NFPA® 1410 Drill 3: Two Engine Forward Lay

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Objectives

After successfully completing this course, you will be able to:

- ✓ describe the work flow of this evolution
- ✓ illustrate evolution tactics
- ✓ apply the timing needs to achieve a successful evolution with practice
- ✓ function effectively within the company, while meeting the expected national standard for this evolution

Introduction (Video)

1410 Basics

The 1410 evolutions measure the initial capability and the effective operation of a department's first response personnel through the assessment of the responding company. Hose loads are those used by your jurisdiction; they are supplied through pre-connection, gated wye, or a hydranted connection. Water flow is dictated in each scenario by source and hoseline. Two firefighters shall be the evolution minimum for hoseline control on interior attack lines.[1]

Where evolutions are conducted, if not held within a controlled fire training center, due consideration shall be given to both pedestrian and vehicular traffic safety. The evolutions will be held in an area that is large enough to properly lay supply, initial attack, and backup lines connected from the water source to the pumper. The hose lay distance is identified in each scenario for supply, attack, and backup handlines. In all atmospheres that are considered immediately dangerous to life and health (IDLH), SCBA shall be worn by all firefighters, and driver/engineer personnel shall comply with requirements contained within NFPA® standard 1500.[1] For the purposes of these scenarios, firefighters will simulate an IDLH environment and wear the appropriate gear to include SCBA, however, participants do not need to be on air.

The responding units to these scenarios shall be consistent with the number of units that are typically assigned to an alarm within a given response area. There is a required delay of thirty seconds between arriving companies. Water supply shall be hydranted through a drafting location or from a water supply apparatus. Nozzles shall be those used by the jurisdiction. Communications shall be both an evaluated element and a focal priority on the scene of each evolution.[1]

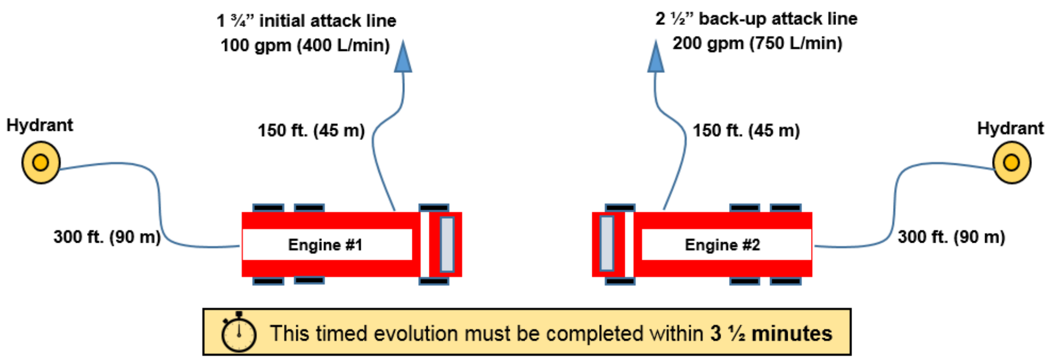
To meet the goals for an effective stream, the attack lines shall have a combined water pressure of at least 300 gallons per minute (gpm). The initial attack line shall have a pressure of at least 100 gpm if a spray nozzle is used, or 50 gpm if a solid bore nozzle is used. The backup line shall have a pressure of 200 gpm. The initial supply line must be laid a minimum of 300 ft. from the water source to the pumper. The initial attack line must be laid a minimum of 150 ft. toward the simulated fire area. In any instance where water supply to an engine is compromised or not attained, that error will be defined as a serious deficiency by the rater.[1]

During structural firefighting, the standard states that when two firefighters are engaged in firefighting on the inside, there will be a minimum of two on the outside. The outside staged group of firefighters are identified as the Rapid Intervention Crew (RIC) members whose responsibility is to aid those firefighters engaged in any structural firefighting operation who are in duress.[1]

The ultimate purpose of these scenarios is to test the ability of a fire service to meet basic, yet essential, evolutions. In the end, the evolution, through a standardized mechanism, evaluates the ability of the crews to put in place water flows through defined (standardized) nozzles, from a hydrant (or other standardized water source) meeting the minimum, basic requirements (standardized) of the evolution within a specified, shared timeframe. For this scenario, timing will begin when the first arriving engine stops at the hydrant.

