

This Month's Working Fire...

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Volume 06-8: August 2006
Approx. Program Length 59:53

Fireline Incident Analysis

FIRELINE

Six-Alarm Warehouse Fire **Louisville, KY**

Approx. length: 10:40

A warehouse that had been condemned for needed repairs erupted into a six-alarm response. A spinning gas meter also indicated a possible fuel source for the fire. Firefighters attacked it from all sides and attempted an internal attack from the rear in an attempt to cut it off, but to no avail. Water supply access was a problem, plus accountability and span of control were real challenges with that many responders on scene. High winds produced firebrands that ignited fires in a nearby waste disposal area. Plenty to learn here on incident management. For more information, contact Major Richard Haines, Louisville Division of Fire, 1135 W Jefferson St, Louisville, KY 40203 or call him at (502) 574-3701.

Roofing Company Confined Space Rescue **Bellefonte, DE**

Approx. length: 10:40

A worker at the site of a roofing company fell about 25 feet between two walls lined with rebar or nails protruding into the space. It was a hot day in August. As it turned out, the patient didn't speak English which caused some problems. Four rescue trucks, a ladder truck, a confined space rescue trailer from a volunteer County Special Operations Team responded and coordinated with a similar Special Operations Team from the City of Wilmington. Interesting information on the coordination between the two teams. There were tight quarters in the space and not enough room to get a ladder truck in position as an anchor point so a backhoe was used. The patient was extricated using a 4:1 mechanical advantage and transported. For more information, contact Fire Chief John Willette, Jr., Brandywine Hundred Fire Co., 1006 Brandywine Blvd. Wilmington, DE. 19809 or call him at (302) 764-8767.

HANDS-ON

IRECA, Part II: **High-Angle Rescue Scenario**

Approx. length: 11:28

The International Rescue & Emergency Care Association competition (IRECA) was held in Puyallup, WA this year and we have scenarios from some of the participating teams. In this judged scenario with a 40-minute time limit, we watch a team deal with raising a patient from a confined space between two tanks. The team couldn't quite finish the scenario within the time limit. For more information, contact Randy Tanner, IRECA President, at 281-421-6606 or email him at tannerc@cpchem.com.

Fireline Incident Analysis

TERC, Part I: Vehicle Extrication Car-on-Car Scenario

Approx. length: 9:55

The Transportation Emergency Rescue Committee (TERC) also held one of their regional competitions with the International Rescue & Emergency Care Competition (IRECA) held in Puyallup, WA This month we feature one of the teams competing in a limited class (no hydraulic tools and a live patient) scenario: a car pushed up against a Jersey barrier with another vehicle half up on its back, with its right-side wheels on the ground. As with IRECA, these scenarios are judged by various criteria and have a time limit; this one was 40 minutes. For more information, contact Event Coordinator Brice Johnston at 253-732-3046 or go to the TERC web site: <http://www.terc.org/>.

FIRE MEDICS

IRECA, Part II: Advanced Life Support (ALS) Cardiac Shock Scenario

Approx. length: 10:04

We return to the IRECA competition outside Seattle, WA for the ALS competition and follow one of the teams that qualified from Virginia. In this judged scenario, a worker has fallen from a ladder. He's unconscious and has injuries from concrete rebar which has pierced his mouth and stomach. He also has cardiac issues with a very high heart rate and very low blood pressure. For more information, contact Randy Tanner, IRECA President, at 281-421-6606 or email him at tannerc@cpchem.com.

EVOLUTIONS 2000

Kramer vs. Kramer: Accountability Systems at Large Incidents

Approx. length: 2:19

Working Fire Training and Professor/Chief (RET.) Bill Kramer presents our Continuing Education segment that's worth one credit from the University of Cincinnati. This month's Fireline warehouse fire presented some challenges regarding accountability and span of control. Bill discusses whether it's a good idea or not to allow responders to enter a fire scene from multiple entry points. For more information, contact Bill at the Open Learning Fire Service Program, College of Applied Science, 2220 Victory Parkway, ML #103, Cincinnati, Ohio 45206 or call 513-556-6583.

