FIRST QUARTER 2015 ISSUE 39

TSIG NEWS

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COME SEE TSIG

FOR A DETAILED LISTING OF ALL FUTURE CONFERENCES THAT OUR EXPERT CONSULTANTS WILL BE ATTENDING OR PRESENTING AT IN THE UPCOMING MONTHS, VISIT PAGE 15 OF THIS ISSUE. WE WELCOME YOU TO COME STOP BY OUR BOOTH TO JUST SAY HELLO OR ASK ANY QUESTIONS YOU MAY HAVE OR ATTEND ONE OF OUR EXCELLENT PRESENTATIONS THAT HAS EARNED NATIONAL PRAISE. WE WELCOME YOU TO COME SEE TSIG!

When Do I Test , Inspect or Maintain My Sprinkler System?

By Matt Oliver

You don't always have the answers in your head. Truthfully, no one has them all memorized. But… There is help. Actually, there is a very cut and dried document that provides every single answer you need. NFPA 25. This single document, *Standards for the Inspection, Testing, and Maintenance of Water Based Fire Protection Systems*, has charts, schedules, and such that will guide you through the steps required to ensure that your sprinkler system works when it's called upon. Let's take a look at a couple items in NFPA 25.

Table *2.1* in the 1998 edition provides a very easy to read overview of what should be completed and at what intervals these tasks should be accomplished. I often receive phone calls asking questions about frequencies. This table is where I find the answers. Additionally, it provides the references for each item listed. As an example, you probably know that you should "do something with your gauges." How often? Quarterly inspection and then either replace them or calibrate them. We can find this in the table. Under the heading *Inspection* we find that gauges are listed as quarterly as prescribed by 2-2.4.1 Further, under the heading *Test* we find that we should comply with 2-3.2. This table should be your first stop for evaluating your compliance with the requirements. Many times, facilities will tailor these tables to fit their building. You may choose to use NFPA 25 as a basis for creating your own matrix for compliance.

It's important to understand that compliance, with applicable codes and regulations, is the responsibility of the facility. While you most likely use a contractor to perform your sprinkler system testing and maintenance, you must remember that the responsibility lies with you. I always recommend the facility use their own system/schedule document to ensure that the contractor is performing required inspection, testing, and maintenance items– while also confirming your contractor performs testing in accordance with the correct edition of NFPA 25.

It's likely that you could look at your bookshelf right now and see a copy of NFPA 101 *Life Safety Code* or NFPA 99 but if not already there, it may prove a wise investment to put a copy of NFPA 25 on that same shelf. This was written for you, the owner of the system.

When to Complete an FSES
By Lori Dinney

Many times after completing a Statement of Conditions (SOC), the resolution for a deficiency or group of deficiencies is to submit an equivalency request via either a traditional equivalency or an FSES (Fire Safety Evaluation System).

A traditional equivalency consists of a letter written to The Joint Commission (TJC) which documents what the deficiency is and what measures will be put in place to achieve an equivalent method of protection. Applicable drawings and eBBIs must be included in the submittal. This must be accompanied with a letter by a licensed fire protection engineer, a registered architect, or an AHJ (Authority Having Jurisdiction) dealing in life safety. This individual is required to physically view the area or areas of concern prior to developing the letter. Detailed instructions on the exact submittal can be found on TJC website. An example of such a request is a building that is fully sprinklered except for electrical rooms. The Life Safety Code, NFPA 101, requires all rooms and areas to be sprinklered if the building is to be considered fully sprinklered. The way to address this would be to request an equivalency based on NFPA 13, Standard for the Installation of Sprinkler Systems. In this code, there is a section that permits the omission of sprinklers in electrical rooms if the room is rated for 2 hours, if there is no storage in the room, and if only dry equipment is used. As long as the electrical rooms comply with all of these requirements, a traditional equivalency request could be made to consider the building as fully sprinklered based on this exception.

In many cases, a more detailed analysis is warranted. This is when an FSES can be submitted. The requirements of such are found in NFPA 101A, Guide on Alternative Approaches to Life Safety, 2001 edition. As with the traditional equivalency request, detailed instructions on the exact submittal can be found on TJC website. The FSES entails a numerical calculation based on the existence of various fire protection concepts such as sprinkler protection, smoke detectors, construction type, interior finish, hazardous areas, smoke barriers, fire alarm systems, vertical openings, corridor walls and doors, zone dimensions, and emergency movement routes. Basically, a value is assigned to each concept based on what presently exists in each zone throughout the entire building. A zone can be defined on a per floor basis or per compartment on each floor. Once these numbers are added, if the sum is zero or greater, then an equivalent method of protection is considered to be achieved. Sometimes, one or more of the sums may result in a negative number. In this instance, it is possible that the negative result could change to a positive number once sprinklers or smoke detectors are installed, or after an existing deficiency is resolved. This can only be determined after the initial FSES is completed. Applicable drawings and eBBIs must be submitted as well. An example of when an FSES may be completed is for a building which is required to be of rated construction but is not. Keep in mind, an FSES may not always work even after deficiencies are completed or after sprinklers or smoke detectors are added.