Scenario Three – The Synopsis

In this third NFPA® 1410 scenario, the goal is that the first two arriving engines will each make a 300 ft. forward supply line hose lay that is connected to a permanent, hydranted water source and then advanced 300 ft. to the fireground. Once at the simulated fire scene, the firefighters on each engine must advance a primary or backup attack line 150 ft. from the pumper to the simulated fire area prior to charging them. In this evolution, the first arriving engine will pull the 1 ¾" attack line and the second due will stretch the 2 ½" backup attack line. In the case of a simultaneous arrival, those hose loads will be pulled by engine one and two respectively.



From a timing standpoint the entire evolution must be completed in three and a half minutes or less. The timing begins by the evaluator upon the arrival of the first engine at the hydrant and ends when each pumper is connected to a charged supply line of adequate pressure, and the attack lines are flowing an effective stream with the required gpm for each line. The 1 ¾" attack line will be charged to 100 gpm and the 2 ½" attack line will be charged to 200 gpm.

The maximum time of three and a half minutes may not be achieved on the first attempt but is reasonably attained with practice. As a note, the attack lines may not be charged until such time that the supply lines are fully connected, charged, and the engine is water-supplied.[1]

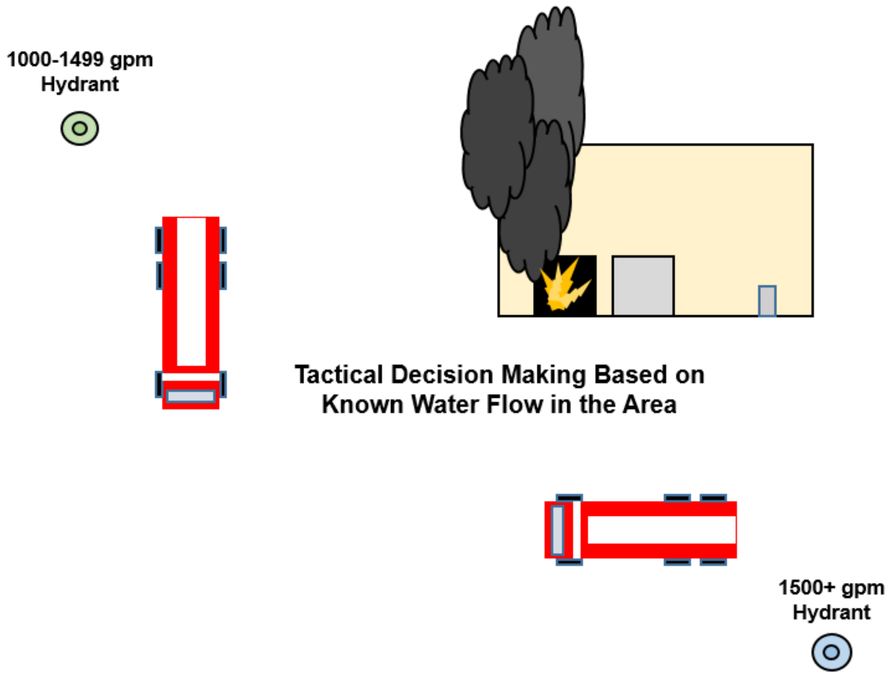
How the Evolution in the Scenario Presents in the Real World

Hydrant Top Color Codes (NFPA 291)

BLUE	1500 GPM or more	Very good flows
GREEN	1000-1499 GPM	Good for residential areas
ORANGE	500-999 GPM	Marginally adequate
RED	Below 500 GPM	Inadequate

The first company arriving at a working fire has to make some mission-critical decisions that may well impact lives and property. A permanent water source must be quickly established or the minimal amounts of water carried in the pumper's booster tank will be rapidly depleted in a few minutes; big volumes of fire require big amounts of water. As the first due engine nears the scene, the company officer has some important decisions to make: one of the first is whether to lay in or instead proceed directly to the fireground and begin a fast attack on the fire.

The decision to not catch the plug and instead defer to the next due engine may be standard operating procedure (SOP) or situationally driven. However, some basic questions will drive this decision in many instances. Questions such as, where is the second due engine and how much water is likely to be needed immediately? Simple mathematics can influence this direction very quickly. A 200 gpm charged 2½" attack line will drain a 750 gallon booster tank in a little more than three minutes. Depending on the jurisdiction and the respective responding standard of cover, this decision may not be that difficult. The decision-making process surrounding water supply tactics needs to be practiced and thought out, if not pre-planned. Water supply issues are all too common in firefighting; running out of water to fight fire can have deadly consequences.