Fireline Incident Analysis

Disclaimer

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Fireline Analysis

Six-Alarm Warehouse Fire Louisville, KY

Training Outline

I. Dispatch

1. A box alarm in Louisville brings two truck companies and three engine companies, plus a district chief on an initial response. The second alarm is a repeat of the first alarm.
2. First-alarm teams were already dispatched to another location, so second-alarm teams were dispatched almost immediately to the warehouse fire, knowing the first alarm teams would respond upon finishing at the other location.
3. IC elected to keep both alarms coming, based on the venue.

II. Size-up

1. The first engine on scene responded in about three minutes and reported a vacant, single-story warehouse with fire through the roof.
2. Responders found a single-story portion of the warehouse heavily involved, extending back a couple of hundred yards to a three-story section.
3. IC knew the location and had the engine lay off and begin pumping to a siamese on scene. This maneuver didn't pan out.
4. Upon arrival, firefighters found a gas meter spinning out of control, indicating a broken or ruptured gas line which was probably what was fueling the fire so vigorously.
 - a. No speculation was made as to whether the break in the line might have happened before the fire.

III. Events

1. The structure had been inspected a few months earlier and had some structural damage from heavy snows that had collapsed portions of the roof.
 - a. At the time of the fire, the building was slated for demolition because of that damage.
2. One of the biggest problems was water supply, partly because of the location of railroad tracks which made it hard to reach.
 - a. The water supply in that area was practically tapped out due to the demand for water to fight this fire.
3. The biggest problem was a lack of water supply at this incident, partly because of many railroad tracks on the east side of the complex.
 - a. Train traffic was eventually stopped on those tracks.
 - b. The water supply was taxed nearly to its maximum and there just wasn't enough in the rear for a structure and fire of that size.
 - c. The fire load of the structure itself -- no real contents involved here -- was immense.
4. Because of the strong wind as the fire progressed, fire brands, or flying embers driven by the wind, traveled several blocks to a waste disposal area, setting several garbage trucks and plastic containers on fire.

Fireline Analysis

Six-Alarm Warehouse Fire Louisville, KY

Training Outline

IV. Strategy/Tactics

1. Because of the sheer mass of the building and the ground it covered, there were a number of logistical problems related to deployment and operations.
2. Major Haines assumed command upon arrival and a Division 3 leader (Side 3) was appointed in the rear.
 - a. The Assistant Chief for Operations that day arrived and command was transferred to him.
3. Major Haines moved over to Operations on the front side (Side 1) and later moved to the 1-4 corner, as there was another viable business structure adjacent to and beyond Side 4 (west side) with an exposure that needed protection.
4. The initial strategy was to pour water on the structure from the outside in the front, with no one entering, to see how much they could knock down.
5. Most companies were positioned in the rear of the structure. A separate division (Division 3) was set up to fight the fire in the rear.
 - a. The wind drove the fire away from the #1 side toward those companies, driving the smoke down on them which became a problem.
 - b. Firefighters had to go on air, even though it was an outside operation.
 - c. New air bottle supplies had to be brought in as personnel started exhausting their bottles.
6. In the rear, as there was no fire extending into that part of the building, Division 3 elected to enter the three-story section of the building which wasn't on fire at the time and try to make a stand inside before the fire got there.
 - a. This was unsuccessful and the fire did reach the three-story section. Consequently, apparatus had to be removed from that area in the rear.
7. Deploying the alarm responses as crews arrived was really no problem.
 - a. The first two alarms arrived nearly at the same time and they had positions and assignments set up for the third alarm upon that crew's arrival.
 - b. The fourth alarm was staged a little north of the property and was the only one that was staged.
 - c. As most of the perimeter was covered by apparatus, the additional alarms (5 and 6) either supplied both apparatus and manpower, but it was mostly rotated manpower that was used.
8. Rehab was established with medical recon but mostly it was for restoration of fluids. EMS was on scene but only one injury was reported, a strained back.
9. Backfill of city station houses was provided by neighboring departments, but because so many apparatus were used on this fire, not all station houses had reserve apparatus. Also, all off-duty personnel were called in to help fight this fire.

