



JULY 2022

BACK STEP TALKS

Special Events Safety

Before the Event—Preparedness is the Key

Summer is here and summer is the time for carnivals, fairs, and other events that include large gatherings of people. As the weather warms up, thousands of Marylanders will flock to popular amusement parks or local carnivals to escape the hibernation forced by two years of COVID precautions in search of a day of excitement and fun. As first responders, we must understand the hazards and risks that are present at these venues and be prepared for accidents that may happen. This issue of Back Step Talks discusses some of the preparedness actions that departments should take prior to these events to keep everyone safe.

You say it won't happen to you? Let us set the record straight with a couple of incidents that occurred across Maryland:

- July 29, 2009 – A 13-year-old girl fell out of a ride after the ride operator failed to belt her into the ride. The girl suffered hand and leg injuries from the accident.
- July 22, 2010 – A roller coaster ride malfunctioned, causing three riders to be transported to a local hospital for treatment.
- August 18, 2010 – A young boy and a ride operator were injured when the swing ride that the boy was riding on struck a fence.
- May 14, 2018 – During a merry-go-round ride with more than 40 people on board, part of the ride collapsed. Fortunately, no one was injured in this incident.
- August 17, 2019 - A roller coaster ride malfunctioned, causing five riders to be transported to a local hospital for treatment.

themselves have a daily inspection requirement and so they inspect it and keep a log of inspections.

What can we learn from past incidents and what actions can we take to avoid accidents at carnivals and fairs in our local response area? The key to managing these risks starts with proper planning. Please take the time to review the articles in this issue of Back Step Talks for actions that you should take to plan for and respond to incidents that may occur in your area. By taking appropriate actions before the event, we can help reduce or eliminate accidents and injuries at these events that are supposed to be a time of fun and excitement.

Fortunately, none of these incidents resulted in major injuries. However, each year, we hear of incidents across the U.S. that have a much more tragic outcome. A 2013 study shows more than 4,423 people are injured across the U.S. on carnival rides each year, about 20 every day during summer months. Ride regulations vary across the country, with different rules in each state. Maryland has some of the strongest rules in the country. Every time that ride is set up, a state inspector inspects it before anybody is allowed to ride it, and the ride operators

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Above: Ocean City Ferris Wheel on the Pier

Fireworks Safety for Firefighters

It's very important to understand that there is a difference between fireworks that you purchase from a store and the munitions that are used in a public display. The fireworks in a public display are considered explosives and depending on the size and duration of the event, they can range from ground displays to bomb launchers that are shooting rockets that are 4"-12" in diameter exploding hundreds of feet into the air.

Some very important strategies for working safely with a public firework display include the following:

- Create an Incident Action Plan (IAP) for the event and list who is responsible for what actions, and their contact numbers. Include the police, communications, traffic & recreation department in your plan.
- You must preplan the launch area even before the displays are set up. Find potential hazards and areas that you need to watch during the display and immediately after.
- Make sure that you have enough personnel with the proper training and equipment to cover the event.
- Stage your apparatus to cover the event, both at the shoot site and for emergencies that can arise in the crowds. Be sure to take into consideration that traffic can be very congested at

the conclusion of the show and plan accordingly.

- Communicate with the firework vendor and your AHJ (usually your fire department's fire marshal in charge) early on and including the day of the event.
- Work with the vendor and visualize how the displays are set up. This will become important after the fireworks have started, as your visibility can be greatly reduced in the dark and smoky air. Have a signal with the pyrotechnician on when you may enter the hot zone.
- Let your crews work with you at the site, so they can see how each rack is wired and secured.
- Understand where the personnel controlling the show will be and how they will launch the explosives.

- Make sure that you determine where the "Hot" zone will be and secure the area from all spectators and your personnel.
- After the shoot has ended, wait about 20 minutes before walking the shoot site to locate the "duds", remember that they are still live munitions capable of deadly consequences.
- Allow the display crew to inspect the site and recover any of the product that didn't explode.
- Remember our portable radios and cell phones can accidentally set off a display

Firework displays are a treasured tradition that poses a unique and challenging environment for the fire and rescue service. Careful planning will insure a good outcome



Attend public Fireworks displays, and leave the lighting to the professionals.

Fireworks are dangerous to people and pets. Using them puts your property at risk.



UTVs and Bicycles for Use in Specialized Situations.