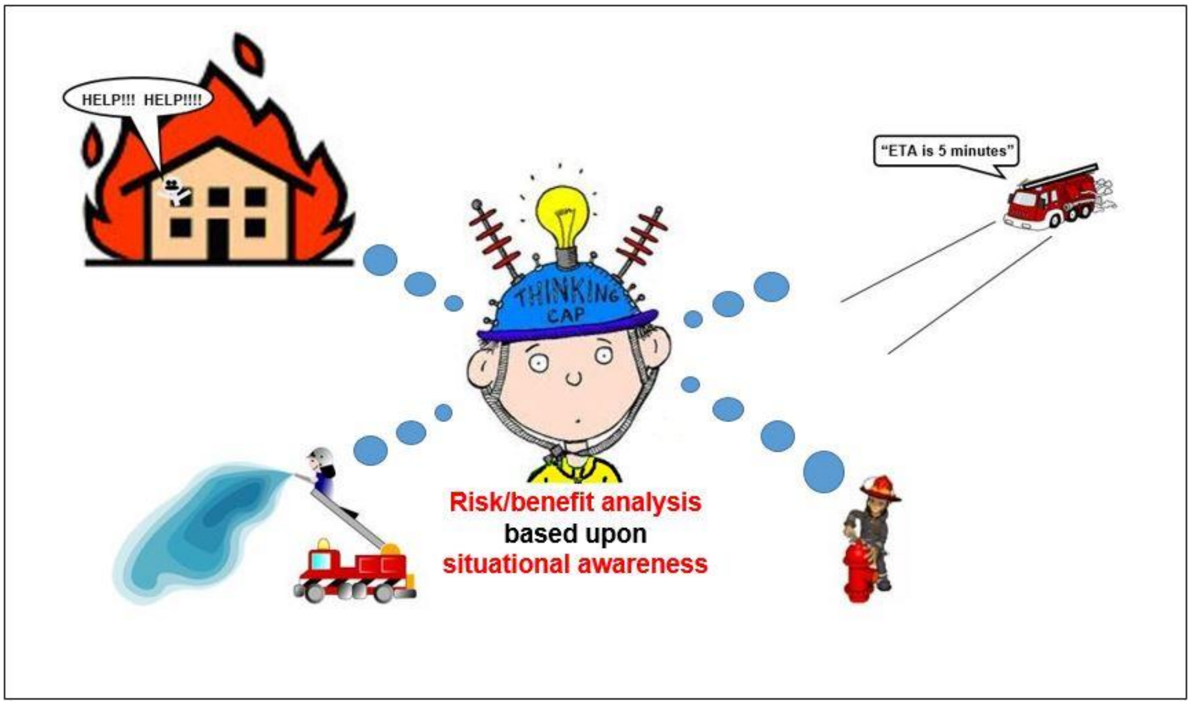


Given a situation with two hydrants nearby, the first due engine company may opt to lay in and ask the second due to also grab the plug and follow suit. This tactical decision may be premised upon an expected or anticipated need for high volumes of water. The known water flow may have bearing on this decision as well, for instance, an orange-top hydrant for one company and a green for the other. Arriving upon a commercial structure with a green-top hydrant to the west and a blue top to the south might also be the decisional catalyst. Grabbing two hydrants increases the water capacity for suppression efforts. The additional water flow allows for the engines to put forth large amounts of water at pressures that are conducive for knocking down a fire. This approach may slow down the initial attack for both companies, but the tactical decision could prove significantly beneficial.

Theory, Tactics, and Reality

Typically, a dedicated water supply is attained through either a forward, reverse, or split lay of the supply line from the pumper to the water source. In this scenario, both of the first due companies will be laying in. Fire in a commercial structure is a solid tactical basis for both companies to secure a water source and lay in.

As mentioned in lessons one and two, there are a multitude of decisions that the company officer must evaluate and contrast with good situational awareness and best practices. We know that in a situation requiring large amounts of water, permanent and reliable water sources are a must. The company officer who reviews those water sources en route to the fireground will take notice and action when two hydrants are within reach and useable for the suppression crews. Doubling the water flow helps to overcome friction losses from hose lays and enhances pump capabilities for the engines involved in combat operations.