Fireline Analysis

Six-Alarm Warehouse Fire Louisville, KY

Training Outline

V. Accountability

1. On Side 1 (north side) where the command post was established, they set up a Level 1 RIT so that no one was allowed inside.
 - a. An Accountability Officer was appointed on that side of the building and ran accountability on sides 2 and 4 as well; this was adjusted later.
2. In the rear, the Division 3 leader appointed an Accountability Officer and a Level 2 RIT since they actually made entry to the building for awhile.
3. Major Haines later moved to Side 4 of the building, and with another district chief, handled the 3-4 side, as well as provided accountability for responders on the roofs of other buildings.
4. Regarding span of control, being split into divisions meant accountability was handled on all sides of the building which made keeping track of people a lot easier.
 - a. Fighting the fire mostly from the outside also made accountability easier. RIT tags and passports were used.

VI. Remarks

1. Ultimately, the fire went to six alarms, 26 companies, 150 firefighters present, plus additional support agencies.
2. At the time of production of this segment, no conclusion had made as to the cause of the fire.
 - a. An arson investigation was begun but so far, no results have been made public.

VII. Lessons Learned

1. Preplanning and recent inspections had identified this building as being a hazardous structure, to the point where court-ordered demolition was imminent.
2. This served notice to responders as to what they had going in.
3. Without this information, personnel might have been committed to the inside of this building unnecessarily, endangering lives.

Fireline Analysis

Roof Company Confined Space Rescue Bellefonte, DE

Training Outline

I. Dispatch/Response

1. A worker at the site of a roofing company fell about 25 feet between two walls lined with rebar or nails protruding into the space.
2. It was a hot day in August.
3. Four rescues trucks, a ladder truck, and a confined space rescue trailer responded from the volunteer County Special Operations Team. Sixty people are on the team, 25 are very active; 15 were at this response.
4. The City of Wilmington Special Operations team also responded prior to the County volunteer team, with a ladder truck and an engine company as well via mutual aid.

II. Size-up

1. Some first-in EMS responders and paramedics were already in the confined space, rendering medical care.
2. As it turned out, the patient didn't speak English.
3. The County Special Ops Team Coordinator met up with the Incident Commander of the first-in fire company.
4. A plan of action was established.

III. Strategy/Tactics:

1. The City Special Ops Team began to provide support such as cutting rebar, building a mechanical advantage, putting a ventilation fan into service for the space, etc., prior to the arrival of the County team.
2. A SKED stretcher was lowered down, but they had difficulty with the area; lots of mud and some safety issues with using the SKED due to a lack of maneuvering room.
 - a. After the patient was immobilized on a backboard, he was moved to a larger space where the confined space stretcher was used.
3. Due to the inaccessibility of the area and unevenness of the terrain, a ladder truck couldn't be moved in to provide an anchor point.
 - a. Instead, a backhoe was used, from which a 4:1 mechanical advantage and a belay line was rigged.
 - b. Once a safety check was made in the space, the patient was lifted out and moved to a stretcher.

IV. Events

1. By the time the County team arrived, crew rotation was necessary and original crews were rehabbed.

V. Remarks

1. Since the County team doesn't train a lot with the City team, there was a difference in procedures and methods.

Fireline Analysis

Roof Company Confined Space Rescue Bellefonte, DE

Training Outline

2. There were a few accountability issues as well, including the handling of entry control points and the numbers of rescuers on scene.
3. This may have been a delayed alarm because it looked as if some of the contractors' employees were covered with mud, trying to effect their own rescue. Then they realized they didn't have the proper equipment to do it themselves.

