Changing the face of first aid!

REDUCING TOTAL COST OF OPERATION:
First Aid Hybrid Training Solutions

Purpose
This case study focuses on proven and cost-effective first aid/responder training programs within manufacturing or industrial plants; giving key resource material and detailed analysis of traditional versus improved hybrid training models.

Summary:
Key resource material on proper procedures, tools and reporting requirements plus recommendations for emergency medical and first aid programs are covered. Key focus is provided on training mandates and traditional first aid training versus proven cost-saving and improved hybrid or blended first aid training.

FIRST AID PROGRAM REQUIREMENTS, KEY RECOMMENDATIONS & COST SAVINGS

Procedures
Procedures are an important step as they set the standard for your emergency medical response and preparedness. Many workplaces have a tiered response plan depending on if the incident is severe, serious or minor. It is important for your procedures to clearly define any tiered response levels and the expectations of your responder teams and any company personnel during these incidents. Procedures should include evacuation expectations and proper initial emergency contact numbers or frequencies. Initial emergency dispatch should know what questions to ask which would include: getting identification of the caller, where they are calling from, the phone number they are calling from, the nature of the emergency, the extent of the injury and where the individual is located that has been assigned to direct crew or advanced care to the incident (if necessary).

In the event that CPR and First Aid skills are necessary, procedures should outline who is to provide that care and where proper responder tools are located. When an incident occurs, it must be reported to the appropriate supervisor and management. Outlining whom is responsible for what reporting within the procedure manual sets the stage for the incident follow up and reporting that will follow. OSHA requirements are less stringent for workplaces with under 10 employees but even small companies should have proper procedures in place to prepare themselves for the worst.

Utilizing OSHA's Website and using first aid keyword searches can also allow you to find important reference material for setting up your first aid procedures and program. As a general resource, refer to the OSHA Best Practices Guide: Fundamentals of a Workplace First-Aid Program.

Tools
There is an over-assortment of first aid kits and first responder kits/bags available on the market today. Most store or online purchased first aid kits are under $99 but may lack in terms of quality, quantity, and selection of items. They usually contain an assortment of band-aids or small wound dressings, an ice pack, tape, aspirin/ibuprofen, one pair of exam gloves and antiseptic wipes and maybe a small first aid guide. An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) Z308.1-2003. Federal OSHA Regulation Standard 1910.151.b requires "Adequate first aid supplies shall be readily available." The contents must at least be able to treat minor injuries that occur in the workplace. However, there are no specific requirements on the contents other than per ANSI

Z308.1-2003.

You will note that within a first aid kit all items are adequate for treating very minor injuries, but what if someone was bleeding severely or you needed to administer eye wash in the field? A well-stocked kit can make responding to an accident or injury much faster and easier AND improve the outcome. Plus, it should provide all adequate personal protective equipment (PPE) for the first aider or responder. Not having appropriate PPE for responders results in OSHA violations due to blood borne pathogen exposure and contamination issues.

There are many first responder kits on the market which keep first aiders within scope of practice and provide more organization and trauma-related supplies than a standard 50 item first aid kit. The key to a good responder kit is to make sure that the supplies are in stock (often first aid kits suffer pilferage of their contents and lack even a pair of gloves) via use of a inspection tag and pull tight seal. In addition, organization and quantity of supplies is key as the assumption is that they will be used for major trauma events vs. minor first aid events. A CPR barrier should always be contained in this responder kit as well since many first aid kits do not contain this essential personal protective item.

Stocking proper questionnaires that allow for recording key medical documentation to hand off to EMTs, and supplies such as glucose for diabetic events, ABD pads for heavy bleeding, plenty of gauze (both stretch and pads), ACE bandages, extra gloves, and so on. A good kit will have a blood borne pathogen cleanup kit included. It is important to note that each workplace is unique and if you have other “high risks” you should select additional first aid products to suit your work environment. Key consideration should be given to burn dressings such as the face mask or larger burn dressings or FDA approved blood clotting solution if you have risk of severe burns or bad lacerations, respectively, at your workplace. A few extra dollars spent on proper supplies can save you thousands of dollars (or even a life) in the long run.

Kits that take the guess work out of treating most major medical emergencies by providing color-coding or easy organization and thorough manuals or reference materials are useful. Prepackaged supplies which are color-coded by major traumas that match a color-coded and tabbed reference book are available and recommended for facilities that are expanding or implementing a new program. Each supply pack should ensure proper PPE is used for every event and allows for easy access to all the supplies you need so you don’t have to fumble through an array of supplies. The supplies need to be in compliance with OSHA recordable concerns (do not include items that will result in overzealous treatment by a first aider). These kits keep things simple, easy and efficient to restock after an incident. First aiders or ERT members must have enough knowledge to treat superficial wounds with care and not be overzealous. To keep things clear & concise it is important to give responders appropriate equipment that is within their scope of practice yet easy to use.

Reporting

OSHA recordables for injuries and illness in the workplace are limited to those incidents which occur that need immediate assistance using medical supplies or care outside of standard first aid requirements. Any incidents that involve rehab or an unconscious victim are absolute OSHA recordables. Any non-serious or minor event should result in a first aid report, prepared by the employee and supervisor for the area. First aid reports should be prepared for non-OSHA recordable events to ensure proper incident prevention and potential improvements to the workplace in the future.