In a situation involving an entrapped victim in a fire, the delays associated with the forward lay could very well be detrimental to saving an individual's life. However, the knowledge that in minutes a booster tank will empty and render a company ineffective is something that must be factored. As we have seen, the difficult task of a risk/benefit analysis must be performed by the company officer. The outcome of this rapid analysis may situationally lean toward deferring to a suspected rescue of entrapped occupants vs. capturing the hydrant and laying in, or it may be predicated upon the capture of the fire hydrant to ensure sustainability. Proximity of the next arriving units will be a factor in this equation as well.[2,3]

High Acuity Low Frequency Events (HALFEs)

Where Scene Mistakes Occur and Why

Since 1980, working fires have decreased by two thirds.[4] As we know, the remaining fires are actually more dangerous than ever, so the data can be confusing if one loses perspective. Given the totality of what a modern firefighter responds to, fire calls account for only about 4% of the runs encountered, and working fires account for even fewer runs in that subset.[4] Therefore, if 96% of what a firefighter does is non-firefighting in nature, that makes suppression a low frequency event for most.[4] Given the known and unknown dangers inherent during fire suppression activities, despite the decrease in annual fires, the profession remains one of the most dangerous of all callings.[5]

Low occurrence of frequency events, such as fires, puts pressure on the responding companies to remain functionally ready to respond at all times. This is not a passive happening. Even the most seasoned firefighter requires practice to remain technically sharp and mentally prepared. The mental aspect of firefighting, that from which tactical decisions are made, uses a process known as recognition-primed decision making (RPD). Faced with a fireground task, firefighters, driver/operators, and company officers all rely on what has been ingrained, learned, and seated in mental muscle memory. Thus, when faced with something requiring technical expertise and fast execution, they rely on what has been seen and learned in the past to formulate the answer to a problem or hurdle encountered; this is the basis of RPD.[6]

If a firefighter does not practice these most basic evolutions, the work produced will be less than seamless. Modern suppression activities require expert execution at all levels. The amount of fires has decreased, yet the dangers have gone up markedly, making fireground activities a High Acuity Low Frequency Event (HALFE). HALFEs can quickly turn deadly for inexperienced, untrained, or unaware first responders. The outcomes in a HALFE event are unforgiving when the firefighter is faced with nothing to compare it to in the RPD memory bank of experience.

Evolution number three in the NFPA® 1410 standard is an evolution that has a lot of moving pieces, parts, and roles; each requires technical expertise, practice, and on-going evaluation to become and remain proficient when the time comes to act. Nothing in the business of firefighting is really planned, but the fireground is one of the last places in the world to start practicing. We know that booster tanks will be depleted in mere minutes if they remain unsupplied from a permanent water source. We know that big fires, hot fires, and large flame volumes require substantial amounts of water for suppression. These first due pumpers will quickly lose any forward momentum needed to stop the fire, protect the property and any exposures, or to remain mission relevant if they run out of the ammunition used to knock the fire down.

In evolution number three, the first two due engine companies will make a tactical decision to both catch the plug and lay in, creating a buttressed water supply. The resultant capacity can serve to fortify the needs of the companies involved in suppression activities. Both will lay 300 ft. from the hydrant toward the fireground. Taking the time for both companies to catch the plug and lay in is tactically driven and must factor the benefit to doing so with the expended time to attain the water supply connections.

Knowing Your Role in this 1410 Drill

In the fire service, the company is an integral and basic part of the organization. Within an engine company, there are typically three, and sometimes four, positions: the firefighter, the driver/operator, and the company officer. Each has distinctive roles within this evolution.

For the purposes of the 1410 evolution number three, both of the first two arriving engines are laying in, thus the roles of both companies are almost identical, as follows:

Firefighter

FIREFIGHTER NUMBER 1
Don gear at start of scenario (air not required).
Unbuckle and step off engine safely when it stops at hydrant.
Bring requisite hydrant tools and a radio, if applicable.
Set down gear, grab supply line, wrap hydrant.
Loosen/open hydrant steamer caps.
Open the hydrant valve with wrench to test water flow.
Connect supply lines.
Charge supply lines when command comes from pumper.
Proceed expeditiously toward simulated fire area.

Engine One/Two - Firefighter Number One:

1. Fully don gear, without going on air, at the start of the scenario.
2. Unbuckle and step off engine safely when it stops at the water hydrant.
3. Bring the requisite hydrant tools used by your jurisdiction and a radio, if applicable, with you.
4. Set the gear down, grab the supply line, and wrap the hydrant.
5. Signal or communicate to the driver that it is safe to proceed to the fire.

6. Loosen and open the steamer caps on the fire hydrant.
7. Open the hydrant valve with the hydrant wrench to test the water flow.
8. Connect the supply lines.
9. Charge the supply lines when the command comes from the pumper.
10. Proceed expeditiously toward the simulated fire area.