VI. Lessons Learned

1. County Ambulance District employees are not trained to a special operations level, so trained technicians had to be in the space with paramedics. That's an area for improvement.
2. Another issue was a language barrier problem as the Hispanic patient spoke no English and no one on the team spoke Spanish. There are Spanish-speaking members on the City fire and police departments and one of them should have been brought to the scene as an interpreter.
3. The County team should train with other resources like the City fire department to develop coordination between both and to develop familiarity with their tools and methods.

Fireline Analysis

Discussion Questions

Training Outline

From the Departments Involved...

DISCUSSION QUESTIONS FOR THIS MONTH'S INCIDENTS

The departments involved in this month's incidents pose some discussion questions and situations that you can use as discussion-starters in your own department's training sessions.

Six-Alarm Warehouse Fire / Louisville, KY **Major Richard Haines, Louisville (KY) Division of Fire**

1. Knowing this industrial site through preplanning and previous visits really helped us in knowing what to expect and anticipate upon arrival. Be sure you do inspections of all industrial sites in your jurisdiction, especially "problem children" with building citations as this one had.
2. On a large incident such as this with plenty of resources coming, have a plan for resource utilization; either a place for apparatus and manpower to fight the fire or a place in staging, but be ready to send them somewhere.
3. Because of the size of the fire and the building complex, multiple points of access to the fire scene worked for us, though thorough accountability at all entry points must be in place. One point of entry is easier to control. (See *this month's Kramer vs. Kramer in Evolutions 2000*).

Roofing Company Confined Space Rescue / Bellefonte, DE **Ops Coord. John Wilson, New Castle County Special Operations Team**

1. Being a volunteer unit, our Special Ops team takes a little time to queue up enough manpower for arrival. Having competent first-in crews or a staffed paid rescue team who can arrive earlier is a big help. Try to work out these systems in advance and mutually train with these units.
2. Often, low-paid (and sometimes poorly trained) immigrants are the ones who end up needing to be rescued. Can you communicate with them? Are you prepared for rescuing non-English speaking people, if your area has ethnic populations?
3. If you have a separate jurisdictional ambulance service, do these EMS personnel get the specialized training necessary to integrate with special operations units such as heavy rescue? You'll often need paramedics in the space prior to extraction so training of these personnel is essential. It's something we're working on.

Hands-On Training

IRECA, Part II: High-Angle Rescue Scenario

Objectives/Outcomes

After watching this segment, the student shall:

1. observe the rigging of two lifts at the same time.
2. see the coordination between members of a championship-quality rescue team.

Codes, Standards and Regulations

This training is consistent with NFPA 1670 & 1006;
OSHA CFR 1910.146

Training Outline

(IRECA is the International Rescue & Emergency Care Association)

I. PRE-BRIEFING

A. Team/Scenario Information

Team: Weslaco Plant
Location: Microchip Plant Facility
Scenario: Worker Trapped Aloft
Time Limit: 40 minutes

B. Rules

1. The scenario will be judged. Team members may ask for clarification of the scenario from the judges as it proceeds.
2. The commander (or "Captain" with this team) will report decisions and actions taken if they can't be demonstrated. This includes the simulation of certain actions.
3. The commander will call "time" upon completion of the scenario.

C. Scenario to be addressed

1. A tank inspector has slipped and fallen at this industrial facility.
2. The team must:
 - a. raise the patient horizontally to the platform
 - b. then lower the patient horizontally to the ground, and
 - c. finally deliver the patient to the first aid station.

Hands-On Training

IRECA, Part II: High-Angle Rescue Scenario

Training Outline

II. SCENARIO BEGINS

The team receives its scenario assignment and team members are assigned duties.

A. Scene Size-up

1. The team enters the area and does a size-up on the patient's location and his status and looks for possible rigging points.

B. Initial Patient Contact

1. A paramedic is assigned to assess the patient from above and render psychological support while rigging is being set up.