So, the question becomes: how long after an SOC is completed, can an FSES be submitted? An article in the January, 2011, edition of Environment of Care News, states that the most current information must be available. It goes on to state that an FSES should NOT be submitted when the survey or evaluation information is more than 1-year-old. The drawings and eBBIs must be accurate but are not subject to the 1-year requirement. TJC is holding tightly to this

restriction, especially now that they are submitting these requests to the CMS (Center for Medicare and Medicaid Services) regional office once they are TJC-approved.

If you have any questions regarding the submittals of equivalencies, TSIG is on hand to provide guidance and aid in these submittals. Call (212) 420-8724 or log onto www.tsigconsulting.com for any inquiries.

The G.O. Team's NFPA 101 Q & A

by **G**abriel Villegas, LEED AP and **O**lga Pankova, LEED AP

Question: Is it permissible to install a window in a surgical supply room protected with a 45 min. door that opens into corridor? Both the corridor and the room are protected with automatic sprinklers.

Answer: Yes. It is permissible for a window to be installed in a fire rated door. However, the door would have to be removed and sent to an approved licensed facility for such modification to occur. This is due to the fact that NFPA 101 8.2.3.2.1 requires compliance with NFPA 80, Standard for Fire Doors and Fire Windows (1999 edition). NFPA 80 1-3.4, in its turn, requires any modifications to fire rated doors to be performed in facilities licensed by the door manufacturer. As a result, no field modifications to a fire rated doors are allowed.

Question: Can evacuation chairs be installed in stairwells?

Answer: NFPA 101 does not offer a direct answer. Section 7.2.2.5.3 prohibits "open space within the enclosure be used for any purpose that has the potential to interfere with egress." With that, it is up to the authority having jurisdiction (AHJ) to determine whether installing an evacuation chair would interfere with egress. General notion, however, is that anything placed inside of a stairwell will be considered an obstruction regardless of the stair width.

Question: How should painted labels on fire doors and frames be addressed?

Answer: NFPA 101 8.2.3.2 requires fire rated door assemblies to meet the requirements of NFPA 80 (1999 edition). As per NFPA 80 1-6.1, only labeled fire doors can be used, while 1-5.1 requires the label to be readily visible and convenient for identification. According to UL, it is permissible to paint over an embossed label as long as the information on the label is still legible. Otherwise, the paint needs to be removed, or the door and frame are no longer considered to meet the requirements of a listed fire door assembly. Should this be the case, the door can be evaluated and possibly re-labeled in the field by an approved agency.

Question: When are stairwell interruption gates required?

Answer: NFPA 101 7.7.3 states that stairwell interruption gates are required at the level of exit discharge in stairwells that continue more than one-half story beyond the level of exit discharge. They are intended to stop people to go beyond the exit discharge door while egressing as the signs proved to be less efficient in this scenario.

New OSHA Hazardous Chemical Labeling Requirements
by Dean Samet, CHSP, CJCS

Effective June 1, 2015, revised Hazard Communication Standard (HCS) 29 CFR 1910.1200 will require pictograms on labels to alert users of the chemical hazards to which they may be exposed, bringing it into alignment with the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

The revised HCS requires the following elements on labels of hazardous chemicals:

- **Name, Address and Telephone Number** of the chemical manufacturer, importer or other responsible party.
- **Product Identifier** is how the hazardous chemical is identified. This can be (but is not limited to) the chemical name, code number or batch number. The manufacturer, importer or distributor can decide the appropriate product identifier. The same product identifier must be both on the label and in section 1 of the Safety Data Sheet (SDS).
- **Signal Words** are used to indicate the relative level of severity of the hazard and alert the reader to a potential hazard on the label. There are only two words used as signal words, "Danger" and "Warning." Within a specific hazard class, "Danger" is used for the more severe hazards and "Warning" is used for the less severe hazards.
- **Hazard Statements** describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. Example: "Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin." All of the applicable hazard statements must appear on the label.
- **Precautionary Statements** describe recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to the hazardous chemical or improper storage or handling. There are four types of precautionary statements: prevention (to minimize exposure); response (in case of accidental spillage or exposure emergency response, and first-aid); storage; and disposal. Examples: "Do not breathe vapors or spray. Get medical attention if you feel unwell. Dispose of contents in accordance with local/regional/national/international regulations"; or "Keep in original container and away from heat, open flames, combustible materials and hot surfaces. **-** No Smoking."
- **Supplementary Information.** The label producer may provide additional instructions or information that it deems helpful. It may also list any hazards not otherwise classified under this portion of the label. An example of an item that may be considered supplementary is the personal protective equipment (PPE) pictogram indicating what workers handling the chemical may need to wear to protect themselves. Example: Hazardous Materials Identification System (HMIS) pictogram of a person wearing goggles may be listed.