There may be only ten steps in the first part of this evolution, however, they lay the footpath toward success. Knowing that time is of the essence, firefighters must swiftly yet carefully proceed toward the plug with the hydrant tools in tow. The supply lines, as per the local jurisdictional SOP, must be pulled and wrapped around the hydrant before signaling that it is OK for the engine to proceed onward to the fire. Lastly, firefighters must quickly charge the supply lines once the order is received and then quickly go to the fireground to assist with the remaining portions of the evolution.

Driver/Operator

DRIVER/OPERATOR
Stop engine short of hydrant after receiving order to catch plug and lay forward.
Proceed at safe speed (5 mph) toward simulated scene as supply lines flake from hose bed once the “all clear” has been given.
In a three-man engine, driver will park the engine on scene at fire and place engine in pump gear.
Proceed to hose bed and pull additional segments of hose, as needed.
Apply hose clamp a minimum of 20 ft. behind pumper, if/as applicable.
Connect supply line to pumper.
Remain in contact with firefighter wrapping hydrant, preferably via radio; charge supply lines in concert with connection of lines to pumper intakes.
Assist with remaining needs of evolution, as required.

Engine One/Two - Driver/Operator:

1. After receiving the order to catch the plug to lay forward, stop the engine short of the fire hydrant.
2. Once the firefighter has given the all clear, the engine shall proceed onward to the simulated fire scene, at a safe operating speed, generally five miles per hour, as the supply lines flake out of the hose bed.

3. In the case of a three-man engine, the driver will park the engine after arriving on scene at the fire and place the engine into pump gear.
4. Next, the driver/operator will proceed to the hose bed and pull additional segments of hose out of the bed, as needed.
5. The couplings will be broken and, if needed, a hose clamp will be applied a minimum of 20 ft. behind the pumper, if and as applicable.
6. Next, the supply line will be connected to the pumper.
7. The driver/operator and the firefighter wrapping the hydrant must remain in contact, preferably via radio. Charging of the supply line must be in concert with the connection of the supply lines to the pumper intakes.
8. Once the supply lines are properly connected and charged and the hose clamp is properly removed, if applicable, the driver/operator will turn their attention toward the remaining needs in this evolution. Such needs may be assisting with the stretch of either the initial or backup attack line, depending upon the arrival sequence, or it could simply involve standing by waiting for the call for water.

Stopping short of the hydrant amidst a chaotic atmosphere, such as those encountered when arriving on the scene of a working fire, requires willpower, forethought, and restraint. The natural tendency may be to proceed onward and begin the fight. As previously discussed, that decision may have dire outcomes if the next due pumper is not close enough to establish a permanent water connection.

The initial eight steps for the driver/operator are really clusters of many steps and operations occurring simultaneously. While the company officer makes the initial decisions, they rely on the driver/operator to become the proverbial orchestra conductor, *making things happen*. In this case, ensuring that the supply line connections are properly made and that the fire-hydrant-stationed firefighter is working at a pace that is commensurate with both the needs of the scene and the firefighting team as they are working through the requirements of the given evolution.

Communication, preferably radio, is obviously critical. Once the permanent water source is established, firefighter #1 will be en route to the fire scene. During this period, they will need to assess where the crew is in the evolution. An attack line needs to be pulled 150 ft. to the simulated fire area. Thus, the driver/operator may be assisting the company officer with the initial attack line being stretched, especially if working on a three-man company.

Company Officer

COMPANY OFFICER
Perform scene analysis to determine risk/benefit of wrapping hydrant vs. deferring to next due engine.
For this evolution, first two pumpers will each grab the hydrant. Convey order to the driver/operator.
Monitor progress of hydrant wrapping by firefighter and, once complete, order driver to proceed toward scene (5 mph) as lines flake off hose bed.
In absence of 2nd firefighter, begin the stretch of the initial or back-up attack line depending on your engine (#1 = 1 ¾" line, #2 = 2 ½" line) and advance 150 ft. (*Note: attack lines may not be charged until supply connections are established and engine has a permanent water source.*)
Meet with reviewer for initial analysis results, noting that the 3 ½ minute time limit for evolution begins when engine #1 arrives at the hydrant.