II. RESCUE EXECUTION

A. Patient Assessment/Preparation

1. The team rope bag was hauled to the upper level where a rigging system was established.
2. Webbing was attached to a welded steel railing on an upper catwalk.
3. With rigging ready, the paramedic is lowered by harness to the patient.
 - a. Where possible, also employ a belay safety line.
 - b. The paramedic does a hands-on assessment of patient.
4. A second rescuer is lowered down to assist the paramedic.
5. A Stokes basket is lowered into the space.
6. The patient is packaged and diamond-lashed into the Stokes.
7. The Stokes is moved over to a point more directly below the haul rig.

B. Patient Rescue

1. Above, the haul team resets the rigging.
 - a. They have a bit of a problem finding a sufficient rigging point that's strong enough, causing a delay.
 - b. Bolt-together handrails are generally not considered safe to use; the welded handrails are safer, yet still not "bomb-proof"
 - c. Be very careful when picking one for an anchor point and test it thoroughly before use. Getting experience with industrial materials and construction will determine which choices are best.
2. The team conducts a three-person test of the anchor point. That's a good idea and reassures the team leader that a single person can be lifted successfully.

Hands-On Training

IRECA, Part II: High-Angle Rescue Scenario

Training Outline

3. Final rigging was done by a piggyback haul system with a redirect of about 90 degrees, with about a 15-foot stroke.
 - a. The team hangs an anchor strap with a carabiner and a rescue ascender/progress-capture device over the edge.
 - b. Putting the rescue ascender over the edge helps get it out of the way and works well on a catwalk where space is a premium.
4. Using a pre-cut piece of rope, the team hand-ties a lifting bridle to the haul line which they can send down to attach to the Stokes basket.
 - a. There is good communications between crew members as commands given are acknowledged.
5. The four-point lifting bridle is attached to the Stokes.
 - a. Always attach the haul line and safety line well over the center of the torso of the body to get good weight distribution and center of gravity, resulting in a good "head-up" position of the Stokes.
6. The main haul line is a piggyback 4:1 mechanical advantage handled by one responder.
 - a. By hanging the progress-capture system over the edge of the guardrail, it results in virtually no drop of the Stokes when the system is paused for a reset.
 - b. The way the piggyback is rigged, they're getting about 12-15 feet of stroke per lift.
7. Having finished the raise, the rescuers then transfer the system so it can be used for a lower over the handrail.
 - a. Rather than grabbing and pulling up, they've reset the piggyback short so they can use the mechanical advantage to lower the load.
 - b. The safety line uses a Munter hitch coming off the far side of the handrail which provides the friction function during the raise and the lower.
8. As the Stokes descends, it's a good idea to call out increments so the haul team knows how far they have to go before the load has to reach its landing; when it does, call for slack.
 - a. SAFETY POINT: Provide eye protection for the patient during the process, if possible.
9. The rescuers are hauled up on the same system, main line and safety line.
 - a. First rescuer in is the last one out.
 - b. They are hauled up to the haul system level, but can assist by being able to climb over the handrail. It's much more difficult doing that with a Stokes.
10. Before the Stokes could be lowered to ground level which was part of the scenario, time was called.

Hands-On Training

IRECA, Part II: High-Angle Rescue Scenario

Training Outline

III. SCENARIO WRAP-UP

A. Patient Care/Scenario Conclusion

1. Following the Stokes landing on the upper level, the patient was reassessed.
2. Had time not expired, the patient would have been lowered to ground level, reassessed again, and transported to the first-aid station.
3. The log would have been presented to the judge with the final report. This would have concluded the scenario.