Arctic Cat, Bobcat, Can-Am, Gator, Gravely, Honda, Intimidator, John Deere, Kawasaki, Kubota, Kymco, Mahindra, Polaris, and Yamaha are just a few of the brands first responder manufacturers are using for today's Utility Task Vehicles (UTVs). Evolved from its recreational cousin the All Terrain Vehicle (ATV), the UTV chassis has a stronger frame and drive train designed to accept emergency skid packages for EMS Transfer, Wildland Firefighting, Off Road Rescue, and Crew Transport over rugged terrain and densely populated areas such as parkland trails and special event venues like fairgrounds and carnival midways. Power trains are available in gasoline, diesel, and now EV depending on your department's needs. Accessories such as front and rear mounted winches, electric generators, scene lighting arrays, and patient stretcher packages round out the options for custom configurations of these condensed units ideal for deployment in narrow and limited access spaces. Like any other motor vehicle, safety belts should be available for each riding position. Eye and head protection should also be available when operating in overhead canopy or rugged terrain. If the unit is to be deployed along waterways, PFDs should be part of the UTV's inventory. If operating in or near traffic, hi-visibility vests are a must. If the unit is not equipped with a mobile radio, a portable radio should be assigned to the unit so the crew can reach command and communications. An electronic siren package may seem an

unnecessary option for a vehicle primarily deployed off-road, and in rural surrounding however, the value of the public address feature, and its ability to place radio communications on loud speaker, become apparent the first time it is used to direct the public out of your path of travel, or to communicate with crew members operating in areas where portable radios are not practical or functional.

As a complement to the use of UTVs, Emergency Bicycle Response Teams add ease and flexibility to the same specialized response areas but with the added advantage of deployability in a fraction of the time once on scene. There are as many or more emergency bicycle outfitters as UTV manufacturers, including ones with electric assist and magneto models. Trunk bags and panniers provide removable cargo space for needed EMS gear, including compact AEDs (LP CR+) and O2 cylinders (size C). Lithium battery

LED lighting is available for visibility from the front and rear of the bicycle. Hi visibility vests and helmets are part of the first responder's PPE when operating on two wheels. If your team is going to be operating in large dense crowds long whip "antenna" flags will help teams locate each other in the endless sea of spectators. International Police Mountain Bike Association (IPMBA) is the industry safety standard in training when operating as a bicycle first responder. The IPMBA EMS cyclist course provides 32 hours of instruction in the basics including maintenance and repairs, fundamentals in cycling skills, falling techniques, quick turning, balance and physics (gyroscopic effect at low speeds). Other courses to enhance safe operations in this specialized field include: EMS Cyclist II Course, Maintenance Officer Course, Bicycle Response Team Training, and the E-Bike Training Module.



Above: Wheaton Vol. Rescue Squad UTV

Planning for Success:

Command Considerations for Public Events

Many volunteer fire companies host carnivals as a fundraising event. Even more companies are asked to provide stand-by emergency medical services at large gatherings – sporting events, graduations, concerts, etc. But is your department ready to meet the service requirements of these events? What can you do to prepare your personnel for these events?

Do Some Research – You should make a point of meet with the event planners/coordinators and get solid information about the event. If you are the organizer of the event, assemble an incident management team to address many of the issues that you will encounter. Some questions to ask:

- Where is the physical location of the event?
- What roads are near that location?
- What's the terrain? How large is the area?
- Can personnel walk the grounds from end to end in a timely manner to respond to incidents or will they require transportation (bikes, ATV/UTVs, trucks)?
- How many people are expected to attend? How many employees will be working the event?
- What is your staffing availability to still respond to regular calls for service?
- How will personnel communicate? Is there an Incident Commander role established? How will personnel request additional resources?

Know Your Resources – Make sure that you understand the resources that you can provide and the level of service you can commit to the event. Understand what resources will be on standby at the event and how you will acquire more if needed. While a routine event may be managed by a single suppression unit and a BLS level ambulance, as the incident complexity increases, so will the need for additional resources.

Never Underestimate Logistical Needs - If you need supplies, what will be the method for obtaining them? Will your company purchase them or are the event planners/coordinators able to pay for them? What will your needs be for water, cooling stations, medical

supplies, etc. Plan for these prior to the event so that you will have them when needed.

Plan for the Worst – It is necessary to conduct a pre-incident plan of the event grounds and provide a briefing to your staff working the event.

