SAFETY net
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fire & life | education & training | laboratory | occupational | environmental | radiation

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Prepare for Emergencies

Jose Melchor - *El Paso Safety Manager & Emergency Management Coordinator*

So why does it help to be prepared? What are the benefits? Being prepared helps to reduce the fear and anxiety one has during an emergency. It also helps to reduce the impact of the disaster to you and your family, but most importantly it helps you and your family to know what to do to survive and recover.

The following are some things to consider when preparing for emergencies.

First, get to know the type of hazards that are vulnerable in your area. Some are:

- **<u>Natural Hazards</u> - fire/wild fires, floods, hurricanes, tornados, earthquakes, winter storms, pandemics, droughts, extreme temperatures, and tsunamis.**
- **<u>Technological Hazards</u> – hazmat incidents, structural failures, industrial accidents, radiological incidents.**
- **<u>Intentional Threats</u> – terrorist incidents and criminal acts.**

Second, prepare a Family Disaster Plan, and participate in your work COOP plans.

- **Know the protective measures for specific hazards at home and at work.**
- **Recognize warning systems and signals.**
- **Learn to evacuate from the disaster area, and identify escape routes.**
- **Participate in your community, work and school plans.**
- **Complete a family communications plan at home and participate in your plans at work; know where to meet.**

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Prepare for Emergencies *(continued)*

Jose Melchor - *El Paso Safety Manager & Emergency Management Coordinator*

- **Learn to shut off utilities, especially the gas.**
- **Obtain appropriate home insurance coverage for the hazards in your area.**
- **Prepare for those with special needs.**
- **Care for animals.**
- **Learn safety skills; first aid, CPR.**

Third, sign-up for Emergency notifications for work and the community where you live.

- **TTUHSC STAT!ALERT:** http://www.ttuhsc.edu/emergencyalert/
- **El Paso Texas Emergency Alert System:** http://www.epemergencyalert.com/

Fourth, prepare a Disaster Supply Kit, for your home and work. The following are some suggestions for a basic disaster supply kit.

- **Food & water for (x) people for 3-7 days**
- **Radio, Flashlight, extra batteries**
- **First Aid Kit – prescription and non-prescription**
- **Hygiene Items – Toilet paper, toothbrush, toothpaste, etc..**
- **Clothes & Bedding**
- **Safety items – matches, whistle…**
- **Kitchen items – knife, can opener etc..**
- **Documents, keys, credit & ID cards**
- **Cash**
- **Special Needs items – pet supplies, comfort items.**

Cycle While You Work

Renee Witherspoon, MS, CSP, CIH, CHMM - *Occupational Manager*

The School of Nursing in Lubbock is starting a "revolution" in wellness - cycling while working at the laptop. Employees like Linda Lane, Assistant Dean for the School of Nursing, are taking advantage of several new cycling workstations where a laptop can be placed on the desktop and the user can pedal the bicycle while checking email. Linda started using these FitDesk workstations in February and now she can easily do 35 minutes per day or up to 5 miles of cycling per day. Linda says that, "she can easily find work to do at this workstation" but typically will use it during her lunch break, because she can get a really good workout too. Active workstations like this have been shown to provide improvements to overall health and wellness by decreasing the static work we normally do at seated workstations.

Buried in AEDs

Renee Witherspoon, MS, CSP, CIH, CHMM -*Occupational Manager*

Safety Services recently purchased new AEDs for all campus locations. Senior Safety Officer, Bruce MacNair is in the process of distributing the new Zoll Medical Corporation automated external defibrillators (AED) to the campuses. In the photo, he is among 83 units currently being stored and distributed from his office.

There are two types of portable units going out to the campuses, the AED Pro® and the fully automatic AED Plus®. The AED Pro is intended for use by trained rescuers to provide emergency defibrillation and to monitor patient electrocardiographic (ECG) rhythm, where the AED Plus are fully automatic and very user friendly so it can be used by both trained rescuers and others to provide emergency defibrillation.