Employers are responsible for maintaining the labels on the containers, including, but not limited to, tanks, totes, and drums. This means that labels must be maintained on chemicals in a manner which continues to be legible and the pertinent information (such as the hazards and directions for use) does not get defaced (i.e., fade, get washed off) or removed in any way. Employers must, through training, ensure that its employees are fully aware of the hazards of the chemicals used and employees must have immediate access to all of the information about the hazards of the chemicals.

Per OSHA Quick Card™
Hazard Communication Standard (HCS) Pictograms and Hazards (Shown below):

Health Hazard

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Gas Cylinder

- Gases Under Pressure

Flame Over Circle

- Oxidizers

Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives

Organic Peroxides

Corrosion

- Skin Corrosion/Burns
- Eye Damage

Corrosive to Metals

Environment
(Non-Mandatory)

- Aquatic Toxicity

Exclamation Mark

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant

Hazardous to Ozone Layer
(Non-Mandatory)

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

For more detailed information about labels and Safety Data Sheets (SDSs) under the revised Hazard Communication Standard, please refer to refer to 29 CFR 1910.1200 - paragraphs (f) and (g), and Appendix C.

The revised Hazard Communication Standard and additional guidance materials are available on OSHA's Hazard Communication page, located at: www.osha.gov/dsg/hazcom/index.html
U.S. Department of Labor www.osha.gov (800) 321-OSHA (6742)

Fire Departments – The Resource and Asset You Need

By Michael Craig

I spent 32 years in the fire service as a fire officer and fire marshal. I also served as an adjunct instructor for the state fire academy. Protection of life and property is the first and foremost priority of the fire department. I enforced fire codes for every type of building built in my community, whether it was commercial, industrial, education, healthcare, storage, or warehouse. As an instructor for the fire department and state, I taught courses on every subject that firefighters had to have to efficiently and safety perform their job. Since coming into the healthcare life safety consulting industry, I have often asked myself, "Why didn't we spend more time on hospital firefighting?" As a fire marshal, I had more knowledge of the hospital than any of my department members, simply because I spent time with the facility director on numerous occasions. Hospitals are one of the most complex facilities that fire fighters will ever walk into.

There is a vast array of components in hospitals that fire fighters, on the average, have no knowledge of; the inner workings of a hospital fire plan, the actual life safety drawings, or the different areas of the hospital besides patient care. Hospital challenges may include helipads, laboratories with significant quantities of flammable and potentially hazardous chemicals, equipment that requires specialized response including, MRI and CAT scan equipment, linear accelerators, full-service commercial kitchens, large, complex central energy plants, hazardous materials storage, and so on. While this may seem like a great challenge, it is important for the firefighters to know that they will likely encounter a well maintained facility, with a very knowledgeable staff, and, where fire protection features are in good working order. It would be advantageous to you as a facility director, to have them meet you and the major players that would assist them in case of an emergency at your facility.

Today, the fire service members are highly trained and professional personnel, who deal with not only fire, but many other aspects of emergency response. They are trained in areas that you would never think about them doing. My question to you as a facility director or administrator is this, "Have they ever been trained in firefighting or other emergencies in my hospital?" Other questions you may now ask yourself:

- What do they actually know about the fire plan in my hospital?
- How would they respond to fires involving the operating rooms?
- What equipment do they have to handle hazardous materials?
- What training do they have in "defending in place"?
- What do they know about my life safety plans and where my barriers and areas of refuge are?
- Do they know what areas of the facility have sprinkler systems?
- What do they know about the mechanical, electrical systems, and other utility systems in the hospital?
- What training and equipment do they have for responding to emergencies other than fire emergencies, such as med gas leaks, natural gas leaks, electrical emergencies, entrapment of one of my facility personnel, etc.?