- Where will you have a medical staging area established?
- What are your closest hospitals and specialty centers (trauma, burns, pediatrics, etc.) and do you have a designated area for aviation rendezvous, if needed?
- How will you transport patients from a triage/staging area to the hospital?
- What are the hazards associated with the physical location of the event and the type of event?
- Is it a high school homecoming football game, a multi-day carnival, or a county-wide fair that will be attended by politicians or celebrities? Each have their own artificial hazards, but you must also account for natural hazards, too.
- Review triage protocols with your providers as well as treatments for the most likely injuries/medical conditions event attendees are likely to experience.
- For summer events, think heat emergencies, insect stings, allergic reactions, and various levels of trauma.
- For fall/winter events, be prepared for cold emergencies and traumas.

Enjoy the Best – Large public events are a phenomenal opportunity to market your department! Be sure to take some time to interact with your attendees. Stage a fire engine for a 'touch a truck' event, offer blood pressure screenings, set up a recruitment table near your medical staging area. Take advantage of the change to be in the public eye and dedicated to that location! The pandemic blunted many face-to-face recruitment efforts and these events deliver a prime opportunity to utilize the most effective recruiting method available – in-person conversation and the personal ask!

Emergency Response From and Within Mass Gathering Events

Summer is here and so are large events such as the local firemen's carnival, summer concerts, sporting events, and County/State Fairs. Many of these gatherings are used as department fundraisers where the members not only work at the event, but also continue to provide emergency services to our communities. Proper pre-planning of these events can allow our department members to safely perform both.

Here are some factors that should be considered when pre-planning these events.

- LOCATION The location of the event may have limited entry and exit points that create chokepoints for the department's response resources. These chokepoints may support both vehicle and foot traffic and that is where particular attention should be paid when responding into or out of the event.
- CROWD SIZE The anticipated number of participants will have an impact on how your response units move within the crowd to an internal emergency event. It would be a good idea to assign personnel to walk in front of your response team to clear a way through the crowd. If local law enforcement is assigned to the event, coordinate with them to clear the way. Large crowds do not move fast or get out of the way of emergency vehicles, no matter their size.
- CROWD MAKEUP The makeup of the crowd will also factor into how you respond. Does the crowd mainly consist of adults, high schoolers, or families? Each of these groups has a different reaction to an emergency event and first responders. And if alcohol is served, then that is an additional challenge where local law enforcement participation is highly recommended for the safety of the response team and the patient.

Take some time to pre-plan your department's response to, into, and/or from this summer's events to ensure the safety of your members and the community.



Above: Odenton Volunteer Fire Company Annual Carnival from overhead.

Carnival Ride Incidents

Summer has arrived and many carnivals are traveling setting up, tearing down and moving to the next location. With the exception of few agencies that may have amusement parks in their first due areas this type of incident will be challenging. A ride accident may occur though rare, typically signifies a failure of all safety systems, and sometimes results in bodily injury, damage to property, or loss of life.

A call comes in for an incident involving a ride at the County Fair and little detail is known at this time. What are you thinking? Below are a few things to think about to ease the pressure.

1. Attempt to get as much information as possible while responding. Will this event need more specialized resources? Examples would be a High Angle Rescue Team, more Medical units or an aerial
2. With this type of event think about staffing to control crowds by either requesting additional Fire Department or Law Enforcement. This will directly impact how quickly crews will be able to start mitigating the incident.
3. Upon arrival start the scene size up and request the lead mechanic, supervisor as this person has the most knowledge of the ride. This person understands how the rides operate and may give recommendations to mitigate.
4. The first thing to do is Lock Out/ Tag Out the machine to insure all electricity, pneumatics or any other type of energy source

are controlled. Make sure to leave someone at that location.

5. Look for locations for a landing site if required for patients
6. Remember this incident will be investigated so only change the scene as necessary. Prepare the crew to be interviewed once the incident is completed while the investigation is conducted.
7. This incident will most likely trigger a large media presence. This will require coordination with owner to establish a location for them.

Most injuries from rides occur from riders falling out of rides, pinned between moving parts, back injuries from being whipped around. A recent event occurred in April 2022 in Florida when a worker was pinned while attempting to retrieve an item. The ride shifted pinning the worker between rails. The workers eventually made a recovery with moderate injuries.

If time allows before an incident occurs visit the carnival site and meet the management team so some of this may be coordinated ahead of time. Because of the regulation a number of carnival companies are aware of the liability and are willing to speak with responders ahead of time reducing the negative impact when an incident occurs. There is a page on face book if interested titled Amusement Ride Accidents. Remember an incident at a carnival or amusement park will bring press. It is up to each of us to make our agency look professional.

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The number of fallen
firefighters through
June 30, 2022.

US Fire Administration

NATIONAL
SUICIDE
PREVENTION
LIFELINE
1-800-273-TALK (8255)
suicidepreventionlifeline.org