Learning Objectives

• Understand the history of the Life Safety Code and how it began

• Understand why the Life Safety Code is important today

• CMS’s role with the Accreditation Organizations
Why do we need the *Life Safety Code*?

Myth or Fact:

“There hasn’t been any fatalities in hospital-related fires in the United States for years...!”
Why do we need the *Life Safety Code*?

According to statistics published by the NFPA, there are approximately 1,400 actual fires each year in hospitals in the United States, resulting in one death every 1.8 years.

That averages out to 3.8 actual fires (not false alarms) *per day* in hospitals in the U.S.
Why do we need the *Life Safety Code*?

This means on average, every hospital in the United States will have an actual fire once every 4 years...
Why do we need the *Life Safety Code*?

**Myth or Fact:**

“If we already have building codes, then we don’t need the Life Safety Code...!”
Why do we need the *Life Safety Code*?

Well... the building codes tell you how to build the structure, but the Life Safety Code tells you how to operate the building safely...

Scope – Safety from fire and similar emergencies
Goal – Protect occupant not intimate with the fire
Assumption – Single fire
Note: Property protection and mission continuity are *not* goals or included as part of the scope of the *LSC*  
[1.1.2, 1.2, 19.1.1.1.10, 19.1.1.1.4]
Why do we need the *Life Safety Code*?

The National Fire Protection Association (NFPA) writes and publishes the *LSC* but does not enforce the LSC.

The LSC must be adopted by an Authority Having Jurisdiction (AHJ) to be legally mandatory:

- CMS
- Joint Commission
- HFAP
- DNV
- State, local agencies
- Insurance companies
Why do we need the *Life Safety Code*?

CMS mandates compliance with the 2012 edition of the *LSC* (and all its references):

– CMS requires compliance with the LSC for Medicare reimbursement [CMS CoP § 482.41(b)]

– Joint Commission, DNV and HFAP requires compliance with the LSC for accreditation

We need the Life Safety Code if for no other reason because CMS says so...
Why do we need the *Life Safety Code*?

But that’s not the best reason why we need the Life Safety Code....

Let’s look backwards at how the LSC began...
Why do we need the Life Safety Code?

The LSC began in 1912 as a NFPA pamphlet entitled *Exit Drills in Factories, Schools, Department Stores and Theaters*

Partly due to the 1903 fire at the Iroquois Theater, Chicago, IL 693 lives lost
Why do we need the *Life Safety Code*?

And partly due to the Triangle Waist Company fire—New York, NY

March 25, 1911, 146 lives lost: Mostly women and girls

Exits were locked
Why do we need the *Life Safety Code*?

The NFPA Committee On Safety to Life was appointed in 1913 to study notable fires involving loss of life.

In 1927 the NFPA published the comprehensive guide *Building Exits Code*.

In 1966 the title was changed to “*Code for Safety to Life from Fire in Buildings and Structures*” and was written in enforceable ‘code language’.
Why do we need the *Life Safety Code*?

In 1981, the LSC included occupancy chapters with sections for new and existing structures.

In 1991, the LSC allowed for larger smoke compartments and required sprinklers in new construction.
Why do we need the *Life Safety Code*?

In 2003 the title was changed to *Life Safety Code*.

Subsequent editions included changes to egress capacity, fire suppression, and smoke compartments.
Why do we need the *Life Safety Code*?

But significant loss of life in fires continued and caused many changes and additions to the code...

– Cocoanut Grove Night Club, Boston 1942: 492 lives
– LaSalle Hotel, Chicago 1946: 61 lives
– Winecoff Hotel, Atlanta 1946: 119 lives

Hospitals were not excluded in the tragic results of fires...
Why do we need the Life Safety Code?

Cleveland Clinic, Cleveland, OH, May 15, 1929
125 lives lost
Why do we need the *Life Safety Code*?

Cleveland Clinic fire started in Cine storage room from high pressure steam leak
Why do we need the *Life Safety Code*?

St. Anthony’s Hospital, Effingham, IL, April 4, 1949  77 lives lost
Why do we need the *Life Safety Code*?