Hospital personnel are trained in their respective roles when it comes to patient care and safety, system shutdowns, fire plan implementation, and evacuations, among other vital functions when it comes to an emergency. The problem arises when the fire department personnel arrive on scene and there is no one from the hospital to meet them. I know that this is set out in your fire plan for an essential person from your facility to meet the fire department and inform them of the

situation. In my experience, that does not always happen. I have responded and had to search out someone. In a fire response to an alarm, the first place the fire personnel is going is to the

fire alarm panel. The emergency may be other than fire and the fire alarm may or may not have been activated.

Let's take a look at some of the components that you have at your facility.

Heliports – are they capable of handling an aircraft fire on your heliport. Some of these are ground level and some are on the roof. Will the fire personnel know how to get to the roof? Have they ever been there to see what firefighting equipment will be available to them? Do they know where fuel tanks are for the aircraft on the heliport? Do they know, if there is a spill of fuel, where it is going to run off too?

Do they have training of helicopter fires?

Laboratories – First, do they know the location of the labs? Do they know what type of chemicals and other dangers there are in the lab (i.e., inhalants, flammables, toxins, biological materials)? Do they know the whether there is a negative or positive ventilation in any of the rooms?

Radiology – Are they aware of the dangers of radiation? Are they aware of the dangers of the radiology equipment in case of fire? What dangers do these pieces of equipment pose to firefighters? Do they know if you have a nuclear med department and what equipment is in there and the procedures performed?

Electrical system – Do fire fighters know where your main electrical vault is? What is their procedure in controlling and extinguishing electrical fires, especially in vault rooms? Are they aware that they cannot completely shut down the electrical system in your hospital? How many electrical closets and rooms are in your facility and are they located on your life safety plans? Firefighters need to know their locations or have a set of plans for your facility available to them. Even though your staff is trained to respond to electrical emergencies, firefighters need to be informed of your procedures and assured that they are being carried out.

Boilers and Generators – What knowledge of these pieces of equipment do the firefighters have? Do they run on natural gas, diesel, propane, or capabilities of running on all three?

Patient evacuation – Where are your areas of refuge? Make the fire fighters aware of your life safety plans and how to read the different barriers that are in place. Your personnel will need assistance in moving patients. Find out what resources that the fire department can provide in assisting with the evacuation.

Med Gas systems and storage – Do the firefighters know the different types of med gas that you have at your location? They need to know so that they will have the resources to handle emergencies with these gases. Do they know where your tank rooms are and where your bulk storage tanks are outside?

The above situations are only a few of what firefighters could possibly run into in your facility. You, as a facility director or manager, need to know that you have a resource that has some knowledge about your facility and the emergencies that could occur, even though you have personnel to respond and handle these systems. It is their job to routinely visit and tour all complexes in their fire area. It is your responsibility to make sure they are informed about your facility and the problems that they may face.

The main objective is for patient, staff, and visitor safety. One important way you can provide this to them is to make sure that the local fire department has knowledge of your facility, your personnel, your fire plans and evacuation plans, and the equipment and location of this equipment. Your life safety plans are a crucial piece of information to the fire department. It will not only show your barriers (for defend in place area, location of smoke and fire compartments, stairs, etc.), but, it should show the location of hazard rooms, electrical rooms, area that have sprinklers, and all the information that is required on them by Joint Commission. This will be invaluable for the fire department. The fire marshal may want a copy of these plans for his files

Continued on next page

because most states require current plans to be kept on file with the fire department. These people can be a great resource for you and your facility. Find out what they have as assets that can be beneficial for you in an emergency, whether it is fire or other emergency. Contact the fire chief or fire marshal and set up visits for them to come spend some time with you and your staff. Don't let this be just a walk-through. This needs to be a training time for you and them. Set it up for three separate days so that each shift can go through the same training and gather the same information. Fire departments normally work twenty-four hour shifts, with three different shifts, so make sure with that you advise your contact at the fire department that you want all three shifts to come when they are on duty. During their visit, go through your life safety, fire plan, and emergency preparedness plans, and find out what resources they can provide during an emergency situation. You and your facility will become safer with these people having a knowledge of what you have in place and what the actions of your personnel will provide. Use this resource. They are invaluable.

TSIG WELCOMES A NEW ADDITION

We are pleased to announce that Wayne Kestler, CHFM, CEM, CJCP, has joined us after spending 32 years at ARAMARK Healthcare and its predecessors, in various capacities with the final 16 years as FM Director of Operations Support.