B. Post-Analysis

Arnold Pena, Lead Instructor, American Emergency Response Training:

1. This haul system seemed to generate nearly two-thirds of the lift with one stroke of the system, so one reset should get the lift done.
2. Suggestion to Haul Team: Try to stand in one place while hauling the line hand-over-hand, rather than walking the load. This helps avoid trip hazards.
3. The high point rigging worked out well, so the Stokes only has to be lifted to a lower level, rather than all the way up and over the handrail at the rigging system level; that would make handling the Stokes very difficult.
4. Ideally, build and attach the haul system in a location where:
 - a. the haul team is out of the way
 - b. rope lengths and space are sufficient so that a reset does not have to be done.

Answers to the quiz on page 14:

1. True
2. True
3. False
4. e.
5. c.

Hands-On Training

IRECA, Part II: High-Angle Rescue Scenario

Training Outline: Quiz

Date _____

Chief / T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: When working with a partner to rescue a patient, division of labor is very important.
2. True or False: This may vary by department SOG, but in general, a belay line is not mandatory when rigging a lift -- but it is advisable.
3. True or False: Items like lifting bridles can never be pre-built.
4. Which of the following might determine what kind of rigging you might use in a high-angle rescue?
 - a. Manpower available
 - b. Weight of lift
 - c. Amount of rope available
 - d. Choice of anchor point
 - e. All of the above
 - f. None of the above
5. Which of the following could **not** be used in a high-angle rescue?
 - a. Sked stretcher
 - b. Stokes basket
 - c. Spill containment boom
 - d. Harness
 - e. Webbing
 - f. All of the above

(Answers can be found at the bottom of page 13.)

Hands-On Training

TERC, Part I: Vehicle Extrication Car-on-Car Scenario

Objectives/Outcomes

After watching this segment, the student shall:

1. observe a rescue performed without using hydraulic tools
2. learn the considerations of the incident commander which change depending upon the needs of the scenario.

Codes, Standards and Regulations

This training is consistent with NFPA 1670 and 1006 and appropriate OSHA codes and standards.

Training Outline

(TERC is the Transportation Emergency Resource Committee)

I. PRE-BRIEFING

A. Team/Scenario Information

Team: Lakewood Fire Department, Lakewood, WA

Location: Best Western Hotel, Puyallup, WA

Scenario: Auto on top of auto with patient in bottom car.

Time Limit: 40 minutes, Limited Scenario (no hydraulic tools and live patient)

B. Rules

1. The scenario will be judged.
2. The commander will call "time" upon completion of the scenario.

C. Scenario to be addressed

1. A car has crashed sideways up against the Jersey barrier with a second car which has climbed up on the back and roof of the first car.
2. There is a patient in the bottom car who is to be extricated.

II. SCENARIO BEGINS

The team receives its scenario assignment and team members are assigned duties.

Hands-On Training

TERC, Part I: Vehicle Extrication Car-on-Car Scenario

Training Outline

A. Scene Size-up

1. The team arrives on scene, does an inner and outer circle size-up, prior to formulating a Plan A and Plan B.
2. The car underneath will have to be stabilized against the Jersey barrier.

B. Initial Patient Contact

1. A Paramedic interacts with the patient to make sure he is awake, alert, and oriented.
 - a. One suggestion: in such an incident, if manpower is available, consider appointing a helper for the paramedic, so the helper can stay with the patient, freeing up the paramedic to make primary and secondary surveys of the scene.

II. RESCUE EXECUTION

A. Stabilization

1. Stabilization of both vehicles begins. Cribbing was used with the vehicle up against the barrier and a rescue jack was used to stabilize the top car, wedging it from the sill above the windows to the ground.
2. A REMINDER TO RESPONDERS: Never kneel with both knees down! Always keep one knee up so, with one foot on the ground, you can move or back away quickly if the vehicles should shift!

B. Incident Commander Responsibilities

1. The Incident Commander must perform multiple tasks on-scene. He must:
 - a. ensure vehicle security and stabilization.
 - b. oversee scene safety for the patient and the responders by working with a Safety Officer
 - c. develop Plans A & B for executing the extrication
 - d. anticipate the needs of his team making sure resources are available.