St. Elizabeth’s Mercy Hospital, Davenport, IA, January 7, 1950. 41 lives lost
Why do we need the *Life Safety Code*?

Hartford Hospital, Hartford, CT
December 8, 1961 16 lives lost
Why do we need the *Life Safety Code*?

There is an exceptional 25-minute documentary created using archive film footage and interviews with the survivors of this tragedy. Go to “YouTube” and search: “Hartford Hospital Fire”
Why do we need the *Life Safety Code*?

SAC-Osage Hospital, Osceola, MO

**December, 1972:** Eight (8) patients died as a result of a fire at the SAC-Osage Hospital. Six patients died of smoke inhalation and two patients died when a supply valve to their oxygen tent was inadvertently shut off.

The facility was only 5-years old at the time, and was constructed to the federal and state fire prevention codes in affect at the time. The fire was thought to have started from smoking materials igniting combustibles in a patient’s room.
Why do we need the Life Safety Code?

Let’s take a close look at the MGM Grand Hotel fire, in Las Vegas, NV

November 21, 1980
Why do we need the *Life Safety Code*?

85 Lives lost... Over 600 injured

MGM Grand Fire: Contributing Factors

1. The AHJ did not require the facility to be fully sprinklered—only in areas not occupied 24 hours per day
2. No sprinklers required in sleeping rooms
3. Fire started in Deli restaurant next to Casino on 1st floor
Why do we need the *Life Safety Code*?

MGM Grand Fire: Contributing Factors

4. Fire and smoke developed rapidly and spread quickly throughout the Casino
5. Interior finish and decorations in Casino were combustible
6. There was a lack of fire extinguishment devices for hotel staff to fight fire
7. Maximum travel distances were exceeded in Casino
Why do we need the *Life Safety Code*?

MGM Grand Fire: Contributing Factors-

8. Unprotected vertical openings (seismic joints, elevator shafts, HVAC plenums and shafts)

9. Substandard construction in most stairwells (less than 2-hour), and plywood construction in one stairwell

10. Room HVAC units took make-up air from the corridor
Why do we need the *Life Safety Code*?

MGM Grand Fire: Contributing Factors

11. No evidence of execution of fire response plan -
10 minute delay in evacuation order and FD contact after fire is discovered

12. Lack of proper amount of exits in Casino area

13. No fire alarm pull stations in path of egress in Casino (fire alarm system never activated)

14. No elevator recall devices on elevators
Why do we need the *Life Safety Code*?

MGM Grand Fire: Contributing Factors

15. Fire & smoke dampers failed to operate—Either tied open with wire or did not operate correctly (no fan-shutdown interface)

16. Some sprinkler pipe was not secured to building, but toggle bolted to sheetrock ceiling, and fell and broke when ceiling collapsed
Why do we need the *Life Safety Code*?

MGM Grand Fire:
- The fire started in the coffee shop next to the Casino, on the 1st floor
- The fire was extinguished within an hour of the FD arriving
- There were over 3,400 guests in the hotel at the time of the fire
- It took over 4 hours to evacuate all of the people from the hotel
Why do we need the *Life Safety Code*?

MGM Grand Fire: Where the victims died

- Casino level: 18
- Roof: 6
- Sleeping Floors 16 – 26: 61 (72%)
  - 22 in the corridors
  - 5 in the elevators
  - 9 in the stairwells
  - 25 in the sleeping rooms
Why do we need the *Life Safety Code*?

MGM Grand Fire: How the victims died-
- All but two (2) victims died of smoke inhalation
- One (1) victim died of thermal shock
- One (1) victim died of head trauma, after she jumped off the roof to the ground
Why do we need the *Life Safety Code*?

MGM repaired the building, constructed new fire barriers, installed sprinklers and a new fire alarm system with detection in every room, and sold the property to Bally’s, who still operates the facility today.
Why do we need the Life Safety Code?

We need the Life Safety Code because without it, lives have been lost in fires in various types of facilities.