In that capacity he provided the following services:

- Performed Life Safety Code & Environment of Care mock survey assessments for healthcare institutions preparing for TJC and DNV surveys for accreditation
- Supported healthcare facilities in 28 states and Washington, DC
- Managed FM Start Ups
- Performed FM program audits (IPA's)
- Developed long range capital improvement plans
- Co-authored a book on compliance with EPA regulations.
- Instructed managers in the use of proprietary CMMS
- Developed RFP's and bid specifications for major facility improvement projects.
- Served as an authorized safety trainer for OSHA-related compliance programs

Wayne has the following certifications/credentials:

- Certified Joint Commission Professional by Joint Commission Resources
- Certified Healthcare Facility Manager by the American Hospital Association
- Certified Energy Manager by the Association of Energy Engineers
- Certified Sustainable Development Professional by the Association of Energy Engineers
- EPA – former accredited Building Inspector/Management Planner under AHERA

We look forward to working with Wayne and welcome him to the TSIG family




News from our CEO: TSIG NEWEST AFFILIATION

As of April 01, 2015, TSIG will have an affiliation with a Women Owned Business Enterprise headed by Pamela Jerome, AIA, FAPT, LEED AP. The company will be known at TSIG Architectural Preservation and will specialize in Historic Preservation, building envelope inspections, repairs and restoration. This firm is very near and dear to my heart as it was started under my leadership at an architectural engineering firm some thirty six years ago.

The staff consists of architectural conservation specialists offering expertise in building pathology, materials science, water management, historical documentation, condition assessment and analysis, cost estimating, and more. Over the past 36 years the Preservation Group has completed hundreds of projects ranging from $50,000 to well over $50 million, with many receiving national acclaim and awards.

In the healthcare arena, we will now be able to assist our clients in the repair/restoration of the building envelope including facades, exterior doors, windows, curtain walls, parapets, bulkheads and roofs – in other words, the entire building envelope, which includes balconies, guardrails, fire escapes, flagpoles, signs, copings balusters, canopies and cornices. More specifically, we will check for bulging and cracking masonry, loose brick and stone, leaning parapet walls and cornices. Our services will include investigation, contract documents, and assistance during bidding, and construction phase services.

We have posted on our website a link to the TSIG Preservation Group that shows an extensive list of their clients and the type of work they have performed. They include Museums, House Museums, Cultural Institutions, Performing Arts, Educational, Governmental, Residential, and Healthcare.

For more information contact us at 212 420 8724 x 111 or x 141





BE CAREFUL WHAT YOU ASK FOR…

By Ken McGraw

It has been a strategy for many years when performing the life safety assessment at a hospital, that the company performing the assessment would recommend to split up the hospital into different occupancy types. Sometimes it is absolutely necessary based on the design of the building, but other times it was for alternative reasons like less stringent requirements, making up for budget reductions and even corridor storage issues.

Be careful what you ask for.

There are some very significant long term implications one must consider before agreeing to the strategy of a mix occupancy building. I have been around long enough to see this strategy cycles back and can place the organzation in a position where it has to spend considerable amounts of money to bring the occupancy type back to healthcare standards or be very limited in their operational options. As you will see later in this article, this decision even affects day to day operational requirements you may not be considering between the occupancy types. There are also a few differences between CMS and Joint Commission surveyors in how they approach mixed occupancy buildings. Before someone convinces you to change to a mix occupancy strategy because it is in your best interest, understand the positives and negatives to doing so.

1. Inpatients in Business Occupancies

There is a hospital that built a cancer center right next to the hospital. The cancer center was built as business occupancy building. The plan was to bring inpatients to the cancer center for treatment and close the infusion unit within the hospital. Another hospital changed their first floor to business occupancy. Radiology, among other diagnostic units are on the first floor which services inpatients. What is wrong with this approach? You have to afford an inpatient (healthcare occupancy) the same level of life safety protection all the time. In these two cases, they are not compliant based on the somewhat vague wording in the 2000 LSC (not vague to the surveyors). Historically, it has been the expectation of CMS/JC that any building or area that inpatients are taken into must meet the requirements for a Healthcare occupancy.

The requirement relax slightly in the 2012 Life Safety Code - the 2012 Code has been revised to allow Ambulatory or Business occupancies to provide services to no more than 3 inpatients at any one time and not have to meet Healthcare requirements. How many radiology units alone, today have holding areas for inpatients that exceed 3 patients?

2. Executive Decisions

Senior leaders are staying at one hospital longer. The average in the last 10 years was 3.5 years in the CEO position. The last three years it has risen to 4.6 years tenured. As these senior leaders adjust to the Affordable Care Act, the market, technological changes, etc., long term master plans change. It has been countless times where facility directors

have been asked to “repurpose” an area/unit/floor. If you have separated parts of your building to other occupancy types beside healthcare, this can be extremely restricting.

It is important to note that rarely have I experienced a hospital justify the cost of the upgrade back to healthcare. It is a final long term decision to go to mixed occupancy.