The AED Plus is intended for use in publicly accessible areas and has voice prompts and visual indicators to guide the rescuer through a resuscitation sequence that may include defibrillation and/or cardiopulmonary resuscitation (CPR) for both adult and pediatric victims.

The AED Plus has a built-in cover that can also be used as a PASS (Passive Airway Support System) to support the victim's neck and shoulders in a position that assists in maintaining an open airway. The other benefit is that it is powered by 10 commercially available consumer brand lithium-manganese dioxide batteries, which during replacement are a significant time and cost savings.

Learn more about how to use the new Zoll Plus AED by viewing the training video's online at:

http://www.zoll.com/medical-products/automated-external-defibrillators/fully-automatic-aed-plus/demo/
http://www.youtube.com/watch?v=jTPmYSYoG3U

New Zoll AEDs in the Permian Basin

Arthur May, MS, CHMM, COHC, CSS-*Permian Basin Safety Manager*

Some of the TTUHSC Permian Basin and Abilene locations have new Zoll AED's (green case) replacing the Phillips FR2 AED (red case). As the Zoll AED looks different and has different pads than the Phillips FR2 AED, we have been given permission from Zoll to put the Zoll AED Plus Operators Video Guides on the Permian Basin Safety Services website: www.ttuhsc.edu/admin/safety/ODESSA.

Since only one CD is sent with each Zoll AED, it would be difficult for all employees that may need to respond to a situation with an AED to know that the green case is an AED and the pads are different than the AED pads they have been trained on. Now any employee can have access to the Zoll Operators Guide and recognize the green case as the new AED and know how to use the Zoll pads which also measure the depth of the chest compressions.

Stakeholders in the Safety Process

Johnathan A. Edwards - Amarillo Senior Safety Officer

Since last quarter, Safety Services at the Amarillo Campus expanded its staff by hiring me, Jonathan Edwards as a new Senior Safety Officer. I'm very excited to be here, working in a field that I enjoy, and very excited to meet any of you that I haven't had the pleasure to meet or interact with.

In other news, I'd like to include some thoughts I've had in just a few short months on this job. Primarily, I mean my thoughts about including the necessary stakeholders. While Safety Services is charged with many safety issues around our respective campuses, it's important to note that we are not the only stakeholders in wanting a safe work environment. Fellow employees, students, and visitors to our facilities are all stakeholders in our safety process, and deserve to be treated as such.

Viewing our organization in this manner is not simply well-intentioned rhetoric, but actually makes good sense. Weeks ago, I was having a problem with one of our labs. Occasionally, I would walk by and I would find one of the exterior lab doors held ajar. Obviously, I wanted to rectify this lab security issue right away, but I also knew that I could blitz around the lab, letting everyone know how unsatisfactory this was, and it might not do any good. I can't just sit outside that door all the time, just to make sure it was closed. But rather, if I include the lab personnel as stakeholders in their own facilities, I can probably ensure good practices rather than I had ran around yelling at people. I've had several conversations along these lines with the personnel who consistently use that lab, and I've yet to have any problems with those exterior access doors since.

Office Ergonomics Webinar Hosted by TTUHSC

Renee Witherspoon, MS, CSP, CIH, CHMM - *Occupational Manager*

On March 18 Bruce MacNair, Sr. Safety Officer organized an office ergonomics webinar conducted by HumanTech. The webinar described ergonomic injury as a combination of Force, Frequency and Posture. When we have aching, tenderness and swelling in our hands that may indicate early warning signs and symptoms for an ergonomic injury. When aching and tenderness become more severe this can lead to pain, tingling, numbness or trouble sleeping due to that pain.

These are just some of the warning signs that we should be aware of to prevent Musculoskeletal Disorders or MSDs. If these symptoms are not dealt with immediately they can cause permanent injury including decreased strength, loss of joint movement, and decreased coordination including dropping things. Being able to recognize these early warning signs of an ergonomic injury can help prevent injury.