C. Extrication Plan

1. In this incident, Plan A was a roof flap using a come-along. Here are the steps:
2. Remove the windshield and rear window.
 - a. SAFETY POINT: Be careful when removing glass not to clear it away with your hands. Use a tool or a brush to do that.
3. Cut the "A" post.
4. Cut the "B" post last.
5. Use the come-along to slowly crank the roof up and off the vehicle.
6. Remove the patient.

Hands-On Training

TERC, Part I: Vehicle Extrication Car-on-Car Scenario

Training Outline

IV. POST-RESCUE PATIENT CARE

Time was finally called with the patient about to be removed and transported.

V. SCENARIO WRAP-UP

A. Post-Analysis

1. Always keep the work area clear of tools and clutter.
 - a. Encourage team members to carry tools a reasonable distance away before they are set down to avoid a trip and/or fall hazard.
 - b. This is also part of the Safety Officer's responsibility.
2. When the roof is removed, check for sharp edges or metal stumps remaining.
 - a. Cover these hazards with padding before the patient is removed.

Answers to the quiz on page 18:

1. False 2. True 3. True 4. b. 5. a.

Hands-On Training

TERC, Part I: Vehicle Extrication Car-on-Car Scenario

Training Outline: Quiz

Date _____

Chief / T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: During a vehicle extrication, fire safety concerns are a little unnecessary since nothing is going to catch fire.
2. True or False: Wearing eye protection and PPE during glass removal is essential.
3. True or False: Vehicle extrications are often comprised of two efforts at once: patient stabilization and patient removal.
4. Not being able to use hydraulic tools during an extrication means you have to become proficient with:
 - a. spreaders
 - b. winches and jacks
 - c. rams
 - d. cutters
 - e. None of the above
5. In stabilizing a vehicle, which tool would you **not** use?
 - a. Crib sheet
 - b. Cribbing
 - c. Chocks
 - d. Air bags
 - e. None of the above

(Answers can be found at the bottom of page 17.)

Fire Medics

IRECA, Part II: ALS Cardiac Shock Scenario

Objectives/Outcomes

After watching this segment, the student shall understand:

1. the issues involved in rendering care at a construction site accident
2. the importance of trying to learn if the patient's problems caused the accident or were caused by the accident.

Standards and Regulations

U.S. Department of Transportation, State Departments of Health and/or EMS, and other local bodies such as Regional Medical Advisory Committees.
Usual Advanced Life Support protocols.

Training Outline

(IRECA is the International Rescue & Emergency Care Association)

I. PRE-BRIEFING

A. Team/Scenario Information

Team: Virginia Beach (VA) Volunteer Rescue Squad

Location: Simulated construction scene

Scenario: A worker falls from a ladder; he's unconscious with injuries .

Time Limit: 20 minutes

B. Rules

1. The scenario will be judged. Team members may ask for clarification of the scenario from the judges as it proceeds.
2. Team members will report decisions and actions taken if they can't be demonstrated. This includes the simulation of certain actions.
3. The team leader will call "time" upon completion of the scenario.

II. SCENARIO BEGINS

A. Initial Patient Assessment/Scene Safety

1. A worker has fallen off a ladder at a construction site.
2. Scene safety and patient assessment are begun simultaneously.
3. He is found face-down and is unresponsive when paramedics arrive.
4. He also sustained some injuries, with concrete rebar having punctured his cheek and stomach.

Fire Medics

IRECA, Part II: ALS Cardiac Shock Scenario

Training Outline

4. His pulse rate is extremely high and blood pressure is low.
5. Further inspection reveals rebar has punctured his mouth through the cheek and his stomach.

III. SCENARIO TREATMENT

A. Injured Patient Care

1. The patient is rolled over on to his back.
2. Paramedics attempt to bag the patient, but the rebar in the mouth area is preventing a good seal around the mask.
3. The EMS team continues to monitor vital signs.
 - a. Symptoms of shock are in evidence.
 - b. The patient is finally intubated to insure breathing.
4. An IV is started with adenosine, which in patients suspected of supraventricular tachycardia (SVT), can be used to help identify the rhythm.
 - a. Certain SVTs can be successfully terminated with adenosine.
 - b. Amiodarone was also added as it can greatly help patients with supraventricular and ventricular arrhythmias.