Even though CMS adopted the Life Safety Code in 1970, enforcement started out poorly and took time for AHJs to adequately train their inspectors.
Why do we need the Life Safety Code?

1985

– Eight patients died in a fire at the Hospice of Southeastern Michigan. Smoke spread from patient room to patient room via the bathroom ventilation system. Fire started with smoking materials.

1986

– Five patients died in a fire at Riverside General Hospital in California. Smoke spread from a patient room into the corridor and across a smoke barrier. Fire started with smoking materials.
Why do we need the *Life Safety Code*?

**1993**
- Three patients died in a fire in Maimonides Medical Center in Brooklyn, NY. Fire started by a faulty respirator supplying oxygen to a patient.

**1994**
- Five patients died in a fire at Southside Regional Medical Center in Petersburg, VA. Smoke spread from patient room to corridor to patient room because doors were not shut. Fire started by smoking materials.
Why do we need the *Life Safety Code*?

When combined with a variety of fire-safety features, such as firestopping, early detection, and suppression systems, along with trained, capable staff, the Life Safety Code is saving lives.

But, it won’t if it is not being enforced...
Why do we need the *Life Safety Code*?

**Saudi Arabia - 2015**

Jazan General Hospital, is located in the southern province of Jizan, S.A. near the Red Sea
Why do we need the *Life Safety Code*?

Hospitals in Saudi Arabia do not have to comply with the Life Safety Code. While there are building codes, there are no fire-safety codes that are required.

There are no periodic inspections for fire-safety compliance. Compliance is voluntary and spotty at best, and non-existence at most.

The Jazan Hospital is a government hospital.
Why do we need the *Life Safety Code*?

On December 24, 2015, a fire swept through the maternity ward and the children’s ward on the first floor.
Why do we need the Life Safety Code?

25 women and children died, and over 140 others injured.
Why do we need the *Life Safety Code*?

Eyewitnesses state the fire started from an electrical short, and a burning odor could be detected long before the conflagration started.

Investigations revealed a poly-urethane style of ceiling materials contributed greatly to the spread of the fire.
Why do we need the *Life Safety Code*?

The fire spread to the second and third floors of the hospital.

Investigation reveals the some egress doors were chained shut, preventing their use during the fire.

Investigators said the deaths were caused by smoke inhalation.
Why do we need the *Life Safety Code*?

There was no Incident Command system employed to control the crowds, who rushed to help, but they actually obstructed access for the local fire-fighters.

Large numbers of the crowd were injured in the rescue attempt which took much of the time and resources of the medical staff.
Why do we need the *Life Safety Code*?

There are distinctly different approaches to fire emergency response in Saudi Arabia:

- The local fire department is a division of the government’s Civil Defense department
- The local fire department refuses to roll on a fire alarm signal that is not confirmed verbally by the hospital staff
- This means there is a delay in the fire department arriving because staff has to confirm there is a fire and contact the local Civil Defense department... precious time is lost
Why do we need the *Life Safety Code*?

Other factors contributing to the tragedy:

- Defective oxygen wall-outlets allowing free-flow of oxygen
- Heavy smoke on the upper floors caused many of the deaths
- The committee investigating the fire said there were “Serious engineering errors in the design of the hospital and its safety systems.”
Why do we need the *Life Safety Code*?

Saudi Arabia is not some third-world Banana Republic

Their hospitals would in all appearances be equal to those in the United States

Their staff are well trained in the manner and professionalism of their respective disciplines.
Why do we need the *Life Safety Code*?

What is different is the lack of fire-safety codes and an authority who enforces them.

This is why the Life Safety Code, and the respective AHJs are needed.

Without them, patient safety is impacted in a detrimental way.
Transition...

Let’s shift gears and look at the Federal Agency who is ultimately responsible for the enforcement of the Life Safety Code in healthcare organizations....
Understanding CMS

On July 30, 1965, President Johnson signed the Social Security revision act that created the Medicare law to provide healthcare to those 65 and over, and Medicaid for those who could not afford it.