Having a good reporting system means proper documentation by the safety manager, your responder team as well as immediate interviews by management and supervisors for the work area. Reports should not only address the incident but be thorough enough to allow focus on future incident prevention. Make sure reports are filed within 6 days of the event. Note that fatalities and incidents involving more than 3 hospitalized employees must be phoned in or orally communicated in person within 8 hours of the incident to the nearest OSHA office. Each state OSHA office has reports and in some cases state workers’ compensation, insurance, or other reports may be acceptable substitutes. A log of work-related injuries and illnesses must be kept along with an annual summary of these to show the extent and severity of work-related incidents at each company. Reports must be kept on file for a minimum of 5 years[3].

Training

OSHA general industry guidelines state that if there is not a hospital, clinic or infirmary on premises of the workplace and the location is more than 3-4 minutes away from advanced care first aid training and appropriate tools must be provided at the workplace. Specialized and higher risk industries have other OSHA mandated guidelines and requirements. You can find general industry, first aid procedures and training for the workplace here.

First Aid and CPR training should be provided on an annual basis but certain national training organizations have a 2 or 3 year certification program. OSHA interpretations state that a 1 year CPR certification is suggested and up to a 3 year first aid certification renewal is acceptable. CPR and First Aid skills retention has been documented to have a rapid descent with 50% of knowledge being forgotten within 3 months and 75%-90% of skills being forgotten within nine months.[1]

OSHA does not require certain designated training organization certificates but nationally accepted training certifications are the guideline. American Heart Association, American Red Cross, National Safety Council, American Safety and Health Institute, Medic First, and Emergency Care and Safety Institute are examples of such national training certifications. CPR and First Aid training along with Blood Borne Pathogen training are minimal requirements for many workplaces. It is not necessary to have a written test for your files to verify skills but some sort of verification is necessary, including a certification card from a qualified trainer. With the addition of Automated External Defibrillators to the responder tool mix, AED training is also becoming a standard part of annual workplace responder training.

Training can be provided via instructor/classroom, online, video, scenario training or a combination of all of these. Note that a combination of all of these is commonly called Hybrid Training, and has been proven to improve skills retention. Having a good instructor is essential and practicing and performing scenario-based outcomes is crucial to putting a good responder and first aider program in place. Lastly, SHORTS (short 7-10 minute training sessions) are becoming more common in the training sector. Managers have documented the ability to provide excellent training refreshers and skills improvement over the course of the year using these SHORTS in areas where high risks are present and highly likely. The commonality to good SHORTS includes engaging the student's attention and as many senses as possible…getting auditory, visual, and sensory engagement is key.[2] Good training equipment helps in engaging the student and improving skills retention. Software, hardware and manikins are essential to great training programs.[2] Examples of hybrid training solutions and costs associated with them are in the Exhibit A and B that are attached to this case study.

Many workplaces provide advanced training such as certified first responder or EMT classes due to higher risks and serious injury rates within that industry. It is up to each safety manager and EHandS department to determine if this is necessary. However, OSHA standards do vary for training in certain industries due to past injuries and injury severity within that industry.

Cost Savings From Hybrid Training

Example 1: Plant in Central Midwest

Option 1: Traditional Training Costs for 40 people		
4 classes of 10 people each at $500/class	$2,000	
- have to pay these 10 people overtime for 6 hours		
- pay is $16/hour plus 50% benefits; OT cost is $36/hr	$8,640	
Type of kits picked to use: 2 responder bags at $200 each	$400	
Total costs of mandated first aid training program	$11,140	
Option 2: Hybrid Training Costs for 10 people plus advanced talking responder kit		
1 class of 10 people each at $500/class	$500	
- have to pay these 10 people overtime for 6 hours		
- pay is $16/hour plus 50% benefits; OT cost is $36/hr	$2,160	
Type of kits picked to use: EID & AED in FV3199 SET	$2,075	
Total costs of mandated first aid training program	$4,735	
Total savings from Year 1 alone:	$6,405	
5 yrs: = $8,480/yr + $6,405 year 1		$40,325

This example summarizes how a manufacturing facility has reduced their responder class size and is doing quarterly in-house training with First Voice equipment. As a bonus, the plant utilizes it for their responder's confidence and assistance from others during actual incidents. The plant saves about $7,000 in the first year alone – even AFTER including the cost of upgraded expert equipment. Over 5 years the company saves $40,325!

Example 2: Plant in Lower Midwest

Option 1: Traditional Training Costs for 40 people	
4 classes of 10 people each at $500/class	$2,000
- have to pay these 10 people overtime for 6 hours	
- pay is $16/hour plus 50% benefits; OT cost is $36/hr	$8,640
Type of kits picked to use: responder bags at $250 each x 2	$500
Total costs of mandated first aid training program	$11,140
Option 2: Hybrid Training for 40 people plus advanced talking responder kit & online training	
All 40 people will take online First Aid/CPR/AED courses @ $30.00 each	$1,200
- have to pay these 40 people overtime for 4 hours most	
- pay is $16/hour plus 50% benefits; OT cost is $36/hr	$5,760
40 skills assessment verifications for CPR & First Aid w/instructor onsite - no overtime needed - done in shifts during 2 days; use PM001 CPR & First Aid Feedback Training System	$499
Type of kits picked to use: 1 First Voice EID & FV3100 SET	$2,075
Total costs of mandated first aid training program	$9,534
Total savings in Year 1:	$1,606
5 yrs: = $4,180/yr + $1606 year 1	$18,326

This example summarizes how a manufacturing facility has gone with a hybrid training program using online emergency care courses followed by onsite skills assessment testing and verification. The facility will also do quarterly in-house training with First Voice equipment. As a bonus, the plant will utilize First Voice for their responder's confidence during actual incidents. The plant saves approximately $3,000 in the first year alone - even AFTER including the cost of upgraded expert equipment. Over 5 years the company saves $18,326!