Engine One/Two - Company Officer:

1. Perform a multivariate scene analysis that determines the risk/benefit of wrapping the hydrant vs. deferring to the next due engine.
2. For the purpose of this evolution, the first two pumpers are each grabbing the hydrant. The order is then conveyed to the driver/operator.
3. As the firefighter carefully steps down from the fully stopped engine, the company officer monitors the progress toward wrapping the hydrant. Once the firefighter has the hydrant wrapped and has notified the company officer of same, the order can be given to the driver to proceed forward toward the simulated fire scene, operating at a safe speed of 5 miles per hour, allowing the supply lines to flake off of the hose bed.
4. Once at the scene, the engine company officer, in the absence of a second firefighter, will begin the stretch of either the initial or backup attack line. For this scenario, engine one will be the first unit to arrive on the fireground. The company officer will grab the initial 1 ¾" attack line; the company officer on engine two will pull the 2 ½" backup upon fireground arrival. In both instances, they will be advancing this hose load the 150 ft. needed for this evolution. Neither attack line may be charged until the supply connections are established and the engine is adequately supplied from a permanent water source.
5. The time limit for the evolution is three and a half minutes, beginning upon engine one's arrival at the fire hydrant. Once every milestone has been accomplished, the company officer needs to meet with the reviewer for the initial analysis results.

The situational needs and tactics in scenario three in the 1410 series require that both engines lay in from a hydrant and pull an attack line. Each company has distinctive responsibilities that separate them from the other. Performing a rapid risk/benefit analysis is a primary responsibility of the first due company officer. Knowledge that the booster tank will provide only a few to several minutes of water, lurks in the mental background when making the determination as to whether or not a pumper will grab the plug or defer to a next due engine. The company officer, for this evolution, will order the driver/operator to stop short of the hydrant to capture the permanent water source. The right seat will need to monitor exactly what's happening as the firefighter steps off of the truck with the hydrant gear in hand. Radio communications, as well as the rear view mirror, need to be monitored. Losing track of the firefighters' whereabouts can prove deadly on the fireground.

Arriving on the fire scene, the company officer defaults to their firefighter beginnings. The attack lines need to be deployed 150 ft. for this evolution. Assistance with this task will depend upon where the firefighter is after wrapping the hydrant—either charging the supply line or making their way to the fire scene.

There are multiple variables and multiple personnel actions that must work in concert to achieve the milestones in this evolution. Three and a half minutes passes quickly, and seem to pass even quicker amid an evolution of this type. The decision to make this manner of a forward lay is often determined from a grey area; it is neither black nor white. Therefore, the company officer must make an informed decision that is predicated upon tactical knowledge, real-world intelligence, keen situational awareness, good communication skills, and practice. These are HALFEs; mistakes can cost lives and surely property, so this should be an event that is committed to muscle memory, or RPD.

NFPA® 1410 Evolution 3 Demonstration (Video)

Scenario Blueprint (Interaction)

How to Approach HALFEs

In the fire service, as in any profession, there are varying degrees of demonstrable proficiency. Individuals are just that, individual; we have varying intrinsic motivation that is directed by a complex set of driving or moral factors. This isn't to say that the less motivated are amoral; we are all just wired differently.

However, just because an individual isn't necessarily a self-starter, doesn't mean that they aren't motivated. All levels of drive can be uplifted when the collective unit, the company, is united in a cause. In this case, when company training becomes part of the collective ethos or expectation, the end result is positive.

Hands-on company training is the backbone for rounding out skill sets that require psychomotor knowledge. This proverbial rounding allows the company to practice skills that are not used every day, have significant opportunity to help if done right, or can be catastrophic if done wrong. Fires are often infrequent events; we call these infrequent happenings HALFEs.

The fire service is a profession of layered knowledge. We enter the business with the minimum amounts of knowledge to function on a team and hopefully not hurt ourselves or others. Over a period of years, we learn institutional knowledge that completes our skill sets; this knowledge is generational, handed down from older firefighters to the younger ones. Added to this is experiential knowledge that is imparted on every fire. This experiential knowledge becomes part of our RPD process. We also observationally and situationally obtain best practices on what works and what doesn't. There is knowledge that everyone walks away with, and then there is knowledge that is sought out, usually by driven professionals who are programmed to seek out more and be among the very best within their profession. These individuals can be called "keepers of their craft."

A fire service "keeper of the craft" recognizes the history of the calling. Moreover, this recognition translates through internal desire to attain and do more safely, to advance both themselves and the profession through change. In the end, the keepers are the cognitive historians who can positively transform the profession for handoff to the next generation. They've always existed and always will.