Consider out of the box long term options before going to a mixed occupancy strategy.

3. Path of Egress Issues

Egressing through different occupancies can complicate the issue. In only some instances, the desire to break up the building into mixed occupancies and a loose interpretations of the requirements regarding the path of egress to or through a lesser occupancy has led to compliant conditions. It absolutely is possible, but make sure the interpretations are solid in complying to the requirements.

4. Damper Inspection Frequency

Dampers in business occupancies require a four year inspection cycle. Since CMS’s Memorandum in 2009, healthcare occupancies have been changed to six years. Are you compliant with the business occupancies damper inspection requirement?

5. Integrity issues of shafts and chutes through mixed occupancy buildings.

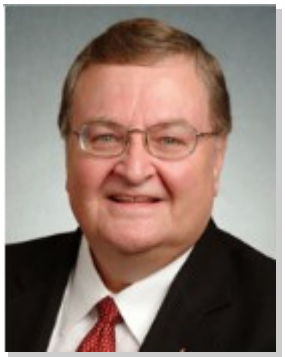
Both CMS and JC surveyors routinely inspect shafts and chutes on EVERY floor, not just the healthcare ones. When one has a life safety building assessment, not all companies (excluding ours) will inspect every floor where the shafts and chutes penetrate, regardless of occupancy type. It has also been our experience shafts and chutes in a mixed occupancy building are maintained on every floor by the organization through penetration permits, etc. Historically, we have seen issues where the organization has not maintained shafts and chutes in business occupancies (and construction in business areas in a mix occupancy building.

6. Fire Plans in mixed occupancy.

If you have a mixed occupancy, can a “defend in place” strategy apply in a business occupancy? You are not maintaining other occupancy types besides healthcare as “defend in place”, so is it appropriate? Still not a consistent ruling, but more during CMS surveys and in different parts of the country, CMS surveyors are expecting the business or industrial occupancy to have fire plans that are NOT “defend in place” but evacuate.

Several companies that have tried to defend the position of the “defend in place” fire plan in business occupancy when it is cited. They have taken the position that even though it is business, it is maintained to a higher level than business because the rest of the building was healthcare…guess what. Prove it. No surveyor yet has agreed that I have experienced. The other issue is – can this approach (2 different fire plans) actually be operationalized successfully? One area or floor responds to an alarm or fire differently than others in the same building that is healthcare? Very difficult to do.

In conclusion, it is imperative that you think through all the implications when someone recommends this strategy. On the surface, it may seem like the path of least resistance, but in many cases it may not be.



U.S. Government Report on Active Shooter Incident Planning

by Dean Samet, CHSP, CJCS

Incorporating Active Shooter Incident Planning into Health Care Facility Emergency Operations Plans is a report that was primarily designed to encourage health care facilities to consider how to better prepare for an active shooter incident. It was prepared by staff from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response, Division of Health System Policy, and Division of Tactical Programs, in collaboration with staff from the Federal Emergency Management Agency and the Federal Bureau of Investigation. Additional comments were also received from staff at the Department of Education and from the Healthcare and Public Health Sector Coordination Council.

While hospitals and many other health care facilities (HCFs) have emergency operation plans (EOPs), this document provides emergency planners, disaster committees, executive leadership, and others involved in emergency operations planning with detailed discussions of unique issues faced in an HCF. Our nation's health care facilities are entrusted with providing expert medical care in safe and secure environments for patients, staff, and visitors. HCFs must plan for emergencies of all kinds, ranging from fires, tornadoes, floods, hurricanes, earth quakes, pandemic of infectious diseases, active shooters, hostage situations, as well as other safety & security challenges. This document includes discussions on related topics, including information sharing, psychological first aid (PFA), and law enforcement/security.

As with any threat or hazard that is included in a HCF emergency operation plan, the planning team should establish goals, objectives, and courses of action for an active shooter annex. The plan should be created with input from internal as well as external stakeholders including local law enforcement officers, emergency medical services (EMS), emergency management, fire department officials, public health and mental health practitioners, and people with disabilities. Internal stakeholders include executive leadership, clinical care providers, safety, security, facility engineering, human resources, ethicists, chaplains, and risk managers.

An effective plan includes:
– Proactive steps, including training that can be taken by employees to identify individuals who may be on a trajectory to commit a violent act.
– A preferred method for reporting active shooter incidents, including informing all those at the HCF or who may be entering the HCF.
– An evacuation policy and procedure.
– Emergency escape procedures and route assignments (e.g., floor plans, safe areas).
– Lockdown procedures for individual units, offices, and buildings.
– Integration with the facility incident commander and the external incident commander.
– Information concerning local area emergency response agencies and hospitals (e.g., name, telephone number, and distance from the location), including internal phone numbers and contacts.