This act provided reimbursements to hospitals for caring for those who could not pay for services.
Understanding CMS

The act signed by President Johnson created the Health Care Finance Administration (HCFA) and they developed standards called Conditions of Participation (CoP) that hospitals must comply with in order to receive reimbursements.
Understanding CMS

But Congress did not trust the upstart HCFA agency to enforce hospitals to be compliant with these new CoPs, so they decided to give deeming authority to The Joint Commission, that had already been assessing hospitals for compliance with their own standards, for 14 years (since 1951).
Understanding CMS

This means any hospital that Joint Commission accredited was ‘deemed’ to be in compliance with the HCFA CoPs.

In reality, this really didn’t work out that way. The Joint Commission standards were not entirely consistent with the HCFA CoPs.
Understanding CMS

Right from the start, there was animosity between The Joint Commission and HCFA. The accreditor really didn’t care what HCFA said or did, because The Joint Commission got their authority from Congress; not from the HCFA federal agency.
Understanding CMS

Over time, things changed: In June, 2001, HCFA changed their name to the Centers for Medicare & Medicaid Services (CMS) and in the early 2000’s the U.S. Government Accountability Office (GAO) revealed large discrepancies between The Joint Commission’s assessment of hospitals, and the validation assessments made by state agencies on behalf of CMS.
Understanding CMS

In 2004, The Joint Commission responded by hiring 50 Life Safety experts and trained them to be surveyors.

But that was not enough, as Congress’ attitude towards The Joint Commission deteriorated to the point it was obvious the accredits were going to lose their special deeming authority.
Understanding CMS

In 2008, The Joint Commission announced they will voluntarily give up their special deeming authority and submit an application to CMS in 2009 to receive deeming authority from the federal agency, which they did.

CMS granted deeming authority to The Joint Commission but it extended to only 2014.
Understanding CMS

Since 2009, CMS has been ‘working’ with The Joint Commission to change their standards to be consistent with the CMS CoP standards.

While there has been a lot of progress, there are still many Joint Commission standards and interpretations that are not consistent with CMS.
As far as the hospital is concerned, accreditation is voluntary; not mandatory. Since being accredited is costly, many hospitals chose to be surveyed by the state agencies on an annual basis rather than on a triennial basis by accreditors.
Understanding CMS

But state surveys are typically more difficult and the AO’s standards are actually a better measurement for quality healthcare than just compliance with the CMS CoPs.

It’s more prestigious to be accredited, and many insurance companies require the hospital to be accredited.
Understanding CMS

These two organizations need each other:

Joint Commission needs CMS for the deeming authority. Without it, they would lose most of their clients.

CMS needs The Joint Commission because they currently accredit the most hospitals (They are the big gorilla in the tent).
Understanding CMS

There are other accreditation organizations:

Healthcare Facilities Accreditation Program (HFAP) started in 1945 by the AOA, and received deeming authority from HCFA in 1965.

Det Norske Veritas Healthcare (DNV) started in 2007 and received deeming authority from CMS in 2008.

The Center for Improvement in Healthcare Quality (CIHQ) received deeming authority from CMS in 2014.
Understanding CMS

Joint Commission accredits approximately 4100 hospitals in the U.S.

DNV accredits approximately 500 hospitals.

HFAP accredits approximately 212 hospitals.

CIHQ accredits approximately 15 hospitals.
Understanding CMS

Hospitals rely anywhere between 40% and 75% of their income from CMS, so it is in their best interest to be compliant with CMS’ standards.

CMS has authority over the entire process... They control hospitals by allocating the reimbursements.
Understanding CMS

They control the AOs by limiting the authority the AOs have over the hospitals.

Based on the annual budget, they are the second largest department in the US government, after the Defense Department (The Department of Health and Human Services)
Understanding CMS

They have control over all the players in the game...
In the coming years, you’re going to see CMS be much more active in setting standards, enforcing those standards, and making the AOs as well as the healthcare providers, comply to their wishes.
Understanding CMS

CMS is the one true entity regarding healthcare regulatory compliance...
Questions...

At this time I will answer any questions...
Thank You...

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