One thing that separates the keepers of the craft from others is their ability to recognize the importance of basic skill sets. Basic skills are the backbone of HALFEs; in this case, multiple coordinated steps between two engine companies. Effective execution of HALFES is never by chance.

Evolution Best Safety Practices

This scenario has a maximum evolution time of three and a half minutes. Whenever timing components are inserted into training for a dangerous profession, the chances for injuries or deaths rise. Over 11% of all fire service deaths occur during training. This is an important statistic that must never be lost on the profession.

Safe training starts with safe practices and best practices. Embodied within the culture of safety are best practices that seek to identify areas of improvement, optimize actions that protect, and shed attention upon risk factors that are preventable, unpreventable, modifiable or non-modifiable. By doing so, these known risks are clearer to the firefighting profession and are managed to the extent that is possible.

Timing and communication between personnel is pivotal to evolution outcomes and safety. Knowing what is expected allows for anticipation. Less than 4% of all fire service calls are working fires.[4] These skills are called into play at odd hours, without advanced knowledge in most cases. However, in this evolution, the firefighters must know every step in the process and have a feel for the needed timing and ancillary expectations in advance of the scenario. This allows for these HALFEs to be practiced and eventually mastered safely. Once the skills are mastered, provided they are rehearsed periodically, they will be available for use during moments that require RPD.[5]

Best practices are just that; they are the best of the successful practices that lead to good outcomes. They follow rules, procedures, and safety requirements to a fault. Best practices do not rely on chance or the hope that others in or on a team will make up the deficits posed by the unpracticed.

Evolution Communications Plan

In this NFPA® 1410 evolution, the game plan calls for both engine one and engine two to forward lay in. Once this is achieved, both engines will pull either the initial or the backup attack line. There is a timing component; in this case, three and a half minutes. To achieve this goal, the two companies will have to effectively communicate to one another. Communication seems to be a fairly straightforward concept. However, under the stresses of exertion and timing, and without an established plan, the evolution will be choppy.

Although not required, it is suggested that there be radio communications between firefighter #1 and the driver/operator on both companies. The supply line charging and connection can be done with horn blasts or visual signals, if needed, but it is not as seamless nor efficient as clearly spoken word via radio. With that in mind, if there is ever any question about what was said in a radio transmission, the phrase, “please repeat last transmission,” should be conveyed. During a HALFE or in a timed evolution, when seconds matter, the last thing that is needed would be a costly mistake that may have been avoided by clarification achieved through a repeated transmission vs. an incorrect action based on assumption. Additionally, it’s a good best practice to predetermine some areas that the company officer might identify as moments that would benefit from communication. Some suggestions are:

- Before beginning the evolution, a complete radio check, if applicable, should be performed.
- Pre-arrival on-scene, the company officer will convey the method for obtaining a permanent water supply.
- All engine company members acknowledge the command.
- Company officer advises team of any pertinent milestones.
- All engine company members acknowledge the command.
- Upon arrival on-scene, company officer advises same.
- Reviewer acknowledges.

- All crew member evolution milestones should be conveyed, such as “Engine one to engine one firefighter, ready for water supply.” “Engine one firefighter to engine one driver, backup attack line ready for water.”
- Communication should be acknowledged.
- Common phraseology should be used, such as *standby, water, repeat, stop, time*.

After Action Review

Borrowing from the military, the After Action Review (AAR) has increasingly become a part of every fire service event; this would include training evolutions, as well. To be effective, the AAR should immediately follow the event, serve as an initial debrief, and should be consistently structured and held. If the event was a major event, the initial AAR will give way to a more thorough evaluation by battalion and chief officers after its metrics and milestones have been completely reviewed.

With respect to this training, it would include the company officer, the crew, and typically, the reviewer. The format should allow for open dialogue between the reviewer and the engine companies participating in this ideation of the forward lay evolution. All aspects, timing metrics, communications, techniques, and overall effectiveness should be conveyed to the participants being reviewed.

Areas of concern, or those needing improvement, should be identified. Once accomplished, the correct procedures must be reiterated, and possibly walked through, to convey the needed best practices for the crew participating in the evolution evaluation. By identifying and walking through areas of concern and conveying what is a needed or expected best practice, the team learns together and will likely have improved performance moving forward.

Participants on the engine company crews should all be allowed to be a part of this open, respectful dialogue. The goal in an AAR is not to break down, it is to build up; caustic remarks have no place in the AAR process. The engine company participants will value the opportunity to learn from what went correctly, could have gone better, or was a failure. This is how skill sets are improved, RPD is formed, and HALFEs become more seamless and effective overall.