To be prepared for an active shooter incident, training and exercises should include what to expect and how to react. Training for personnel can focus on an easy-to-remember mantra of "Run-Hide-Fight." As HCFs train and discuss these options, they should be viewed on a continuum. Everyone should be trained first to run away from the shooter, if possible, encouraging others to follow. If that is not possible, they should seek a secure place to hide and deny the shooter access. As a last resort, each person must consider whether he or she can and will fight to survive, incapacitate the shooter, and protect others from harm. Staff should be trained to:
– Leave personal belongings behind.
– Visualize possible escape routes, including physically accessible routes for patients, visitors, or staff with disabilities and others with access and functional needs.
– Avoid escalators and elevators

– Take others with them but not stay behind because others will not go.
– Call 911 when safe to do so.

If running is not a safe option, staff should be trained to hide in as safe a place as possible where the walls might be thicker and have fewer windows. Likewise, for patients that cannot "run" because of mobility issues (e.g., they are unable to leave their bed) hiding may be their only option.
– Lock the doors if door locks are available.
– Barricade the doors with heavy furniture or wedge items under the door.
– Those in a specialty care unit should secure the unit entrance(s) by locking the doors and/or securing the doors by any means available (e.g., furniture, cabinets, bed, equipment).
– Close and lock windows and close blinds or cover windows.
– Turn off lights.
– Silence all electronic devices.
– Remain silent.
– Look for other avenues of escape.
– Identify ad-hoc weapons.
– Remain in place until given an all clear by identifiable law enforcement.

Good planning also includes conducting drills with first responders and facility security teams. In actual emergencies, timely intelligence is critical. Staff should be trained to contact the police and share with them essential information, such as the location and description of attackers, types of weapons, methods and direction of attack, and flight of attackers. Law enforcement encourages all calls, and no one should assume that someone else has called. Video surveillance that is accessible to smart phones and other electronic devices must be shared with responding units as soon as practical.

Building strong partnerships with law enforcement, fire, and EMS officials includes ensuring they know the location of available public address systems, two-way communication systems, security cameras, and alarm controls. Equally important is information on access to utility controls, medical supplies, fire extinguishers, and how to access secured or locked areas of the facility.

Emergency operation plans for health care facilities should be living documents that are routinely reviewed and consider all types of hazards, including the possibility of an active shooter or terrorist incident. As law enforcement continues to draw lessons learned from actual emergencies, HCFs should incorporate those lessons learned into existing EOPs or in newly created EOPs. By having plans in place to keep patients, staff, and visitors safe, HCFs play a key role in taking preventive and protective measures to prevent an emergency from occurring or reduce the impact of an incident when one does occur.

To obtain entire copy of this report: Download online from the Office of the Assistant Secretary for Preparedness and Response at http://www.phe.gov or at the Federal Emergency Management Agency at http://fema.gov.

Building Partnerships as Part of Cost Management

By Ode Keil

Every healthcare organization has a focus on reducing the cost of operations. Facility managers are feeling pressure to cut costs while maintaining the scope and quality of services. As the pressure intensifies it is important to have a strategy to deliver.

Engineers have long lived with the designer's triangle of "Good, Fast, Cheap" – you can pick two. The downward pressure on the cost of operations and on the development of buildings and services is rewriting this to "Good, Fast and Cheap"; picking two in no longer an option. One potential strategy for achieving this seemingly impossible goal is using leverage.

Continued on next page

The financial markets use leverage in the form of borrowing or bonds to raise much more capital than is available to develop new services or to add capacity. The debt is paid down over time. Most homeowners use leverage in the form of a mortgage. The key to leverage is developing partnerships. Whether banks or bondholders the institutions and individuals who provide the cash resources needed to finance growth and development are business partners. Leverage in facilities management is developing partnerships with firms and individuals with specific skills that are needed on a limited basis.

Facilities managers do this all the time when they hire contractors to do time and materials work or to design and construct new space. It is less common for facilities managers to use leverage to extend the capabilities of their own staff or to develop partnerships to meet day to day operational needs. To be clear, outsourcing is not included in my definition of developing a partnership. Outsourcing is shifting accountability for an operation to an outside corporation based on a belief the outsourced service is not a core function of healthcare.