If you would like an ergonomic evaluation for your workstation complete an Ergonomic Request Form on the Safety Services website at **www.ttuhsc.edu/admin/safety**.

Training News

Boiler Safety

On May 13, 2014 Safety Services hosted a "Lunch and Learn" Boiler Safety Training event in Lubbock. The event was TechLinked to regional campuses in Abilene, Amarillo, Odessa and El Paso. Chrys Griffing, Texas Department of Licensing and Regulation (TDLR) Deputy Boiler Inspector for the Lubbock Region was the guest speaker.

All boilers must be registered and inspected and this includes all types of boilers used in commercial and public facilities that produce steam at either low or high pressure, hot water heating of use in comfort air heating systems, and hot water supply for use in showers, sinks, pools and other miscellaneous domestic water systems.

According to the definitions in the Texas Boiler Law and Rules, boilers used for hot water supply or potable hot water supply can be defined in the following two (2) categories:

1. A hot water supply boiler means a boiler designed for operation at a pressure not exceeding 160 psig or temperatures not exceeding 250°F at or near the boiler outlet if the boiler's: heat input exceeds 200,000 BTUs per hour; water temperature exceeds 210°F; or nominal water-containing capacity exceeds 120 gallons.

2. A potable water heater means a boiler designed for operation at pressures not exceeding 160 psig and water temperatures not exceeding 210°F if the boiler's: heat input exceeds 200,000 BTUs per hour or nominal water-containing capacity exceeds 120 gallons.

Free boiler safety training is available from FM Global at: **http://training.fmglobal.com** and at the West Texas Boiler Safety Association Annual Boiler School in October in Lubbock.

Lockout / Tagout

On April 28, 2014 Safety Services hosted a training program by University of Texas at Arlington instructor Tom E. Burns, PE, CSP, CPE, CET on OSHA's Control of Hazardous Energy standard (29 CFR 1910.147) or lockout/tagout (LOTO). OSHA's LOTO standard applies to all types of energy both potential and kinetic including electrical, mechanical, hydraulic, pneumatic, chemical, etc. An employer is required to establish procedures and train their personnel to de-energize equipment and apply a lockout/tagout device before performing maintenance or servicing operations. This prevents unexpected energization, start-up, or release of these stored energy hazards that could cause a disabling injury or even death.

One of the key points made in the training was the requirement for periodic inspections. According to the OSHA Compliance Directive (CPL 02-00-147), which provides enforcement policy and inspection procedures, an authorized person (or persons) shall conduct a periodic inspection of one (or more) authorized person(s) implementing each of the employer's machine-specific LOTO procedures (or group of like procedures).

This directive further explains that each energy control procedure required by §1910.147(c)(4) must be separately inspected annually to ensure that the procedure is adequate and that is it properly implemented by the authorized employee(s). Each of the LOTO annual inspections must include a demonstration of the procedures and must be performed while the authorized employee(s) performs the servicing and/or maintenance activity on the designated machine or equipment. If deficiencies are identified, retraining must also be completed.

Biological Safety Cabinets

Renee Witherspoon, MS, CSP, CIH, CHMM - *Occupational Manager*

On March 28th, Joanna Hillman, PE, Project/Senior Engineer for Physical Plant hosted a luncheon presentation on Biological Safety Cabinets (BSCs) by ThermoFisher Scientific. Bernie Schwartz, Product Specialist for the Gulf Region of ThermoFisher was the speaker.

BSCs are designed to provide personnel, environmental and product protection when appropriate practices and procedures are followed. There are three types of BSC, designated as Class I, II and III. Most BSCs use high efficiency particulate air (HEPA) filters in the exhaust and supply systems. The exception is a Class I BSC, which does not have HEPA filtered supply air.