Conclusion

The 1410 drills are an excellent means to assess engine companies in a standardized manner. These evolutions are some of the most common in the fire service, despite the fact that fires are not necessarily common events. Working fires account for about 4% of the totality of the calls received, making fireground operations High Acuity, Low Frequency Events (HALFEs).[4,5]

Fireground evolutions are complex mechanisms. The skills used are not used every day. As such, they require regular practice. In the absence of rehearsals, the firefighter relies solely on a decaying recognition-primed decision-making mental tool box. Faced with an immediate challenge or fireground need, the 21st century firefighter must have immediate recall of a combination of real-world and practiced scenarios to rely upon.

These scenarios, standardized as they are, allow all sizes of departments to train equally. The 1410 drills are well thought out, scripted, and organized with thorough explanations of the positional skills expectations and their timing requirements.

In this assignment, a basic explanation of the fireground tactics was explored. Why would a company officer decide to ask for a second engine company to also lay in to the fireground? What are the factors that a company officer uses to formulate an initial arrival decision—one that could have such a quick and potentially profound outcome?

This drill was broken down into segments, roles were discussed, and every assignment for each position was identified and explained. Likewise, best practices, a communications plan, and the concept of participating in After Action Reports (AAR) were identified as a functional and foundational need.

In the end, success in this evolution requires understanding of the needs of the drill, good pre-planning, teamwork, communication, and practice. Competency comes at varied intervals within a team. As an example, even though a team may be successful in an evolution, the team members all perform at varying levels of competency. We only attain individual mastery after repeated exposure to scenarios that require our skills to be tested. The fire service relies on the sum of the team; however, the team is strengthened one person at a time. As the individual goes, so goes the team, the event, and the outcomes. We're only as strong as our weakest link and we're only as weak as we allow ourselves to be.

Summary

This course explained the required steps for completing NFPA® 1410 Evolution 3. The NFPA® 1410 standards establish what should be accomplished during each of the 14 evolutions, including a reasonable timeframe for completion and the expected outcomes. Timing metrics are cited as desirable benchmarks for each evolution, and they have been determined based on reasonable, attainable times, while considering varied jurisdictional realities. Refer to your local jurisdictional SOPs regarding supply lines, nozzles, hydrant tools, and hose loads.

Click on the Table of Contents to review any lessons, as necessary, before taking the test.

References

1. NFPA.® *NFPA® 1410: Standard on Training for Initial Emergency Scene Operations 2010 Edition*. National Fire Protection Association. Quincy, Massachusetts. 2009.
2. Silvernail, James. "James Silvernail: Tactical Fireground Decision Making: Water Supply." FDIC International. Last Modified 2015. Accessed February 20, 2016. http://www.fdic.com/articles/2015/01/james-silvernail-tactical-fireground-decision-making-water-supply.html
3. IFSTA. *Essentials of Firefighting and Fire Department Operations 5th Edition.* Oklahoma State University: Pearson, 2008. pp 664-666.
4. NFPA.® "Fire Department Calls." Nation Fire Protection Association. Last modified September 2016. Accessed February 20, 2016. http://www.nfpa.org/research/reports-and-statistics/the-fire-service/fire-department-calls/fire-department-calls
5. Careercast.com. "The Most Dangerous Jobs of 2015." CAREERCAST. Accessed February 20, 2016. http://www.careercast.com/jobs-rated/most-dangerous-jobs-2015
6. Johnson, Jeff. "Natural Decision Making for Incident Commanders." FIREHOUSE. Last modified May 11, 2012. Accessed February 20, 2016. http://www.firehouse.com/article/10710920/natural-decision-making-for-incident-commanders
7. Fahy, Rita F. "US Firefighter Deaths Related to Training, 2001-2010." National Fire Protection Association. January, 2012. Accessed February 24, 2016. http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/the-fire-service/fatalities-and-injuries/us-firefighter-deaths-related-to-training-2001-to-2010

Resources

- NFPA.® *NFPA® 1410: Standard on Training for Initial Emergency Scene Operations 2010 Edition*. National Fire Protection Association. Quincy, Massachusetts. 2009.
- City of Phoenix. "Phoenix Regional Standard Operating Procedures." M.P. 205.06. Accessed February 29, 2016. https://www.phoenix.gov/firesite/Documents/074784.pdf

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