B. Patient Transport

1. While preparing the patient for transport, another worker who knows the patient is found.
2. He explained the accident as he saw it.
 - a. The patient "didn't feel good" and then collapsed.
 - b. The other worker didn't know if the patient had eaten or not
 - c. He didn't know if the patient was allergic to anything or if he used drugs. He didn't think he used drugs.
3. The patient is transported and reassessed again for vitals:
 - a. Blood pressure was extremely low (60 by palpation).
 - b. Heart rate was 170 by heart monitor.
4. The patient was also treated for cardiac shock.
 - a. Dopamine was added to the IV and his legs were elevated.
5. The team notifies receiving hospital of incoming patient, supplying all vitals and incident details.
6. A glucose reading is also taken en route.

Fire Medics

IRECA, Part II: ALS Cardiac Shock Scenario

Training Outline

IV. SCENARIO WRAP-UP

A. Scenario Conclusion

1. Final report made to judge.
2. Time was called.

B. Post-Analysis

1. Questions dealing with whether or not the un responsive patient was allergic, was feeling well or not, or had eaten anything recently prior to the accident will help paramedics determine whether or not his current condition was the result of the fall or existed prior to the fall.
2. In the latter case, caregivers may be treating for one set of symptoms while another underlying cause may be present, but not known.
3. In this incident, regardless of the cause, paramedics diagnosed a cardiac shock problem with a possible arrhythmia issue and selected meds that would attempt to regulate the heartbeat and assist the pumping action of the heart.
4. It could be argued that the glucose reading taken during transports could have been taken earlier in the treatment.

Answers to the quiz on page 22:

1. True
2. False
3. False
4. b.
5. d.

(A case might be made for 5 C., improving the patient's condition, but that might be unrealistic under most conditions. Try not to reach too far in your treatment. Stabilization is an excellent goal.)

Fire Medics

IRECA, Part II: ALS Cardiac Shock Scenario

Training Outline: Quiz

Date _____

Chief/T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: Acquiring knowledge about the patient from co-workers or bystanders is extremely helpful for possible diagnoses.
2. True or False: However, never listen to these people as there is always a substantial risk that someone who doesn't like the patient will give you false or misleading information.
3. True or False: How far the patient has fallen may be the most relevant information you can learn.
4. In a case such as this, with a bleeding injury and a suspected cardiac problem, which would you most likely deal with first?
 - a. The injury because the patient may bleed to death
 - b. The cardiac problem because the patient may stop breathing
 - c. The patient is unconscious; that has to be dealt with first.
 - d. The patient has fallen and may have a spinal injury which makes turning him over to bag or intubate him very dangerous.
 - e. Don't treat him at all because of the above. Just transport him as is.
5. With a range of medicines at your disposal, you pick the one that will give you the best chance to:
 - a. cure the patient
 - b. keep the patient from dying
 - c. improve the patient's condition
 - d. stabilize the patient.
 - e. None of the above

(Answers can be found at the bottom of page 21.)

Evolutions 2000

University of Cincinnati Continuing Education Program

Kramer vs. Kramer

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VOLUME 06-8

Accountability Systems at Large Incidents

Complete written responses to the following three essay questions:

1. At large commercial fires should accountability be centralized or divided into geographical sectors, such as at building sides?
2. List the advantages of both systems and explain the reason for your choice.
3. Describe a large recent fire with which you are familiar and provide a critique of the accountability system including any areas needing improvement.

Submit your responses to:

**Mr. Bill Kramer, Ph. D.
University of Cincinnati
College of Applied Science
2220 Victory Parkway, ML #103
Cincinnati, OH 45206**

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