One of the key points was that a chemical fume hood should not be used as a BSC. Infectious materials should not be used in chemical fume hoods since neither the intake nor exhaust is HEPA filtered. The reverse is also true, a BSC should not be used as a chemical fume hood. Volatile chemicals should not be used in a BSC since chemical fumes may be either exhausted to the room or recirculated inside the cabinet.

An overview of the common types and uses are below:

Class I cabinets provide worker and environmental protection, but no product protection. Air is drawn across the interior work surface and it is not HEPA filtered. There is a HEPA filter in the exhaust system to protect the environment. Whether air is exhausted outside the building or recirculated depends on the type of work to be done. Class I cabinets may be used to enclose equipment or procedures with a potential to generate aerosols such as tissue homogenization, sonication, or cage cleaning/manipulation.

Class II cabinets provide personnel, environmental and product protection. Both room air and interior cabinet air are drawn into a front grille creating an air barrier that provides personnel protection. In addition, downward laminar flow of HEPA-filtered air provides product protection. Air exhaust passes through a certified exhaust HEPA filter and may be recirculated back into the laboratory or exhausted out of the building. All Class II cabinets are designed for work involving microorganisms assigned to Biosafety levels (BSL) 1, 2 and 3.

Class III cabinets are designed for work with highly infectious microbiological agents and for the conduct of hazardous operations and provides maximum protection for the environment and the worker. These cabinets are gas-tight, and access for passage of materials into the cabinet is through a dunk tank or double – door pass-through box (i.e. an autoclave) that can be decontaminated between uses. Both supply and exhaust air are HEPA filtered. These cabinets have long, heavy-duty rubber gloves attached to allow for direct manipulation of the materials located inside.

BSC's are required to be certified annually by qualified service personnel. HEPA filter changes and decontamination are also required to be completed by qualified personnel.

Spring Cleaning

Renee Witherspoon, MS, CSP, CIH, CHMM - *Occupational Manager*

In many clinical settings office staff is responsible for cleaning, reprocessing and preparing endoscopes for the diagnoses and treatment of many medical conditions. To prevent the spread of healthcare-associated infections (HAI) all heat-sensitive endoscopes (e.g., gastrointestinal endoscopes, bronchoscopes, cystoscopes, nasopharygoscopes) must be properly cleaned and disinfected using a high-level disinfection (HLD) method.

Multiple disinfectants for HLD exist but one of the most common contains Glutaraldehyde, an irritant that may cause acute sensitivities (skin irritation, irritation to eye, asthma-like symptoms) if improperly handled. The recommended soak time for HLD varies so the manufacturer's recommendation should always be followed. Any deviation from the recommended procedure must be validated by the user and if the manufacturer warns against a specific chemical being used because it may cause damage to the instrument then that chemical should be avoided.

Having accurate and up-to-date procedures is a weapon in our arsenal against HAI. Communication is an important part of this. We must strive to improve how we communicate and train staff that will be responsible for cleaning, reprocessing and preparing endoscopes. What's the use of having a procedure if no one understands it or follows it? Procedures must be accurate and written in such a way that the people using the procedure understand. This is especially important when communicating with personnel where English may not be their native language.

On-the-job training is good but this type of training should also be supplemented with review of the actual written procedure. Adding a few pictures to a written procedure is an easy way to communicate a specific task. Once training has been completed it should be documented and that documentation should be placed in the training record. Periodic refresher training is also recommended.

Let your spring cleaning this year include a "clean up" and review of your procedures for HLD. Always check with the manufacturer or the operator's manual for the specific care and maintenance of endoscopes. Procedures should be reviewed regularly, employees trained in each procedure and the training documented. Communication regarding procedures and documentation of training is an important step in our fight against HAI, one that is often overlooked.

This newsletter was written, designed, and produced by Safety Services Lubbock. For more on information contained within this publication, or to suggest content, please contact: maria.garza@ttuhsc.edu or call 806-743-2597