people. In fact, whenever I witnessed a brutal hit or what I believed was a serious injury and started picking up my gear and walking towards the field, I would be waived off in lieu of calls for "WATER!". A team member would trot onto the field with a gallon jug of water which would either be poured upon the injured member or offered for consumption and, within moments, the person I previously envisioned being carted off in an ambulance would make their way from the field. But not on this day. I responded to the rugby field probably 25 minutes after the call came in and still there wasn't any EMS on scene. As I walked onto the field I realized the reason this player couldn't be cured by the magic elixir from the gallon jug was because his tibia was sticking out of his leg. And the response from the ever diplomatic rugby players and fans was a resounding chorus of boos. At first I was angry, I wanted to tell them what we were doing and why we couldn't be there but then I realized - they justifiably don't care. They needed us and we weren't there. That's all that mattered. And this was another moment, another realization, that we were right to focus on consistency. For GFR and for life - consistency and reliability will take you far.

Throw Out the Bad Ideas

We had a lot of ideas during my time with GFR and they weren't all good. Encouraging ideas is a great trait for an effective and innovative organization to succeed. And throwing out the bad ones is just as important. When I was a crew chief my sophomore year, our Captain was frustrated and discouraged with our responders looking like they were going to provide emergency roadside assistance or deal with a leaky toilet when they responded in the "blue whale". He was a man of action, so he came up with a solution and asked me to assist with implementing it. This solution was replacing the amber light bar covers with clear covers. It would differentiate us from the construction workers and skirt the issue of our lack of a siren which would be required if we had traditional red lights. So, we proudly responded to our first call with clear lenses one night and drove straight down Main St with the blinding white orbs rotating, reflecting off the glass store windows. Other vehicles were confused into submission and we got finished with the call and returned to base. I'll spare you the details but those clear lenses were replaced by the next day with the ambers that we thankfully didn't throw away. And, bad ideas were not reserved for others - I had, and continue to have, plenty myself - such as the week when I was absolutely convinced that we should sue Geneseo Family Restaurant for their server's new shirts which were adorned with the initials "GFR". The nerve! This noble idea was quickly swept under the rug when a little research revealed Geneseo Family Restaurant had been around longer than Geneseo First Response. Though, in the end we outlasted them.

You Don't Need to be the Hero to Make a Difference

There is a lot of satisfaction that can come from performing admirably during a critical call and, hopefully, achieving a desirable outcome. It can be a real rush. But sometimes the background work is just as important. When I started at GFR we had a filthy, heavy, AED with a frayed power cord that had a chance, but I'm not sure how good of one, to work in an emergency. So, between our sophomore and junior years Kyle Heassler and I came up during the summer to go to a Student Association meeting and convince them to pay for a modern AED, which they did. Fast forward three years when Kyle and I had graduated and moved on to our adult lives. A student living in the townhouses went into cardiac arrest.

Members of GFR who lived in the townhouses performed CPR. The aforementioned AED was effectively used. Ultimately, the student survived and returned to campus. After learning of that incident I found myself mulling over the question, "would our old AED with the frayed power cord have performed in that situation?" I don't know. And I'm grateful the EMTs working that code did not have to find out.

I'll leave you with this anecdote. One of the concerts during either my junior or senior year was Dashboard Confessional. GFR mustered up both a duty and standby crew for this event. We treated a handful of patients including a teenager who passed out and struck her head. She was treated by GFR then transported by another agency and I never thought anything more of that night, assuming she simply had a syncopal episode for which the etiology would probably never be known. Fast forward to the end of my senior year. Each year the college would hold a luncheon for the organization as a means of thanking us for our service that year. A high-level administrator at the college wanted to say a few words of thanks to us at this event where he shared that during the past two years, whether we knew it or not, our organization had been at a crossroads. Essentially, he had been wrestling with the weighty decision of eliminating Geneseo First Response and relying solely on the Geneseo Fire Department or a contract commercial agency for all EMS service to the campus. Or, to bolster our funding and implement a sustainable administrative structure to include a Board of Directors which would allow us to flourish into the future and fill a niche that outside agencies could not. During the time he was contemplating these options, his teenage daughter attended the Dashboard Confessional concert on campus. She passed out and was initially treated by Geneseo First Response before being taken to the hospital for evaluation where they discovered a previously unrealized underlying cardiac issue that led to her syncopal episode at the concert. In that moment he had the answer to his decision. And in large part, due to that moment, we are here celebrating 50 years of service.