As the healthcare industry goes through consolidation more and more hospitals are part of a system or network. In any group of hospitals internal leverage is generated through using specialized skill sets throughout the group rather than locating highly skilled maintenance technicians in one location and contracting in others. This form of leverage comes at the cost of some on-site presence in the single location and some windshield time in a vehicle. The benefit can be reduction in the use of purchased services. The leverage may be enhanced through careful analysis of current purchased services to identify additional opportunities to bring services in house. Elimination of purchased services is not always desirable as skills are highly specialized, equipment and parts are prohibitively expensive and the frequency of need is very low. Using a balanced approach to identifying and capitalizing on opportunities to leverage in-house talent and to engage business partners when self-performing is not an effective use of resources can result in significant savings. Some experts estimate that smart leveraging of talent can reduce operating costs by 10% - 25% depending on the current approach to facilities management.

A secondary approach to reducing cost of purchased services is to develop a preferred vendor agreement with specific firms. Supply chain operations have done this thorough group purchasing organizations for decades. Most GPO's focus their work on supplies and on some types of equipment. It is unusual for supply chain operations to focus on developing a purchased services agreement for general maintenance or operations of buildings. Using the same example of consolidation, many hospital organizations include a large and increasing number of other than hospital care sites and business operations buildings. Much of the work in these facilities is handled on a site by site basis often negotiated by site managers. There is little incentive for firms to sharpen their pencil to deliver services in this model. The small local firms cannot service more than one or two sites. They may be a "jack of all trades" group rather than a specialized, high skill work force. Combining sites into a region or enterprise may represent enough business to attract a large service provider capable of meeting the needs of many or all other than hospital locations.

Leverage may be possible through a competitive bidding process involving one or more large service providers. The leverage comes through negotiating a reduced labor rate, elimination of surcharges such as mileage and travel, and low markup on parts. These deals can be made attractive by committing to a provider for a year or longer. The firm is assured of a book of business and the healthcare organization benefits by having a predictable operational expense.

As the healthcare sector of the economy evolves into value based services and population health management the organizations that thrive are likely to be those that build strong, effective partnerships. Through leverage facilities managers can increase their effective staffing many fold at a modest cost. During a presentation given by a high level executive of a large manufacturing firm he made the point that the firm employs about 15,000 product research and development engineers around the world. Through business agreements with key suppliers that number is increased to more than 75,000 – a 500% increase at no direct cost to the company. The suppliers build the cost into parts that can be priced into the sale of the manufactured goods. The pricing is much lower than if the manufacturer employed all 90,000 engineers. That's the magic of leverage.

TSIG Calendar for Tradeshow Attendance

In the next few months our staff will be present at the following shows :

Larry Barlow:
Delaware Valley, Trevose, PA— April 7, 2015
Pennsylvania Engineers meeting, Harrisburg, PA— April 9-10, 2015
Virginia Society of Healthcare Engineers: Trade show May 5-6. Speaking engagement
Can I Lock this Door— May 5, 2015

Michael Craig
Virginia Society of Healthcare Engineers: Trade show—May 5-6, 2015

Dr. William Wagner
Mass. Healthcare Facility Managers Group at Spaulding Cambridge.-Speaking engagement
Environment of Care Update - 2015 on April 16, 2015

Jerald Stewart & Eric Phillips
CSHE annual Institute, Newport Beach,CA—March 29-April 1, 2015

John Taylor
Alabama Society for Healthcare Engineers, Pensacola Beach, Fl.—May 13-15, 2015

Ken Gregory
Nebraska Society for Healthcare Engineers- Speaking engagement
TJC Expectations in the Equipment Maintenance Standards—April 30-May 1, 2015
South Carolina Society for Hospital Engineers-Speaking engagement
EC/LS Updates— May 7-8, 2015
Georgia Association for Healthcare Facility Managers-Speaking engagement
ISO 9001 Introduction— May 27-29 2015

Eric Phillips
Washington State Society for Healthcare Engineers-Chelan, WA— April 22-24 2015
California Society of Healthcare Engineers, Fairmont, CA— April 29-May 1, 2015
Northern Ohio Society for Healthcare Engineers, LaCentre-Westlake, Ohio— May 8, 2015
Oregon Society for Healthcare Engineers, Bend, OR— May 20-22, 2015

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Hello Mr. Ralph Heiman,

I'd like to take this opportunity to share with you my appreciation for George Rivas (Senior Vice President at TSIG Consulting) who took time to research and answer a code question at midnight for an issue which required immediate clarification.

The detailed response with specific references that were quoted makes Mr. Rivas an exceptional asset. His insight and comprehensive approach is educational as well as thorough. Mr. Rivas' continues to be a subject matter expert and a renowned resource on the national and local level within the healthcare industry.

Please share this note regarding our appreciation for Mr. Rivas's professionalism and responsiveness.

Sincerely,

Michael A. Doss,
Senior Vice President of Facilities Management & Business Development
Christian Health Care Center